NEOPHOTONICS CORP
Form 10-K
March 15, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2015

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

001-35061

(Commission File No.)

NeoPhotonics Corporation

(Exact name of Registrant as specified in its charter)

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| | |
|---|---|
| Delaware | 94-3253730 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |

2911 Zanker Road

San Jose, California 95134

(Address of principal executive offices, zip code)

Registrant's telephone number, including area code:

+1 (408) 232-9200

Securities registered pursuant to Section 12(b) of the Act:

| Title of Each Class | Name of Exchange on Which Registered |
|---|---|
| Common Stock, par value $0.0025 per share | New York Stock Exchange |

Securities registered pursuant to Section 12(g) of the Act:

None

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Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933.    Yes    No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

| | | |
|---|---|---|
| Large accelerated filer | | Accelerated filer |
| Non-accelerated filer | (Do not check if a smaller reporting Company) | Small reporting company |

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

As of June 30, 2015, the approximate aggregate market value of voting stock held by non-affiliates of the Registrant, based upon the last sale price of the Registrant's common stock on the last business day of the Registrant's most recently completed second fiscal quarter, June 30, 2015 (based upon the closing sale price of the Registrant's common stock on the New York Stock Exchange), was approximately $266,804,000. This calculation excludes 10,922,270 shares held by directors, executive officers and stockholders affiliated with our directors and executive officers.

As of February 29, 2016, the Registrant had 41,100,326 outstanding shares of Common Stock.

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DOCUMENTS INCORPORATED BY REFERENCE

The Registrant has incorporated by reference into Part III of this Annual Report on Form 10-K portions of its Proxy Statement for its 2016 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A. The Proxy Statement will be filed within 120 days of Registrant's fiscal year ended December 31, 2015.

NEOPHOTONICS CORPORATION

ANNUAL REPORT ON FORM 10-K

For the Fiscal Year Ended December 31, 2015

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PART I

ITEM 1.BUSINESS

FORWARD-LOOKING STATEMENTS

You should read the following discussion in conjunction with our Consolidated Financial Statements and the related "Notes to Consolidated Financial Statements", and "Financial Statements and Supplementary Data" included in this Annual Report on Form 10-K. This discussion contains forward-looking statements including statements concerning our possible or assumed future results of operations, business strategies, competitive position, industry environment, potential growth opportunities and the effects of competition. Such statements are based upon our management's beliefs and assumptions and on information currently available to us. Forward-looking statements include statements that are not historical facts and can be identified by terms such as "anticipates," "believes," "could," "seeks," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would" or similar expressions. Forv statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks, uncertainties and other factors in this Annual Report on Form 10-K are discussed in greater detail under the heading "Risk Factors." Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date of this Annual Report on Form 10-K. You should read this Annual Report on Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect. Except as required by law, we assume no obligation to update these forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

CONVENTIONS THAT APPLY IN THIS ANNUAL REPORT ON FORM 10-K

Unless otherwise indicated, references in this Annual Report on Form 10-K to:

- "3G" refers to third-generation wireless architecture;

- "4G" refers to fourth-generation wireless architecture;

- "10G" refers to 10 Gbps;

- "100G products" collectively refers to all products sold by us designed for use at 100Gbps ("100G"), and in coherent transmission systems designed for use at 100Gbps or higher data rates. Some customers may use components designed for use at 100G at lower speeds. Our 100G products include both coherent transmission products and 100G network products that are not coherent;

- "III-V compound semiconductors" refers to compound semiconductor materials made from group III and group V elements of the periodic table, such as Indium Phosphide and Gallium Arsenide;

- "Access" refers to the portion of the telecommunications network that connects subscribers to their carriers network;

- "Advanced Hybrid Photonic Integration" refers to state-of-the-art integration of multi-platform materials and devices;

- "CDC" refers to Colorless, Directionless, and Contentionless;

- "China" refers to the People's Republic of China;

- “Coherent” refers to optical transmission systems that encode information in the phase of an optical signal and decode such information through comparison with an independent laser at the receiver and digital signal processing;

- “Contentionless” refers to the ability to switch two or more channels of the same wavelength or color from different directions through the same switch, such as a Multi-Cast Switch (MCS);

- “DCI” refers to Datacenter Interconnect;

- “Design win” refers to a confirmation by a customer that a product or group of products may be used as part of a customer’s product and we have a purchase order for such products;

- “Drop Modules” refers to wavelength multiplexer modules;

- “ECL” refers to External Cavity Laser;

- “EML” refers to Externally Modulated Laser;

- “Gbps” refers to gigabits per second;

- “High Speed Products” refers to transmitter and receiver products as well as switching and other component products for 100G optical transmission applications over distances of 2 to 2,000 kilometers. Our high speed 100G and beyond products are based on our Advanced Hybrid Photonic Integration technology. These technologies support encoding 100 gigabits or more per second of information for transmitting over a single channel and decoding the information at the receiver. Through 2014, our use of this term included our products designed for use at 40Gbps (“40G”) and that comprised less than 1% of our total revenue and approximately 1% of our revenue from high speed products in the year ended December 31, 2014. From 2015 onward, High Speed Products refers exclusively to products sold by us and designed for use at 100Gbps or higher data rates;

- “ICR” refers to Integrated Coherent Receiver;

- “ICT” refers to Integrated Coherent Transmitter;

- “ITLA” refers to Integrable Tunable Laser Assembly;

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“Long Haul” refers to fiber optic communications between central offices in different cities, where distances range from a few hundred to two thousand kilometers;

· “LTE” refers to Long-Term Evolution wireless architecture;

· “Metro” refers to fiber optic communications between central offices within and around cities, with distances up to a few hundred kilometers;

· “MCS” refers to Multi-Cast Switch;

· “MPEG-2” refers to the Moving Picture Experts Group standard for compressed coding of moving pictures and associated audio information;

· “Network Products and Solutions” collectively refers to all products sold by us for use in optical communications networks and a variety of other applications that are designed for use at data rates that are less than 100Gbps, including 40G, 10G and lower data rates. These products include certain passive products that do not explicitly have a data rate specification, but that are most commonly used in networks at these data rates. From 2015 onward, Network Products and Solutions includes products sold by us and designed for use at 40G that, prior to 2015, were included with High Speed Products;

· "NLW" refers to Narrow Line Width;

· "PAM" or "PAM4" refers to Pulse Amplitude Modulation or PAM with four amplitude levels;

· "petabytes" refers to one million billion bytes;

· "PIC" refers to Photonic Integrated Circuit;

· "PLC" refers to Planar Lightwave Circuit;

· "PON" refers to a Passive Optical Network;

· "PSM" or "PSM4" refers to Parallel Single Mode or PSM with four parallel lanes or fibers;

· "QSFP" refers to 40G and 100G Quad Small Form-factor modules that are pluggable into standard industry interfaces for switches, routers and other telecommunications equipment;

· "ROADM" refers to Reconfigurable Optical Add Drop Multiplexer;

· "SDN" refers to Software Defined Networks;

· "SFP+" refers to 10G Small Form-factor modules that are pluggable into standard industry interfaces for switches, routers and other telecommunications equipment;

· "U.S. GAAP" refers to generally accepted accounting principles in the United States;

· "WDM" refers to Wavelength-Division Multiplexing and is a technology that combines multiple channels onto a single fiber using different wavelengths, or colors, of light;

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“well-characterized” refers to the ability to predict the outcome of manufacturing processes based upon known statistics of various manufacturing inputs; and

· “WSS” refers to Wavelength Selective Switch.

Unless the context indicates otherwise, we use the terms “NeoPhotonics,” “we,” “us,” “our” and “the Company” in this Annual Report on Form 10-K to refer to NeoPhotonics Corporation and, where appropriate, its subsidiaries.

BUSINESS

Overview

We develop, manufacture and sell optoelectronic products that transmit, receive and switch high speed digital optical signals for communications networks. We focus on growth in our 100Gbps (“100G”) and beyond products and we report our product group as “High Speed Products” and “Network Products and Solutions”. High Speed Products includes products designed for 100G and beyond for telecom and datacenter or content provider networks and applications. Network Products and Solutions comprises all products designed for applications below 100G, and includes 40G products. This group also includes passive optical products that do not have a specific data rate and are generally used in 10G and other low speed networks. 100G networks are among the highest growth segments of the optical communications market, supporting the rapid expansion of telecom backbone and content provider networks and accommodating increased mobile traffic. The high speed 100G and beyond market, which requires advanced photonic integration technology, is the core focus of our strategy.

Our Advanced Hybrid Photonic Integration technology progressively increases performance, reduces cost and reduces size of our products. This technology is an enabler to the development and manufacturing of products for 100G and beyond applications. In addition, the cost reductions and performance increases enabled by this technology are required for the growth of network capacity.

Our 100G and beyond products require our Advanced Hybrid Photonic Integration technology. We produce photonic integrated circuits (PICs) that comprise both arrayed and individual photonic functional elements using optimized materials systems and processes from our in-house Silicon, Indium Phosphide and Gallium Arsenide wafer fabrication. These individual PICs from different materials are then combined using our hybrid integration technology to make complete products, such as our Integrated Coherent Receiver (ICR) for 100G coherent transport applications.

According to Infonetics, the percent of WDM system revenue that is attributable to 100G network applications has grown from 12% of this market in 2012 and is forecasted to grow to 52% of this market in 2016.

For telecom and inter-datacenter interconnections Coherent transmission is the technology of choice, providing an efficient path for transition from 100G to 400G data rates. For intra-datacenter interconnections, the release of 25G switches, itself part of a full upgrade cycle in the datacenter, is rapidly driving data lanes to 25G data rates and interconnections to use single mode fiber and single mode lasers.

Service and content providers are demanding increasing levels of network capacity from their communications infrastructure investments in order to meet their growing network bandwidth needs. These applications utilize optical products in the switching, routing and transport systems they provide to service and content providers globally as the build, operate and expand their networks.

Content providers increasingly design, build and operate their own datacenters, wide area networks and related optical network elements. This trend expands the potential demand for our products beyond the traditional providers of communications equipment. Our integration technologies provide methodologies for creating multiple functions in individual components, thereby reducing costs, saving space and lowering power. In addition, the increasing use of 25G data lanes in client side telecom networks and in intra-datacenter connections is directly creating new demand for the range of 25G devices and high speed IC products we provide.

The introduction of contentionless network architectures that incorporate “Colorless”, “Directionless” and “Contentionless” functionality is rapidly gaining momentum. The need to eliminate contention is being driven by the move to “software defined networks” or SDN, which is important to both telecom networks and content provider networks. A “contentionless” architecture in coherent networks uses both traditional “Wavelength Selective Switches” and newer “Multicast Switches”, which we supply. While it is notable that Verizon has chosen this architecture, it is also the case that a substantial amount of current demand derives from content providers and webscale customers. As one or more multicast switches are deployed initially with each ROADM node, and then additional multicast switches are deployed over time as traffic growth demands, networks are enabled to expand as needed.

The percentage of our total revenue derived from our High Speed Products (100G and beyond) increased to 58% in the year ended December 31, 2015, up from 42% in the year ended December 31, 2014, reaching $195.8 million of revenue in the year ended December 31, 2015. Since 2011, our High Speed Product revenues have increased at a compound annual growth rate (CAGR) of 182% and since 2012 revenues from these products have increased at a CAGR of 47%.

The 100G optical module and component market is growing rapidly, and it is steadily becoming a larger part of the total optical module and component market. At the same time, we are reducing production of certain of our product offerings for slower speeds that do not have good prospects for high growth and reasonable profitability. We continually seek to drive down our cost of goods, and are continuing to implement initiatives that are designed to reduce our infrastructure and operating expenses and to strengthen our balance sheet.

We sell our products to the world’s leading network equipment manufacturers, including Alcatel-Lucent SA (which was acquired by Nokia Corporation in January 2016), Ciena Corporation, Cisco Systems, Inc. and Huawei Technologies Co., Ltd . These four companies are among our largest customers and together with emerging content developers and datacenter operators are the focus of our strategy due to their leading market positions. These four companies accounted for approximately 79% of our revenue in 2015 and approximately 68% of our revenue in 2014.

We have research and development and wafer fabrication facilities in San Jose and Fremont, California and in Tokyo, Japan that coordinate with our research and development and manufacturing facilities in Dongguan, Shenzhen and Wuhan, China and Ottawa, Canada. We use proprietary design tools and design-for-manufacturing techniques to align our design process with our precision nanoscale, vertically integrated manufacturing and testing. We believe we are one of the highest volume PIC manufacturers in the world and that we can further expand our manufacturing capacity to meet market needs.

In October 2011, we acquired Santur Corporation (Santur), a leading producer of tunable lasers and of 100G transceiver modules. Santur’s capabilities included array DFB (distributed feedback) lasers, silicon photonics and photonic integration of such active elements as lasers, modulators and photodiodes.

In March 2013, we acquired the optical component business unit of LAPIS Semiconductor Co., Ltd., located in Japan, now known as NeoPhotonics Semiconductor, which is a leading producer of high performance communications lasers, photodiodes and optical control electronic devices. NeoPhotonics Semiconductor was built over 30 years as part of OKI Electric, and earned a reputation as a leading developer and supplier of the highest speed optoelectronic devices. This business produces high speed EML lasers and photodiodes from Indium Phosphide, and semiconductor drivers and high sensitivity amplifiers from Gallium Arsenide.

In January 2015, we acquired certain assets and assumed certain liabilities of EMCORE Corporation’s (EMCORE) tunable laser product lines. The EMCORE ultra narrow linewidth tunable laser products are used in the industry’s highest speed applications and have strong complementary with our highest speed and most sensitive receiver products at speeds of 400G and beyond.

We believe our technology is well positioned to serve the highest speed and most demanding applications. These three acquisitions, together with other internal developments, and acquisitions conducted prior to 2011, continue our path spanning more than ten years to develop complete Advanced Hybrid Photonic Integration capabilities.

In November 2015, we acquired the assets of EigenLight Corporation (EigenLight) and their precision optical power monitoring technology and product lines. These optical power monitors are among the highest performance devices of their class and are used in high speed optical transmission systems together with other NeoPhotonics products. As a result, we see strong complementary with our existing product suite in applications having data rates at 40G, 100G and beyond.

Industry Background

The realm of communications, having become almost entirely digital, has moved from electronic signals over copper wire to optical signals over thin glass fibers, which achieves the speed and capacity necessary for the current and future communications market.

Increasingly, the most ubiquitous data link to users is via mobile devices through broadband wireless access. Smartphones now incorporate the most sophisticated and powerful applications which were developed at great cost over the last four decades for consumer electronics. Originally priced in the $100s, or $1,000s or $10,000s for earlier computing platforms, these applications, when migrated onto smartphones, are usually priced at cents to a few dollars per application. As cost performance has improved for applications by many orders of magnitude over the four decades since the introduction of the personal computer, so too has end user hardware advanced many orders of magnitude in cost performance, while network data rates have also increased a comparable magnitude.

Further the deployment of networks has rapidly expanded from being the domain of telecom service providers to today's deployment rate by enterprises and content providers.  The rapid rise of internet traffic that is going through mega datacenters operated primarily by leading content companies including Amazon, Google, Microsoft, Apple and Facebook has created a large and rapidly growing new market for optical modules and components in general, but more specifically for high speed optical modules and components.

This new era of connectedness is increasingly universal and demands that the capacity of the digital communications networks must increase exponentially. Smartphones and related wearable devices have emerged as the vehicle connecting the entire digital world, with more than one billion current smartphone users and a rapidly increasing volume of wearables. Not only are more people connected to the mobile web, they are connecting at increasingly higher data rates requiring higher bandwidths. Wireless network deployments have progressed from second generation (2G) to third generation (3G) to fourth generation (4G/LTE) and moving toward fifth generation (5G) to provide end-users ever-increasing download speeds. Fiber to the Home (FTTH) connections have also continued apace, with more than 100 million homes receiving such service, according to the FTTH Council, and with download speeds reaching as high as 1 Gbps.

Industry Growth Dynamics

The revolution in the power of low cost computing devices is associated with Moore's Law. Moore's Law refers to an observation made by Intel co-founder Gordon Moore in 1965 that the number of transistors per square inch on integrated circuits had doubled every two years since their invention and a prediction that this trend would continue. In the domain of optical communications, a similar revolution, progressing at a similar rate, is driven by the increased speed, smaller size and lower cost achieved by photonic integration.

Bandwidth capacity of communications networks continues to expand at a rapid rate. According to Infonetics, total deployed telecom bandwidth capacity is expected to grow at a compound annual growth rate of 32% from 2013 to 2018, reaching more than 50 petabytes per second in 2018, while total deployed datacenter bandwidth capacity is expected to grow even faster, at a compound annual growth rate of 44% from 2013 to 2018 and reaching more than 900 petabytes per second in 2018.

According to Infonetics, datacom 100G transceiver revenue is projected to grow at a 29% compound annual growth rate from 2013 to 2018, reaching $1 billion in 2018. In contrast, revenue from slower speed products such as 10G datacom transceivers is forecast to grow at only a 2% compound annual growth rate from 2013 to 2018.

Digital Optical Communications Market Structure

The digital optical communications market has two main sectors, telecom (long haul, metro, access) and datacom. The telecom sector includes the global backbone of Long Haul and Metro communications. It also includes local access links to end users. Telecom, with its historical background as a public utility, is driven by reliability, telecom communications protocols and standards, and the long life of its infrastructure capital investment. The service life objective for products used in telecom infrastructure historically has been 20 years.

The Long Haul telecom sector is the first adopter of the highest speed and most advanced communication links, which migrate over time into the Metro sector as costs are reduced such that they are economical in the shorter Metro network links, with its commensurate lower traffic densities prior to aggregation for Long Haul transport.

The datacom market can be described primarily as an “enterprise” market, in contrast to the historical public utility nature of the telecom market. In addition to the broad enterprise market, datacom also includes data centers and infrastructure for cloud based services. Companies, including Amazon, Apple, Facebook, Google and Microsoft, are steadily increasing investments in very large datacenters as they implement cloud-based “big data” services that can be crowd-sourced and crowd-distributed, and that utilize machine-to-machine and inter-datacenter transactions to power the mobile web. Such very large datacenters are an emerging high growth market for “big pipes” using dedicated 100G and beyond digital optical connections from datacenter to datacenter (inter-datacenter and datacenter interconnect, or DCI), datacenter to telecommunications carrier and within datacenters (intra-datacenter).

Generations of hardware installations for datacom, such as server farms and "big data" network storage facilities, have relatively short lives, typically about five years, as computing and storage technology advances rapidly. Therefore, the datacom market for optoelectronic devices generates more rapid changes in form factors, energy efficiency and compactness than the telecom market.

The datacom market is often the most cost sensitive sector of digital optical communications, and therefore it begins to adopt leading edge speeds after those speeds penetrate the Metro sector of the telecom market segment.

From this market structure, it can be concluded that a technology leader must achieve a leadership position in the Long Haul telecom sector as the basis for commercializing the most advanced technology and then extending that technology to additional applications in datacenters and other datacom applications.

Digital Optical Communications Network Equipment

The structure of the industry that supplies the network equipment for the telecom digital optical communications network has largely concentrated down to leading vendors which include: Alcatel-Lucent (which was acquired by Nokia Corporation in January 2016), Ciena, Cisco, Coriant (including Tellabs, which was acquired by Coriant in 2013), Fujitsu Limited, Huawei, Infinera, NEC and ZTE.

Major suppliers of network equipment to the datacom and datacenter market include Alcatel-Lucent (which was acquired by Nokia Corporation in January 2016), Brocade, Cisco, Huawei and Juniper. At the optical module and component level, Broadcom Ltd. (resulting from the acquisition of Broadcom by Avago Technologies), Finisar and Sumitomo Device Innovations are leading merchant suppliers and some larger network equipment companies like Huawei and Cisco have divisions or affiliates (such as HiSilicon in the case of Huawei) that are captive suppliers. Furthermore some of the largest investors in datacenters, for example, Google, are beginning to design and source their own optical network systems equipment from Asia-based OEMs. While the speeds for most of the datacom market today are at 10G, recent changes in switch architectures and interconnection has moved most new installations to higher 25G speeds, plus a fast growing 100G module market has emerged that provides "big pipes" connecting datacenters at 100G and even 200G data rates.

A single optical fiber can carry nearly 100 individual wavelengths (colors), each of which can now support 100 gigabits per second of capacity. Each of these wavelengths requires a 100G transmitter and receiver, which can be tuned to any of the 100 separate channels. Thus, using 100G coherent technology and industry standard compression (MPEG-2), a single fiber can carry approximately 500,000 individual high definition full motion movies simultaneously over one fiber.

The main photonic modules required for digital optical communications are transmitters, receivers and, where the network is branched, optical switches. Transmitters and receivers are often combined into single modules which are called transceivers. At the high end, such as Long Haul, a transmitter and receiver can be paired and combined with signal processing electronics to error correct and restore degradation which affects the signal after traveling long distances, in which case the unit is referred to as a transponder. For high speeds each of these product types requires photonic integration at the most advanced and complete level.

Switching products, which switch different colors, or signal channels, down different branches of the network, have thus far been Reconfigurable Optical Add/Drop Multiplexers (ROADMs) consisting of Wavelength Selective Switches (WSSs). For 100G coherent networks, a new type of optical switch, the Multi-Cast Switch (MCS), has been developed and introduced to eliminate contention in 100G coherent switching. The need to eliminate contention is being driven by the move to “software defined networks” or SDN, which is important to both telecom network requirements and content provider networks. A “contentionless” architecture uses both traditional “Wavelength Selective Switches” and the new MCS, which is supplied by NeoPhotonics. One or more MCSs are deployed initially with each ROADM node, and then additional multicast switches are deployed over time as traffic growth demands, allowing networks to efficiently expand as needed. This type of switch is Colorless, Directionless, Contentionless (CDC), and its function is optimized for 100G and beyond coherent networks.

Digital Optical Communications Technology Background

Advances in cost performance in photonic integration have followed a path that has been similar to electronic integrated circuits.

The main objectives for technology advances in electronic digital integrated circuits and in integrated optical digital devices are similar, and are based on the drive towards lower cost and higher performance. In integrated optics these main objectives also include higher speed, lower power, smaller or denser form factor, and lower cost.

In both electronics and optics these objectives require ever increasing integration and miniaturization. In optics, however, advanced hybrid integration is required for the highest performance products. Hybrid integration for digital optical devices incorporates multiple types of materials substrates, rather than just one, as in silicon, for an electronic integrated circuit.

Complete advanced photonics integration capability requires at least three materials substrate systems: Indium Phosphide for active devices such as lasers, photodiode detectors, modulators, and amplifiers; Silicon or planar doped silicon dioxide (silica) for wave guides, filters, interferometers and other passive devices; and Gallium Arsenide or Silicon Germanium for drivers and control functions at the speeds necessary for 100G. The integration of more than one material substrate is called hybrid integration, and Advanced Hybrid Photonic Integration enables products in the 100G and beyond domain.

Advent of Coherent Transmission

The recent advent of coherent digital optical transmission has increased the native capacity of a fiber optic link tenfold, versus a transmission modulation of simple on/off such as in 10G WDM networks. Coherent transmission modulation encodes information via phase and polarization, and the permutations of these variables are many times greater than on/off.

To create a detectable error-free signal in the coherent modality requires that each color (wavelength) transmitted be much purer than would be required for lower speed protocols. The primary enabler of ultra-narrow line width (NLW), that is, ultra pure color, is a new generation of the most advanced lasers. These NLW lasers must be paired with a new generation of receivers that decode phase and polarization through comparison with another NLW laser in a PIC-interferometer. Ultra-narrow line width lasers are built on Indium Phosphide substrates while the receivers utilize a Silicon or Indium Phosphide interferometer and Indium Phosphide photo detectors.

These 100G and beyond coherent optical transmission devices require tighter tolerances of material thickness and other critical dimensions than do components operating at 10G. For 100G, a new generation of technologies, including faster Gallium Arsenide drivers, is required to suitably process transmission signals in both the laser transmitter or the detector and receiver. As transmission speeds move to 200G and 400G through higher order modulation protocols and higher symbol rates, even higher performance optical components are required. We believe we have established and characterized the full range of driver, laser and detector technologies required for implementing 100G, 200G and 400G coherent systems, a capability that we believe is held by only a few companies.

Our Advanced Hybrid Photonic Integration Platform

We believe we have developed or acquired all necessary capabilities required for producing high performance Advanced Hybrid Photonic Integrated optoelectronic devices for the most stringent performance requirements and operating conditions. Our multi-material platform leverages:

Indium Phosphide (InP): Indium Phosphide is used to produce efficient lasers, sensitive photo detectors and modulators in the wavelength window typically used for telecommunications, i.e. 1.55 micron wavelengths, as it is a direct bandgap III-V compound semiconductor material. InP is the most important material for the generation of laser signals and the detection and conversion of those signals back to electronic form.

Silicon (Silicon Photonics or Planar Lightwave Circuits): Silicon is very inefficient in generating or detecting light in the telecom wavelength window as it is an indirect bandgap semiconductor material. Consequently, waveguides of Silicon or doped silicon dioxide (silica) exhibit very low optical loss and are ideal for switching, filtering or interferometric applications. We are now developing modulators using Silicon waveguides.

Gallium Arsenide (GaAs): Gallium Arsenide can operate at very high speeds and is well suited to make analog integrated circuit drivers for high speed lasers and modulators due to its high electron mobility. GaAs is a direct bandgap III-V compound semiconductor material, but unlike InP, GaAs does not lase in the telecom wavelength window.

Silicon Germanium (SiGe): Silicon Germanium is an alloy of Silicon and Germanium that is used to manufacture mixed signal and analog integrated circuits and is well suited for high speed amplifiers used in 100G systems. SiGe devices are made using standard silicon processing techniques in commercial foundries.

We have developed design, integration and manufacturing approaches and techniques to produce advanced, high speed integrated solutions leveraging each of these in-house materials technology platforms.

Hybrid Photonic Integration

| Products | Indium Phosphide | Silicon/Silica | Gallium Arsenide/Silicon Germanium |
|---|---|---|---|
| Integrated Coherent Receiver | | | |
| 100G Transceiver | | | |
| Multi-Cast Switch | | | |
| Narrow Line Width Tunable Laser | | | |

100G EML Lasers/Photodiodes/Drivers

Coherent Modulator/Driver

Our Strategy

· Continue innovating to develop industry-leading comprehensive technology for Advanced Hybrid Photonic Integration. Over the past three years, we have strengthened our technology platforms for comprehensive advanced photonic integration, in part from acquisitions and in part from internally funded development. We expect to continue to combine our mixed platform approach to design and produce the highest performance optical signal processing solutions.

· Capture major customer share for the most advanced modules and components at the top suppliers of state of the art network equipment. We intend to deepen our relationships with our strategic customers by increasing design wins in their systems, including Alcatel-Lucent (which was acquired by Nokia Corporation in January 2016), Ciena and Huawei and certain others, which are market leaders in 100G coherent systems.

· Offer complete optoelectronic solutions for 100G and beyond for leading edge telecom and datacom market segments. We expect to continue to introduce Coherent Transmitter products that are optimized for the highest speeds and introduce Multi-Cast Switches so that our product line will include each of the major types of the most advanced products.

· Achieve growth in integrated optical applications that leverage our core technology of advanced optoelectronic products. We intend to provide state of the art products and solutions to industry leading customers to advance our goal of achieving continuous improvement in operating performance, profitability and growth.

· Focus on high growth segments that leverage our leadership in Advanced Hybrid Photonic Integration and that contribute to our profitable growth. We plan to continue to develop our products and solutions to capture new opportunities, such as emerging 400G connections in both carrier networks and within and between large datacenters.

· Extend our product line into additional segments of the network that will benefit from ultra-high speed performance. We intend to penetrate the emerging market for 100G connections both within and between mega-datacenters. In this segment we are targeting major users and builders of datacenters and datacenter equipment, such as Amazon, Apple, Facebook, Google and Microsoft, as they develop some of their own network equipment. We believe our technology and product line is well positioned to penetrate this market.

· Pursue acquisitions that extend our leadership position in advanced optoelectronic integration. We may opportunistically pursue acquisitions that we believe provide complementary technology and that can accelerate our growth and strengthen our market position.

Our Technology

We have developed expertise in the design, large-scale fabrication, high-volume module manufacturing and commercial deployment of our Advanced Hybrid Photonic Integration products and technologies. The process of designing and manufacturing advanced optoelectronic integrated devices in high volume with predictable, well-characterized performance and low manufacturing costs is complex and multi-faceted. We have developed the technologies, using multiple materials platforms for photonic integration, that are required to design and manufacture complex, high-performance optoelectronic components, modules and subsystems for fiber optic networks. The basic elements of our technology are as follows:

Mixed-material platform and optoelectronic integration technology. We utilize a set of proprietary integration platforms that provide optoelectronic functionality on silicon and other integrated compound semiconductor substrates including Indium Phosphide, Gallium Arsenide and Silicon Germanium and integrated combinations of these platforms. We utilize micron and sub-micron scale structures of multiple silicon dioxide and Indium Phosphide waveguides to fabricate optoelectronic functional elements such as lasers, detectors, modulators, interferometers, integrated optical filters, switches and variable attenuators. We integrate these functional design elements into optoelectronic devices to achieve a desired functionality and specification that is incorporated into our products. Similarly, we use Gallium Arsenide and Silicon Germanium integration platforms for drivers, amplifiers and related high-speed electronic control functions for our integrated optoelectronic devices.

Advanced Hybrid Photonic Integration. Through precise fabrication and positioning of physical features, we can integrate numerous different optoelectronic devices, which are fabricated on separate wafers from different semiconductor and related materials, matching the material to the function to create improved performance by using the highest performance elements of each type. For example, our hybrid integration allows us to integrate active devices, such as photodiodes or lasers fabricated using Indium Phosphide, with high-performance passive devices, such as interferometers, switches, routers and filters, fabricated on silicon, and to mate electronic amplifiers made with Silicon Germanium or drivers made with Gallium Arsenide directly to optical elements made with Silicon or Indium Phosphide.

This ability to combine specific functional elements out of optimized materials not only allows for very compact and low power components, but also through the intimate coupling of different elements, makes possible completely new functions. An example of this multi-platform architecture is found in the coherent optical communications domain where we intimately couple a passive interferometer with separate quadrature components carrying information and with photo detectors to turn a high speed optical signal into data-rich electrical signals for processing.

Hardware and firmware integration. We also sell our products as modules and subsystems which contain electronic hardware and firmware controls that interface directly with our customers' systems. We design the electronic hardware and develop the firmware for control of our optical products and subsystems, and so that our optical products meet customer specifications.

Devices, Components, Modules & Subsystems. We are vertically integrated from the design of photonic integrated devices through manufacturing in our own wafer fabs and assembly and test in our own factories. We design and manufacture modules and subsystems that combine our key products with other elements to offer customers a complete solution. We sell products at each level of product utility and can achieve the highest performance and capture the greatest value. We utilize some contract manufacturers for assembly operations where it is cost effective.

Fabrication and manufacturing processes. We have developed expertise in the technology domains relevant to high-volume fabrication and manufacturing of our optoelectronic integrated circuit products using wafer-scale processes and including the complex interaction of electro-optic, thermal-optic and mechanical micro-thermal features. Our complex manufacturing steps are analogous to many processes used in the semiconductor industry. Each integrated element is tested and characterized using our proprietary test equipment before incorporation into our products.

Circuit design and design-for-manufacturing tools. We use a comprehensive set of proprietary as well as industry standard software design tools, to model relevant geometries, dimensions and thermal management for a broad range of photonic devices. With these tools, we develop products with minimal design iterations and manage precision manufacturing to a narrow range of high performance specifications.

Our Products

We develop and manufacture Transmitter Products, Receiver Products and Switch Products that are used in ultra-high speed digital optical communications, high speed switching and provisioning, and access connections for wireless and fiber-to-the-home communications networks. We combine our transmitter and receiver products into Transceiver modules. Our Switching Products, such as Multi-Cast Switches, are used primarily in ROADM nodes that dynamically and efficiently allocate bandwidth to adjust for fast changing traffic patterns and for provisioning software defined networks. Our products can be categorized into groups, including High Speed Products for ultra high speed 100G and beyond applications, including in coherent networks, and Network Products and Solutions, for lower speed networks including Access, 10G networks and other telecom products.

High Speed Products: We produce transmitter and receiver products as well as switching products for 100G and beyond optical transmission applications over distances of 2 to 2,000 kilometers. In addition we combine 100G and beyond transmitter and receiver products into pluggable modules for both line side coherent and client side datacenter applications. All of our high speed 100G and beyond products are based on our Advanced Hybrid Photonic Integration technology. This technology supports encoding 100 gigabits or more per second of information for transmitting over a single channel and decoding the information at the receiver. Through 2014, our use of the term High Speed Products included products designed for use at 40G rates.  From 2015 onward, High Speed Products will refer exclusively to products sold by us and designed for use at 100Gbps or higher data rates.

For long distance transport of 100 to 2,000 kilometers, we design and manufacture optical components for coherent systems, which manipulate light to encode ten times or more the amount of information in the same wavelength channel than is possible with traditional methods. This manipulation can only be accomplished using advanced photonic integration to intimately couple functional elements together. Our Coherent Products include Narrow Linewidth Tunable transmit and local oscillator lasers (NLW-ITLA), which generate the ultra-pure wavelength, or color, necessary for coherent transmission, and Integrated Coherent Receivers (ICRs), which decode the phase and polarization encoded coherent signal. We support platforms for Narrow Linewidth Tunable transmission based on ECLs.

We are introducing new generations of pluggable coherent modules which combine our NLW-ITLA with our ICR and with a coherent modulator. Our first such product is a new CFP2-ACO module, which will be first sold in Class 3 configuration. We expect to be shipping these products in 2016.

We also sell 100G products for the client side and datacenter applications, including our CFP2 pluggable module, as well as components, such as EMLs and high-speed drivers, which are used in 100G CFP and CFP2 pluggable modules.

We are extending this product range with our new 100G QSFP28 modules, which are expected to ramp to volume shipments in the middle of 2016 for high-density, telecom-client and datacenter applications.  Further, we are developing 400G client side modules in CFP8 configurations that will be based on our leading 28 Gbaud lasers at 50 Gbps using a PAM4 architecture.  Taking this development one step further, we will also introduce an ultra-high-speed 56 Gbaud EML and driver IC set which will enable single wavelength PAM4 100G applications as well as eventually four wavelength 400G intra-datacenter transmission.

Also, for mega-datacenter applications we have introduced a series of new high power laser diode array products designed to power short reach Silicon Photonics based 100G intra-datacenter interconnections using which use parallel single-mode architectures, or PSM4.

We provide a proprietary switching solution for 100G coherent systems such as our Multi-Cast Switch (MCS) product line. Our 4x4 and cascadable 4x16 Multi-Cast Switch modules for CDC ROADMs efficiently allocate bandwidth and signal routing in 100G and higher data rate networks. The Multi-Cast Switch provides scalable contentionless operation to achieve the highest traffic management efficiency, optimizing traffic flows in coherent transmission systems. Our MCS uses our PLC photonic integration platform and consists of a complex array of switches, waveguides, taps, crossings and other functional elements manufactured on Silicon wafers using standard semiconductor processing equipment.

Network Products and Solutions: We design and manufacture a broad range of products for optical communications networks and a variety of other applications, where the networks operate at speeds less than 100G. We offer a wide range of application-specific passive optical functionalities in modules or sub-system configurations. These include arrayed waveguide grating based drop modules for multiplexing and demultiplexing in conventional ROADM nodes as well as variable optical attenuators and tap power monitors for network monitoring and control. We combine several of these functions together in subsystems such as our VMUX, which combines up to 48 variable optical attenuators and an arrayed waveguide grating multiplexer in a single compact unit.  In addition, many of these products provide high-bandwidth connections to base station antennas for mobile devices and to people and machines over fixed and wireless networks. As consumer connectivity speeds have increased through the transitions from 2G to 3G to 4G/LTE, the bandwidths necessary to aggregate and connect wireless traffic into the backbone network, including Mobile Backhaul, have also increased. We offer 10G EMLs, laser drivers, modulator drivers, photodiode receivers, as well as complete transceiver modules, SFP+ modules and bidirectional transceiver modules designed with the necessary bandwidth for connecting 4G/LTE wireless base station antennas. From 2015 onward, Network Products and Solutions will include products sold by us and designed for use at 40G that, prior to 2015, were included with High Speed products.

For applications under 100G, we also design and produce Switch Products which are manufactured using our Silicon wafer based waveguide integration platform. These products include Drop Modules used in current ROADM nodes.

In addition to products for fiber optic communications, we also sell products for test and measurement, instrumentation, industrial and research applications.

Our Infrastructure, Intellectual Properties and Our Employees

We have product development and product sustaining engineering teams in Silicon Valley (San Jose and Fremont, California), Tokyo, Japan, and Shenzhen and Wuhan, China. In our Silicon Valley and Tokyo facilities we conduct research, product development and product roadmap definitions, including for our PIC products. In our Shenzhen facilities, we conduct new product development, manufacturing and process engineering, quality control, continuous improvement and cost reduction relating to product manufacturing, assembly and test. In our Wuhan, China and Ottawa, Canada facilities we conduct new product development.

We seek to establish and maintain proprietary rights in our technology and products through the use of patents, copyrights and trade secret laws. We have filed applications for patents to protect certain of our intellectual property in the U.S. and in other countries, including Australia, Canada, Japan, Korea, Hong Kong, China, Russia, India, Taiwan and several European Union countries. As of December 31, 2015, we had over 650 issued patents, expiring between 2016 and 2033 covering various aspects of our technologies.

We have manufacturing operations in the U.S., Japan, China and Russia. Our wafer fabrication operations are located in our San Jose and Fremont, California facilities, as well as in our Japan facilities, and include chip design, clean room fabrication, integration and related facilities for PICs. Our manufacturing, assembly and test operations are located in our Shenzhen and Dongguan, China facilities, and in Silicon Valley, California. In addition we have established manufacturing capability in Russia.

As of December 31, 2015, we had 2,304 employees and non-employee contractors, of which 267 were based in the U.S., 1,889 in China, 109 in Japan, 30 in Russia and Europe and 9 in Canada.

None of our U.S. employees are represented by a labor union. Chinese law allows that all employees be members of a union that is overseen by the Chinese government. The majority of the employees in our Japanese subsidiaries are also members of a union. We have never experienced employment-related work stoppages and we consider our employee relations to be good.

Our Customers

In 2015, 2014 and 2013, our ten largest customers accounted for 91%, 88% and 86% of our total revenue, respectively. In 2015, Huawei, together with its affiliate HiSilicon Technologies Co. Ltd. (collectively “Huawei”), and Ciena Corporation accounted for 44% and 21% of our total revenue, respectively. In 2014, Huawei, Ciena Corporation, and Alcatel-Lucent SA accounted for 38%, 15% and 10% of our total revenue, respectively. In 2013, Huawei, Ciena Corporation, and Alcatel-Lucent SA accounted for 27%, 16% and 14% of our total revenue, respectively.

Our Sales and Marketing

We operate a sales model that focuses on alignment with our customers through coordination of our sales, product application engineering and manufacturing teams. Our sales cycles typically require a significant amount of time and a substantial expenditure of resources before we can realize revenue from the sale of products. The length of our sales cycle, from initial request to design win, is typically 6 to 12 months for an existing product and 12 to 18 months or longer for a new product.

We use a global direct sales force based in North America, Europe, Russia and Asia, including China and Japan. These individuals work with our product application engineers, and product marketing and sales operations teams, in an integrated approach to address our customers' current and future needs. We believe that these collaborative engineering activities provide us insight into our customers' broader and longer term needs. We expect to continue to add sales and related support personnel as we grow our business.

Our marketing team focuses on product strategy, product development, roadmap development, new product introduction processes, program management, product demand stimulation and assessment, and competitive analysis. Our marketing team also seeks to educate the market about our products by communicating the value proposition and product differentiation in direct customer interactions and presentations and at industry tradeshows and at technical conferences.

Our Research and Development

We have invested and expect to continue to invest significant time and capital into our research and development operations. Research and development expenses were $44.5 million, $46.0 million and $45.9 million in 2015, 2014 and 2013, respectively.

Our Suppliers

We use suppliers from the U.S., China, Japan and other locations. Although there are multiple sources for most of the component parts of our products, some components are sourced from single or, in some cases, limited sources. We typically do not have written agreements with the majority of these component manufacturers to guarantee the supply of the key components used in our products. We also use contract manufacturers in Japan, China and other Asia locations for the backend manufacturing of certain of our products.

Our Backlog

Sales of our products generally are made pursuant to purchase orders, often with short lead times. These purchase orders are typically made without deposits and may be subject to revision or cancellation. The quantities actually purchased by our customers, as well as the shipment schedules, are frequently revised to reflect changes in our customers' needs and in our supply of products.

Certain of our customers use vendor managed inventory (VMI) arrangements under which we manufacture at a customer's request, then ship to its facility or a designated contract manufacturer for the customer, to be held until it is used by the customer. We maintain title to vendor managed inventory until the customer uses the inventory. At that time the customer takes title to the products, it reports the consumption to us and we recognize the revenue for the product sale. The increased use of VMI by our customers may increase the possibility of changes to our backlog since customers may consume VMI more quickly or more slowly than we had planned.

Because of the possibility of changes in delivery or acceptance schedules, cancellations, modifications or price reductions with limited or no penalties and the increasing use by customers of VMI, we do not believe that backlog is a firm or reliable indicator of our future revenue and do not rely on backlog to manage our business or evaluate our performance. Changes in the amount of our backlog do not necessarily reflect a corresponding change in the level of actual or potential sales.

## Seasonality

Historically, our first quarter revenue is generally seasonally lower than the rest of the year primarily due to lower capacity utilization during the holidays in China and the impact of typical price negotiations during this period. This historical pattern should not be considered a reliable indicator of our future revenue or financial performance.

## Financial Information by Geographic Region

For information regarding our revenue and long-lived assets by geographic region, see Note 16 to the Consolidated Financial Statements. For risks relating to our operations see “Item 1A. Risk Factors” and particularly the risks under the caption “Risks related to our operations in China” and the risk factors “Our future results of operations may be subject to volatility as a result of exposure to fluctuations in foreign exchange rates, primarily the Chinese Renminbi (RMB) and Japanese Yen (JPY) exchange rates”, “We face a variety of risks associated with international sales and operations, which if not adequately managed could adversely affect our business and financial results” and “We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets”.

Competition

The market for optical communications systems is highly competitive. While no single company competes against us in all of our product areas, our competitors range from large international companies offering a wide range of products to smaller companies specializing in narrow markets. We believe the principal competitive factors in this market are:

· ability to provide leading edge technologies for high speed communications;

· ability to design and manufacture high quality, reliable products, including customized solutions;

· breadth of product solutions;

· price to performance characteristics;

· financial stability;

· ability to quickly and consistently produce in high volume and high quality;

· ability to meet customers' specific requirements;

· ability to meet customer lead time demands; and

· depth of relationships with and proximity to key customers globally.

We believe we compete favorably with respect to these factors. We believe our principal competitors include Accelink Technologies Co., Ltd., Broadcom Limited (formerly Avago Technologies Limited), Finisar Corporation, Innolight Technology Corporation, Lumentum Holdings, Inc. (formerly JDS Uniphase Corporation), NTT Electronics Corporation, Source Photonics, Inc., Oclaro, Inc., Sumitomo Electric Device Innovations, Inc., and others.

Our competitors may have substantially greater name recognition and technical, financial and marketing resources than we do. Many of our competitors have greater resources to develop products or pursue acquisitions, and more experience in developing or acquiring new products and technologies and in creating market awareness for these products and technologies than we do. In addition, a number of our competitors have the financial resources to offer competitive products at below market pricing levels that could prevent us from competing effectively and which could adversely affect our financial performance.

We also face competition from some of our customers, including Huawei Technologies and its affiliate, HiSilicon Technologies Co., Ltd., who evaluate our capabilities against the merits of manufacturing products internally. These customers may have the ability to manufacture competitive products at a lower cost than we would charge as a result of their higher levels of integration. As a result, these customers may purchase less of our products and there would be additional pressure to lower our selling prices which, accordingly, would negatively impact our revenue and gross margin.

Environmental, Health and Safety Matters

Our research and development and manufacturing operations and our products are subject to a variety of environmental, health and safety laws and regulations in the jurisdictions in which we operate. These regulations govern, among other things, the discharge of pollutants to air, water, and soil; the remediation of soil and groundwater contamination; the use, handling and disposal of hazardous materials; employee health and safety; and the hazardous material content and recycling of our products. We use, store and dispose of hazardous materials in our manufacturing operations and as components in our products. We incur costs to comply with existing environmental, health and safety requirements, and any failure to comply, or the identification of contamination for which we are found liable, could cause us to incur additional costs, including cleanup costs, monetary fines, or civil or criminal penalties, or result in the curtailment of our operations. In addition, environmental, health and safety requirements have become more stringent over time, and changes to existing requirements could restrict our ability to expand our facilities, require us to acquire costly pollution control equipment, or cause us to incur other significant expenses or to modify our manufacturing processes or the contents of our products. Some jurisdictions in which we operate or sell our products have enacted requirements regarding the recycling of waste electronic equipment, and/or the packaging and hazardous material content of certain products. For example, jurisdictions including China and the European Union, among a growing number of jurisdictions, have placed restrictions on the use of lead, among other chemicals, in electronic products, which affects the composition and packaging of our products. The passage of such requirements in additional jurisdictions, or the tightening of standards or elimination of certain exemptions in jurisdictions where our products are already subject to such requirements, could cause us to incur significant expenditures to make our products compliant with new requirements, or could limit the markets into which we may sell our products.

Additionally, increasing efforts to control emissions of greenhouse gases, or GHG, may also impact us. For example, our semiconductor manufacturing operations in California use perfluorocarbons, which are classified as a high global warming potential greenhouse gas. Under California's Global Warming Solutions Act, we designed and installed additional pollution control equipment at our San Jose, California, manufacturing plant to reduce our perfluorocarbon emissions beginning in 2012. As of December 31, 2012 and continuing through December 31, 2015, our San Jose and Fremont, California, manufacturing facilities have maintained compliance with the Global Warming Solutions Act through the monitoring and reviewing of our Greenhouse Gas Emissions including permits issued locally by the Bay Area Air Quality Management District (BAAQMD), and we have submitted reports annually to verify such compliance. In the U.S., the Environmental Protection Agency has announced a finding relating to GHG emissions that may result in promulgation of federal GHG air quality standards. The U.S. Congress has considered various options, including a cap and trade system which would impose a limit and a price on GHG emissions and establish a market for trading GHG credits. China has agreed to join the Copenhagen Climate Accord, a voluntary (and non-binding) GHG agreement. Globally, negotiations for a treaty to succeed the 1997 Kyoto Protocol Treaty are ongoing, and it is not yet known whether (or on what terms) agreement will be reached on a successor treaty. Additional restrictions, limits, taxes, or other controls on GHG emissions could significantly increase our operating costs and, while it is not possible to estimate the specific impact any final GHG regulations will have on our operations, there can be no assurance that these measures will not have significant additional impact on us. In addition, some of our operations might be affected by the physical impacts of climate change. For example, some of our facilities are located in coastal areas that might be vulnerable to changes in sea level.

## Available Information

We were incorporated in the State of Delaware in October 1996 as NanoGram Corporation, and we changed our name to NeoPhotonics Corporation in 2002. Our principal offices are located at 2911 Zanker Road, San Jose, CA 95134, USA and our telephone number is +1 (408) 232-9200. Our website address is www.neophotonics.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K.

We file electronically with the U.S. Securities and Exchange Commission, or SEC, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. We make available on our website at www.neophotonics.com, free of charge, copies of these reports as soon as reasonably practicable after filing these reports with, or furnishing them to, the SEC.

ITEM 1A.RISK FACTORS

Risks related to our business

If spending for communications networks does not continue to grow as expected, our business and financial results may suffer.

Our future success as a provider of modules and subsystems to leading network equipment vendors depends on their continued capital spending on global communications networks. Network traffic has experienced rapid growth driven primarily by bandwidth-intensive content, including cloud services, mobile video and data services, wireless 4G/LTE services, social networking, video conferencing and other multimedia. This growth is intensified by the proliferation of fixed and wireless devices that are enabling consumers to access content at increasing data rates anytime and anywhere. Our future success depends on continued demand for high-bandwidth, high-speed communications networks and the ability of network equipment vendors to meet this demand. We cannot be certain that demand for bandwidth-intensive content will continue to grow in the future. If expectations for growth of communications networks and bandwidth consumption are not realized and investment in communications networks does not grow as anticipated, our business could be harmed.

We are dependent on Huawei Technologies Co., Ltd. and their affiliate HiSilicon Technologies Co., Ltd., Ciena, Alcatel-Lucent SA and our other key customers for a significant portion of our revenue and the loss of, or a significant reduction in orders from any of our key customers may reduce our revenue and adversely impact our results of operations.

Historically, we have generated most of our revenue from a limited number of customers. In the year ended December 31, 2015, Huawei Technologies Co. Ltd., together with its affiliate HiSilicon Technologies Co., Ltd. (collectively “Huawei”), and Ciena Corporation accounted for approximately 44% and 21% of our total revenue, respectively, and our top ten customers represented 91% of our total revenue. In 2014, Huawei, Ciena Corporation, and Alcatel-Lucent SA accounted for 38%, 15% and 10% of our total revenue, respectively, and our top ten customers represented 88% of our total revenue. As a result, the loss of, or a significant reduction in orders from these major customers or any of our other key customers would materially and adversely affect our revenue and results of operations. Adverse events affecting our customers could also adversely affect our revenue and results of operations.

We are under continuous pressure to reduce the prices of our products, which has adversely affected, and may continue to adversely affect, our gross margins.

The communications networks industry has been characterized by declining product prices over time. We have reduced the prices of many of our products in the past and we expect to continue to experience pricing pressure for our products in the future, including from our major customers. When seeking to maintain or increase their market share, our competitors may also reduce the prices of their products. In addition, our customers may have the ability or seek to internally develop and manufacture competing products at a lower cost than we would otherwise charge, which would add additional pressure on us to lower our selling prices. If we are unable to offset any future reductions in our average selling prices by increasing our sales volume, reducing our costs and expenses or introducing new products, our gross margin would be adversely affected.

Our revenues and costs will fluctuate over time, making it difficult to predict our future results of operations.

Our revenue, gross margin and results of operations have varied significantly and are likely to continue to vary from quarter to quarter due to a number of factors, many of which are not within our control. For instance, changes in gross margin may result from various factors, such as changes in pricing, changes in our fixed costs, changes in the cost of labor, changes in the mix of our products sold, changes in the amount of product manufactured versus the amount of product sold over time, and charges for excess and obsolete inventory. It is difficult for us to accurately forecast our future revenue and gross margin and plan expenses accordingly and, therefore, it is difficult for us to predict our future results of operations.

We have a history of losses which may continue in the future.

We have a history of losses and we may incur additional losses in future periods. As of December 31, 2015, our accumulated deficit was $298.5 million. We also expect to continue to make significant expenditures related to the ongoing operation and development of our business. These include expenditures related to the sales, marketing and development of our products and to maintain our manufacturing facilities and research and development operations.

Customer demand is difficult to accurately forecast and, as a result, we may be unable to optimally match production with customer demand, which could adversely affect our business and financial results.

We make planning and spending decisions based on our estimates of customer requirements. The short-term nature of commitments by many of our customers, and the possibility of unexpected changes in demand for their products, reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, cause our manufacturing to be negatively impacted by materials shortages, necessitate higher or more restrictive procurement commitments, increase our manufacturing yield loss and scrapping of excess materials, and reduce our gross margin. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. Conversely, a downturn in the markets in which our customers compete can cause, and in the past have caused, our customers to significantly reduce or delay the amount of products ordered from us or to cancel existing orders, leading to lower utilization of our facilities. Because many of our costs and operating expenses are relatively fixed, reduction in customer demand due to market downturns or other reasons would have a material adverse effect on our gross margin, operating income and cash flow.

Our products are typically sold pursuant to individual purchase orders or by use of a vendor-managed inventory, or VMI, model, which is a process by which we ship agreed quantities of products to a customer-designated location and those products remain our inventory and we retain the title and risk of loss for those products until the customer takes possession of the products. While our customers generally provide us with their demand forecasts and may give us a promised market share award, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. Many of our customers may increase, decrease, cancel or delay purchase orders already in place. We have experienced and expect to continue to experience wide fluctuations in demand from customers using VMI, particularly Huawei Technologies Co., Ltd. and their affiliate HiSilicon Technologies Co., Ltd., even in instances where we have built and shipped products to the customer-designated locations as VMI. In recent periods, there has been an increase in the number of our customers utilizing VMI, which may increase our exposure to risks of wide fluctuations in demand from VMI customer locations. If any of our major customers decrease, stop or delay purchasing our products for any reason, our business and results of operations would be harmed. Cancellation or delays of such orders, as well as fluctuations in VMI utilization by our customers, may cause us to incur an adverse effect on our revenues, as well as adversely affect our overall results of operations.

We are subject to global governmental export and import controls that could subject us to liability, impair our ability to compete in international markets, or restrict our sales to certain customers.

We are subject to export and import control laws, trade regulations and other trade requirements that limit which products we sell and where and to whom we sell our products, especially laser-dependent products. In some cases, it is possible that export licenses would be required from the U.S. or other government agencies outside the U.S. such as, but not limited to, Japan, China or Russia for some of our products in accordance with various statutes. In addition, various countries regulate the import of certain technologies and have enacted laws that could limit our ability to distribute our products. We may not be successful in obtaining the necessary export and import licenses. Failure to comply with these and similar laws on a timely basis, or at all, or any limitation on our ability to export or sell our products or to obtain any required licenses would adversely affect our business, financial condition and results of operations.

Changes in our products or changes in export and import laws and implementing regulations may create delays in the introduction of new products in international markets, prevent our customers from deploying our products internationally or, in some cases, prevent the export or import of our products to certain countries altogether. For instance, if export restrictions or import restrictions were placed on any of our major customers, we could be restricted from selling our products to such customer(s), which could result in an immediate and material reduction in our sales to such customer(s) and adversely affect our business and results of operations. Any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations. In such event, our business and results of operations could be adversely affected.

We face intense competition which could negatively impact our results of operations and market share.

The communications networks industry is highly competitive. Our competitors range from large international companies offering a wide range of products to smaller companies specializing in niche markets.

Some of our competitors have substantially greater name recognition, technical, financial, and marketing resources, and greater manufacturing capacity, as well as better-established relationships with customers, than we do. Some of our competitors have more resources to develop or acquire, and more experience in developing or acquiring, new products and technologies and in creating market awareness for these products and technologies. Some of our competitors may be able to develop new products more quickly than us and may be able to develop products that are more reliable or which provide more functionality than ours. In addition, some of our competitors have the financial resources on business strategy to offer competitive products at below-market pricing levels that could prevent us from competing effectively and result in a loss of sales or market share or cause us to lower prices for our products.

In particular we have developed new technologies and products that we believe are key components in our customers' systems for 100Gbps and higher data transmission. The emergence of technologies and products from our competitors and their success in competing against our technologies and products for 100Gbps data transmission could render our existing products uncompetitive from a pricing standpoint, obsolete or otherwise unmarketable.

We also face competition from some of our customers who evaluate our capabilities against the merits of manufacturing products internally, including Huawei Technologies Co., Ltd. and its affiliate, HiSilicon Technologies Co., Ltd. Due to the fact that such customers are not seeking to make a comparable profit directly from the manufacture of these products, they may have the ability to provide competitive products at a lower total cost than we would charge such customers. As a result, these customers may purchase less of our products and there would be additional pressure to lower our selling prices which, accordingly, would negatively impact our revenue and gross margin.

Intense competition in our markets could result in aggressive business tactics by our competitors, including aggressively pricing their products or selling older inventory at a discount. If our current or future competitors utilize aggressive business tactics, including those described above, demand for our products could decline, we could experience delays or cancellations of customer orders, or we could be required to reduce our sales prices.

Increasing costs may adversely impact our gross margins.

The rate of increase in our costs and expenses, including as a result of rising labor costs in China, may exceed the rate of increase in our revenue, which would materially and adversely affect our business, our results of operations and our financial condition.

Manufacturing problems could impact manufacturing yields or result in delays in product shipments to customers and could adversely affect our revenue, competitive position and reputation.

We may experience delays, disruptions or quality control problems in our manufacturing operations, which could adversely impact manufacturing yields or delay product shipments. As a result, we could incur additional costs that would adversely affect our gross margin, and product shipments to our customers could be delayed beyond the shipment schedules requested by our customers, which would negatively affect our revenue, competitive position and reputation.

Additionally, manufacturing yields depend on a number of factors, including the stability and manufacturability of the product design, manufacturing improvements gained over cumulative production volumes, the quality and consistency of component parts and the nature and extent of customization requirements by customers. Capacity constraints, raw materials shortages, logistics issues, labor shortages, volatility in utilization of manufacturing operations, supporting utility services and other manufacturing supplies, the introduction of new product lines, rapid increases in production demands and changes in customer requirements, manufacturing facilities or processes, or those of some third party contract manufacturers and suppliers of raw materials and components have historically caused, and may in the future cause, reduced manufacturing yields, negatively impacting the gross margin on, and our production capacity for, those products. Moreover, an increase in the rejection and rework rate of products during the quality control process before, during or after manufacture would result in our experiencing lower yields, gross margin and production capacity. Our ability to maintain sufficient manufacturing yields is particularly challenging with respect to PICs due to the complexity and required precision of a large number of unique manufacturing process steps. Manufacturing yields for PICs can also suffer if contaminated materials or materials that do not meet highly precise composition requirements are inadvertently utilized. Because a large portion of our PIC manufacturing costs are fixed, PIC manufacturing yields have a substantial effect on our gross margin. Lower than expected manufacturing yields could also delay product shipments and decrease our revenue. It can be hard to cost-effectively increase our production output rapidly, and we can experience yield loss and excess material scrap, which can increase our cost of goods sold and harm our profitability. Also, if we do not have sufficient demand for our PIC-based products our cost of goods sold can increase as the fixed costs of our fabrication facilities are spread over lower production.

We are subject to the cyclical nature of the markets in which we compete and any future downturn may reduce demand for our products and revenue.

The markets in which we compete are tied to the aggregate capital expenditures of telecommunications service providers as they build out and upgrade their network infrastructure. These markets are highly cyclical and characterized by constant and rapid technological change, price erosion, evolving standards and wide fluctuations in product supply and demand. In the past, including recently to varying degrees in China, the U.S. and Europe, these markets have experienced significant downturns, often connected with, or in anticipation of, the maturation of product cycles—for both manufacturers' and their customers' products—or in response to over or under purchasing of inventory by our customers relative to ultimate carrier demand, and with declining general economic conditions. These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices. To respond to a downturn, many service providers may slow their capital expenditures, cancel or delay new developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies from original equipment manufacturers, which would have a negative impact on our business.

Our historical results of operations have been subject to substantial fluctuations, and we may experience substantial period-to-period fluctuations in future results of operations. Any future downturn in the markets in which we compete could significantly reduce the demand for our products and therefore may result in a significant reduction in revenue. Our revenue and results of operations may be materially and adversely affected in the future due to changes in demand from individual customers or cyclical changes in the markets utilizing our products.

It could be discovered that our products contain defects that may cause us to incur significant costs, divert our attention, result in a loss of customers and result in product liability claims.

Our products are complex and undergo quality testing as well as formal qualification, both by our customers and by us. However, defects may occur from time to time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. Any significant product failure could result in lost future sales of the affected product and other products, as well as customer relations problems, litigation and damage to our reputation.

In addition, our products are typically embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable and when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems or loss of customers, all of which would harm our business.

The occurrence of any defects in our products could give rise to liability for damages caused by such defects. They could, moreover, impair our customers' acceptance of our products. Both could have a material adverse effect on our business and financial condition. Although we carry product liability insurance which covers this risk, this insurance may not adequately cover our costs arising from defects in our products or otherwise.

We depend upon outside contract manufacturers for a portion of the manufacturing process for some of our products. Our operations and revenue related to these products could be adversely affected if we encounter problems with a contract manufacturer.

The majority of our products are manufactured internally. However, we also rely upon contract manufacturers in China, Japan and other Asia locations to provide back-end manufacturing and produce the finished portion of some of our products. Our reliance on contract manufacturers for these products makes us vulnerable to possible capacity constraints and reduced control over delivery schedules, manufacturing yields, manufacturing quality/controls and costs. If one of our contract manufacturers is unable to meet all of our customer demand in a timely fashion, this could have a material adverse effect on the revenue from our products. If the contract manufacturer for one of our product were unable or unwilling to manufacture such product in required volumes and at high quality levels or to continue our existing supply arrangement, we would have to identify, qualify and select an acceptable alternative contract manufacturer or move these manufacturing operations to our internal manufacturing facilities. Any significant interruption in manufacturing our products would require us to reduce our supply of products to our customers, which in turn would reduce our revenue, harm our relationships with the customers of these products and cause us to forego potential revenue opportunities.

We must continually achieve new design wins and enhance existing products or our business and future revenue may be harmed.

The markets for our products are characterized by frequent new product introductions, changes in customer requirements and evolving industry standards, all with an underlying pressure to reduce cost and meet stringent reliability and qualification requirements. Our future performance will depend on our successful development, introduction and market acceptance of new and enhanced products that address these challenges. The anticipated or actual introduction of new and enhanced products by us and by our competitors may cause our customers to defer or cancel orders for our existing products. In addition, the introduction of new products by us or our competitors could result, and in the past, has resulted, in a slowdown in demand for our existing products and could result, and in the past, has resulted, in a write-down in the value of inventory. We have both recently and in the past experienced a slowdown in demand for existing products and delays in new product development, and such delays may occur in the future. To the extent customers defer or cancel orders for our products for any reason or we fail to achieve new design wins, our competitive position would be adversely affected and our ability to grow revenue would be impaired.

Furthermore, fast time-to-market with new products can be critical to success in our markets. It is difficult to displace an existing supplier for a particular type of product once a network equipment vendor has chosen a supplier, even if a later-to-market product provides superior performance or cost efficiency. If we are unable to make our new or enhanced products commercially available on a timely basis, we may lose existing and potential customers and our financial results would suffer.

The development of new, technologically-advanced products is a complex and uncertain process requiring frequent innovation, highly-skilled engineering and development personnel and significant capital, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to product introductions by competitors, technological changes or emerging industry standards. We also may not be able to develop the underlying core technologies necessary to create new products and enhancements, license these technologies from third parties, or remain competitive in our markets.

Our success will depend on our ability to anticipate and quickly respond to evolving technologies and customer requirements.

The communications networks industry is characterized by substantial investment in new technology and the development of diverse and changing technologies and industry standards. For example, new technologies are required to satisfy the emerging standards for 100Gbps, 400 Gbps and higher data transmission in communications networks.

Our ability to anticipate and respond to evolving technology, industry standards, customer requirements and product offerings, and to develop and introduce new and enhanced products and technologies, will be critical factors in our ability to succeed. If we are unable to anticipate and respond to such changes in the future, our competitive position could be adversely affected. In addition, the introduction of new products by other companies embodying new technologies, or the emergence of new industry standards, could render our existing products uncompetitive from a pricing standpoint, obsolete or otherwise unmarketable.

If our customers do not qualify our products for use, then our results of operations may suffer.

Prior to placing volume purchase orders with us, most of our customers require us to obtain their approval—called qualification in our industry—of our new and existing products, and our customers often audit our manufacturing facilities and perform other vendor evaluations during this process. The qualification process involves product sampling and reliability testing and collaboration with our product management and engineering teams in the design and manufacturing stages. If we are unable to qualify our products with customers, then our revenue would be lower than expected and we may not be able to recover the costs associated with the qualification process which would have an adverse effect on our results of operations.

In addition, due to evolving technological changes in our markets, a customer may cancel or modify a design project before we have qualified our product or begun volume manufacturing of a qualified product. It is unlikely that we would be able to recover the expenses for cancelled or unutilized custom design projects. It is difficult to predict with any certainty whether our customers will delay or terminate product qualification or the frequency with which customers will cancel or modify their projects, but any such delay, cancellation or modification would have a negative effect on our results of operations.

In particular, we have developed new technologies and products that we believe are key components in our customers' systems for 100Gbps data transmission. There are multiple modulation approaches for these systems and not all are likely to be equally successful. While we are shipping certain products for 100Gbps system designs today, many of our products for these systems are currently being qualified for use by our customers. Our ability to successfully qualify and scale capacity for these new technologies and products is important to our ability to grow our business and market presence. If we are unable to qualify and sell any of these products in volume on time, or at all, our results of operations may be adversely affected.

If we fail to retain our key personnel or if we fail to attract additional qualified personnel, we may not be able to achieve our anticipated level of growth and our business could suffer.

Our success and ability to implement our business strategy depends upon the continued contributions of our senior management team and others, including senior management in foreign subsidiaries and our technical and operations employees in all locations. Our future success depends, in part, on our ability to attract and retain key personnel, including our senior management and others. The loss of services of members of our senior management team or key personnel or the inability to continue to attract and retain qualified personnel could have a material adverse effect on our business. Competition for highly skilled technical and operations people where we operate is extremely intense, and we continue to face challenges identifying, hiring and retaining qualified personnel in many areas of our business. If we fail to retain our senior management and other key personnel or if we fail to attract additional qualified personnel, our business could suffer.

The communications networks industry has long product development cycles requiring us to incur product development costs without assurances of an acceptable investment return.

The communications networks industry is highly capital-intensive. Large volumes of equipment and support structures are installed with considerable expenditures of funds and other resources, and long investment return period expectations. At the component supplier level, these cycles create considerable, typically multi-year, gaps between the commencement of new product development and volume purchases. Accordingly, we and our competitors often incur significant research and development and sales and marketing costs for products that, initially, will be purchased by our customers long after much of the cost is incurred and, in some cases, may never be purchased due to changes in industry or customer requirements in the interim.

Due to changing industry and customer requirements, we are constantly developing new products, including seeking to further integrate functions on PICs and developing and using new technologies in our products. These development activities can and are expected to necessitate significant investment of capital. Our new products often require a long time to develop because of their complexity and rigorous testing and qualification requirements. Additionally, developing a manufacturing approach with an acceptable cost structure and yield for new products can be expensive and time-consuming. Due to the costs and length of research and development and manufacturing process cycles, we may not recognize revenue from new products until long after such expenditures are incurred, if at all, and our gross margin may decrease if our costs are higher than expected.

While we rely on many suppliers, there are a few which, if they stopped, decreased or delayed shipments to us, it could have an adverse effect on our business and financial results.

We depend on a limited number of suppliers for certain components and materials we have qualified to use in the manufacture of certain of our products. Some of these suppliers could disrupt our business if they stop, decrease or delay shipments or if the components they ship have quality, consistency, or business continuity issues. Some of these components and materials are available only from a sole source, or have been qualified only from a single source. For example, we use various types of adhesives that are sourced from various manufacturers, which presently are sole sources for these particular adhesives. Furthermore, there are a limited number of entities from which we could obtain certain other components and materials. We may also face component shortages if we experience increased demand for components beyond what our qualified suppliers can deliver. We have experienced component shortages from certain key suppliers, which has resulted and, if this occurs in the future, may result in an inability to meet customer demand, higher purchasing costs, or both. Although we engage in various actions to mitigate the impact of these shortages, any inability on our part to obtain sufficient quantities of critical components at reasonable costs could adversely affect our ability to meet demand for our products, which could cause our revenue, results of operations, or both to suffer.

Our customers generally restrict our ability to change the component parts in our modules without their approval. For more critical components, such as PICs, lasers and photo detectors, any changes may require repeating the entire qualification process. We typically have not entered into long-term or written agreements with our suppliers to guarantee the supply of the key components used in our products, and, therefore, our suppliers could stop supplying materials and equipment at any time or fail to supply adequate quantities of component parts on a timely basis. It is difficult, costly, time consuming and, on short notice, sometimes impossible for us to identify and qualify new component suppliers. The reliance on a sole supplier, single qualified vendor or limited number of suppliers could result in delivery and quality problems, reduced control over product pricing, reliability and performance and an inability to identify and qualify another supplier in a timely manner. We have in the past had to change suppliers, which has, in some instances, resulted in delays in product development and manufacturing and loss of revenue. Any such delays in the future may limit our ability to respond to changes in customer and market demands. Any supply deficiencies relating to the quality, quantities or timeliness of delivery of components that we use to manufacture our products could adversely affect our ability to fulfill our customer orders and our results of operations.

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends to a significant degree on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patent registrations in the U.S. and in other foreign countries, some of which have been issued. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. A failure to obtain patents or trademark registrations or a successful challenge to our registrations in the U.S. or other foreign countries may limit our ability to protect the intellectual property rights that these applications and registrations intended to cover.

Policing unauthorized use of our technology is difficult and we cannot be certain that the steps we have taken will prevent the misappropriation, unauthorized use or other infringement of our intellectual property rights. Further, we may not be able to effectively protect our intellectual property rights from misappropriation or other infringement in foreign countries where we have not applied for patent protections, and where effective patent, trademark, trade secret and other intellectual property laws may be unavailable, or may not protect our proprietary rights as fully as U.S. or Japan law. Particularly, our U.S. patents do not afford any intellectual property protection in China, Japan, Canada or other Asia locations where we have company operations, or in Russia, where we intend to expand operations. We seek to secure, to the extent possible, comparable intellectual property protections in China and other areas in which we operate. However, while we have issued patents and pending patent applications in China, portions of our intellectual property portfolio are not yet protected by patents in China. Moreover, the level of protection afforded by patent and other laws in countries such as China and Russia may not be comparable to that afforded in the U.S. or Japan.

We attempt to protect our intellectual property, including our trade secrets and know-how, through the use of trade secret and other intellectual property laws, and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and independent consultants. We also use non-disclosure agreements with other third parties who may have access to our proprietary technologies and information. Such measures, however, provide only limited protection, and there can be no assurance that our confidentiality and non-disclosure agreements will not be breached, especially after our employees or those of our third-party contract manufacturers end their employment or engagement, and that our trade secrets will not otherwise become known by competitors or that we will have adequate remedies in the event of unauthorized use or disclosure of proprietary information. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products, otherwise obtain and use our intellectual property, or may independently develop similar or equivalent trade secrets or know-how. If we fail to protect our intellectual property and other proprietary rights, or if such intellectual property and proprietary rights are infringed or misappropriated, our business, results of operations or financial condition could be materially harmed.

In the future, we may need to take legal actions to prevent third parties from infringing upon or misappropriating our intellectual property or from otherwise gaining access to our technology. Protecting and enforcing our intellectual property rights and determining their validity and scope could result in significant litigation costs and require significant time and attention from our technical and management personnel, which could significantly harm our business. In addition, we may not prevail in such proceedings. An adverse outcome of such proceedings may reduce our competitive advantage or otherwise harm our financial condition and our business.

We may be involved in intellectual property disputes in the future, which could divert management’s attention, cause us to incur significant costs and prevent us from selling or using the challenged technology.

Participants in the markets in which we sell our products have experienced frequent litigation regarding patent and other intellectual property rights. Numerous patents in these industries are held by others, including our competitors. In addition, from time to time, we have been notified that we may be infringing certain patents or other intellectual property rights of others. Regardless of their merit, responding to such claims can be time consuming, divert management's attention and resources and may cause us to incur significant expenses. In addition, there can be no assurance that third parties will not assert infringement claims against us. While we believe that our products do not infringe in any material respect upon intellectual property rights of other parties and/or meritorious defense would exist with respect to any assertions to the contrary, we cannot be certain that our products would not be found infringing the intellectual property rights of others. Intellectual property claims against us could invalidate our proprietary rights and force us to do one or more of the following:

· obtain from a third party claiming infringement a license to sell or use the relevant technology, which may not be available on commercially reasonable terms;
· stop manufacturing, selling, incorporating or using our products that use the challenged intellectual property;
· pay substantial monetary damages; or
· expend significant resources to redesign the products that use the technology and to develop non-infringing technology.

Any of these actions could result in a substantial reduction in our revenue and could result in losses over an extended period of time.

In January 2010, Finisar Corporation, or Finisar, filed a complaint in the U.S. District Court for the Northern District of California against us and three other co-defendants. In the complaint, Finisar alleged infringement of certain of its U.S. patents arising from the co-defendants' respective manufacture, importation, use, sale of or offer to sell certain optical transceiver products in the U.S. In March 2010, we filed an answer to the complaint and counterclaims, asserting two claims of patent infringement and additional claims asserting that Finisar has violated state and federal competition laws and violated its obligations to license on reasonable and non-discriminatory terms. In May 2010, the court dismissed without prejudice all co-defendants (including us) except Source Photonics, Inc., on grounds that such claims should have been asserted in four separate lawsuits, one against each co-defendant. This dismissal without prejudice does not prevent Finisar from bringing a new similar lawsuit against us. In May 2012, we and Finisar agreed to toll our respective claims until the refiling of certain of the previously asserted claims from this dispute. As a result, Finisar is permitted to bring a new lawsuit against us if it chooses to do so, and we may bring new claims against Finisar upon seven days written notice prior to filing such claims.

If we are unsuccessful in our defense of the Finisar patent infringement claims, a license to use the allegedly infringing technology may not be available on commercially reasonable terms and therefore may limit or preclude us from competing in the market for optical transceivers in the U.S., which may have a material adverse effect on our results of operations and financial condition, and otherwise materially harm our business.

Although we believe that we would have meritorious defenses to the infringement allegations and intend to defend any new similar lawsuit vigorously, there can be no assurance that we will be successful in our defense. Even if we are successful, we may incur substantial legal fees and other costs in defending the lawsuit. Further, a new lawsuit, if brought by either party, would be likely to divert the efforts and attention of our management and technical personnel, which could harm our business.

If we fail to obtain the right to use the intellectual property rights of others which are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

From time to time we may choose to or be required to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third-party licenses will be available to us on commercially reasonable terms, if at all. Generally, a license, if granted, would include payments of up-front fees, ongoing royalties or both. These payments or other terms could have a significant adverse impact on our results of operations. The inability to obtain a necessary third-party license required for our product offerings or to develop new products and product enhancements could require us to substitute technology of lower quality or performance standards, or of greater cost, either of which could adversely affect our business. If we are not able to obtain licenses from third parties, if necessary, then we may also be subject to litigation to defend against infringement claims from these third parties. Our competitors may be able to obtain licenses or cross-license their technology on better terms than we can, which could put us at a competitive disadvantage. Also, we typically enter into confidentiality agreements with such third parties in which we agree to protect and maintain their proprietary and confidential information, including requiring our employees to enter into agreements protecting such information. There can be no assurance that the confidentiality agreements will not be breached by any of our employees or that such third parties will not make claims that their proprietary information has been disclosed.

Any potential dispute involving our patents or other intellectual property could also include our customers using our products, which could trigger our indemnification obligations to them and result in substantial expenses to us.

In any potential dispute involving our patents or other intellectual property, our customers could also become the target of litigation. Because we often indemnify our customers for intellectual property claims made against them for products incorporating our technology, any claims against our customers could trigger indemnification obligations in some of our supply agreements, which could result in substantial expenses such as increased legal expenses, product recalls, damages for past infringement or royalties for future use. While we have not incurred any material indemnification expenses to date, any future indemnity claim could adversely affect our relationships with our customers and result in substantial costs to us. Our insurance does not cover intellectual property infringement.

If we fail to adequately manage our long-term growth and expansion requirements, our business and financial results will suffer.

In recent years, we have experienced significant growth through, among other things, internal expansion programs, product development and acquisitions of other businesses and products. Our business has expanded to numerous locations, including foreign locations, and as a result become more complex, more demanding of management's attention and subject to new laws and regulations. If we fail to comply with new laws and regulations related to the expansion of our business, our business could suffer.

We expect to continue to grow, which could require us to expand our manufacturing operations, including hiring new personnel, purchasing additional equipment, leasing or purchasing additional facilities, developing the management infrastructure and developing our suppliers to manage any such expansion. If we fail to secure these expansion requirements or manage our future growth effectively, our business could suffer.

We have pursued and may continue to pursue acquisitions. Acquisitions could be difficult to integrate, divert the attention of key personnel, disrupt our business, dilute stockholder value and impair our financial results.

As part of our business strategy, we have pursued and intend to continue to pursue acquisitions of complementary businesses, products, services or technologies that we believe could accelerate our ability to compete in our existing markets or allow us to enter new markets. Any of these transactions could be material to our financial condition and results of operations. For instance, in October 2011, we completed the acquisition of Santur Corporation, a designer and manufacturer of InP-based PIC products, and in March 2013 we completed the acquisition of the optical semiconductor business unit of LAPIS Semiconductor Co., Ltd., now known as NeoPhotonics Semiconductor. We purchased the tunable laser product lines of EMCORE in January 2015 and the power monitoring products business of EigenLight Corporation in November 2015. If we fail to properly evaluate or integrate acquisitions, we may not achieve the anticipated benefits of any such acquisitions, and we may incur costs in excess of what we anticipate.

Acquisitions involve numerous risks, any of which could harm our business, including:

- difficulties in integrating the operations, technologies, products, existing contracts, accounting and personnel of the target company;
- difficulties in realizing our expectations for the financial performance of the target company;

- difficulties in supporting and transitioning customers, if any, of the target company;
- difficulties in managing and integrating different cultures with respect to our international acquisitions;
- dependence or reliance on subcontractors or suppliers to the acquired company that may not have been fully qualified or evaluated for their position in supplying the acquired company previously;

· diversion of management time and potential business disruption;
· the incurrence of debt to provide capital for any cash-based acquisitions;
· the price we pay or other resources that we devote may exceed the value we realize, or the value we could have realized if we had allocated the purchase price or other resources to another opportunity;
· risks of entering new markets in which we have limited or no experience;
· potential loss of key employees, customers and strategic alliances from either our current business or the target company's business;
· assumption of unanticipated problems or latent liabilities, such as problems with the quality of the target company's products;
· exposure to environmental liabilities that have not yet been discovered associated with acquired businesses' facilities;
· expenses, distractions and actual or threatened claims or litigation resulting from acquisitions, whether or not they are completed;
· unexpected capital expenditure requirements
· inability to generate sufficient revenue to offset increased expenses association with any acquisition;
· issues arising from weaknesses or deficiencies in internal controls over financial reporting for acquired businesses that were not previously subject to internal control requirements of a U.S. public company;
· in the event of international acquisitions, risks associated with accounting and business practices that are different from applicable U.S. practices and requirements;
· dilutive effect on our stock as a result of any equity-based acquisitions;
· incurring potential write-offs, contingent liabilities and amortization expense; and
· opportunity costs of committing capital to such acquisitions.

The failure to successfully evaluate and execute acquisitions or otherwise adequately address these risks could materially harm our business and financial results.

Acquisitions also frequently result in the recording of goodwill and other intangible assets which are subject to potential impairments which have occurred in the past and which, were they to occur in the future, could harm our financial results. As a result, if we fail to properly evaluate acquisitions or investments, we may not achieve the anticipated benefits of any such acquisitions, and we may incur costs in excess of what we anticipate. The failure to successfully evaluate and execute acquisitions or investments or otherwise adequately address these risks could materially harm our business and financial results.

Failure to realize the anticipated benefits from our past and future acquisitions may affect our future results of operations and financial condition.

In connection with our acquisitions of Santur, NeoPhotonics Semiconductor, EMCORE's tunable laser products and EigenLight's power monitor products, we have integrated the commercial operations and personnel into our existing infrastructure. If there are unexpected difficulties in our integration of these acquired businesses and/or the product lines we have acquired from EMCORE, the anticipated benefits of these acquisitions may not be realized or may take longer to realize than expected. The anticipated benefits of these acquisitions could be materially reduced by a number of factors, including the following:

· the future revenue and gross margins of the acquired products may be materially different from those we originally anticipated;
· we could incur material unanticipated expenses;

- acquired products may not achieve the performance levels or specifications required by our customers;
- claims or lawsuits may arise from the acquisition transaction or from their previous business operations;
- we may experience difficulties in managing inventory and other operational processes in facilities that we acquire or lease as a result of the acquisitions;
- we may experience difficulties in implementing effective internal controls over financial reporting as part of our integration actions, particularly since neither of these businesses were historically subject as a stand-alone entity to the internal control requirements of a U.S. public company;
- potential growth, expected financial results, perceived synergies and anticipated opportunities may not be realized through the ongoing integration actions;
- we may face competition from existing customers as well as new competitors;
- some existing customers of the acquired businesses may view our company as a competitor, and therefore may reduce or end their purchases of NeoPhotonics products for competitive reasons;
- a potential decline in revenues could occur from NeoPhotonics Semiconductor's legacy products for network applications that are declining within our customer base (such as NeoPhotonics Semiconductor's gallium arsenide integrated circuits for 10G network applications)
- we could have difficulty implementing and maintaining financial reporting requirements for the acquired business operations, which have not been previously audited nor subject to the internal compliance structure of a U.S. public company;
- we could incur additional costs associated with known and unknown environmental contamination of the real estate acquired from NeoPhotonics Semiconductor; and
- we could incur costs associated with new export or compliance issues associated with NeoPhotonics Semiconductor products or the product lines we recently acquired from EMCORE or EigenLight.

The occurrence of any or all of these events may have an adverse effect on our business and results of operations.

We may not be able to obtain capital when desired on favorable terms, if at all, or without dilution to our stockholders.

We believe that our existing cash and cash equivalents, and cash flows from our operating activities and funds available under our credit facilities, will be sufficient to meet our anticipated cash needs for at least the next 12 months. We operate in an industry, however, that makes our prospects difficult to evaluate. It is possible that we may not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs. If this occurs, we may need additional financing to continue operations or execute on our current or future business strategies, including to:

- invest in our research and development efforts, including by hiring additional technical and other personnel;
- maintain and expand our operating or manufacturing infrastructure;
- acquire complementary businesses, products, services or technologies; or
- otherwise pursue our strategic plans and respond to competitive pressures.

If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. We cannot assure you that additional financing will be available on terms favorable to us, or at all. If adequate funds are not available or are not available on acceptable terms, if and when needed, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our products, or otherwise respond to competitive pressures could be significantly limited. Furthermore, in the event

adequate capital is not available to us as required, or is not available on favorable terms, our business, financial condition, results of operations, and cash flows may be materially and adversely affected.

Natural disasters, terrorist attacks or other catastrophic events could harm our operations and our financial results.

Our worldwide operations could be subject to natural disasters and other business disruptions, which could harm our future revenue and financial condition and increase our costs and expenses. For example, our corporate headquarters and wafer fabrication facility in Silicon Valley, California and our Tokyo, Japan facility are located near major earthquake fault lines, and our manufacturing facilities are located in Shenzhen and Dongguan, China, areas that are susceptible to typhoons. In the event that an earthquake, tsunami, typhoon, terrorist attack or other natural or man-made catastrophe were to destroy any part of our facilities, destroy or disrupt vital infrastructure systems or interrupt our operations or the facilities or operations of our suppliers or customers for any extended period of time, our business, financial condition and results of operations would be materially and adversely affected. We are not insured against many natural disasters, including earthquakes.

Similarly, our worldwide operations could be subject to secondary effects of natural disasters and other business disruptions, which could harm our future revenue and financial condition and increase our costs and expenses. For instance, natural disasters and other business disruptions have created significant secondary effects in the past (such as the 2011 floods in Thailand and the 2011 earthquakes, tsunami and subsequent crisis relating to nuclear power facilities in Japan). Any of these types of events in the future could result in a slowdown of business or inability to manufacture products by our customers or others in the industry that are located in the affected areas; a disruption to the global supply chain for products manufactured in the affected areas that are included in the products either by us or by our customers; a disruption to manufacturing resulting from power shortages or other rationing of inputs to production; an increase in the cost of products that we purchase due to reduced supply; and other unforeseen impacts. These secondary effects could have a material and adverse effect on our business, financial condition, and results of operations.

Rapidly changing standards and regulations could make our products obsolete, which would cause our revenue and results of operations to suffer.

We design our products to conform to regulations established by governments and to standards set by industry standards bodies worldwide, such as The American National Standards Institute, the European Telecommunications Standards Institute, the International Telecommunications Union and the Institute of Electrical and Electronics Engineers. Various industry organizations are currently considering whether and to what extent to create standards for elements used in 100Gbps systems. Because certain of our products are designed to conform to current specific industry standards, if competing or new standards emerge that are preferred by our customers, we would have to make significant expenditures to develop new products. If our customers adopt new or competing industry standards with which our products are not compatible, or the industry groups adopt standards or governments issue regulations with which our products are not compatible, our existing products would become less desirable to our customers and our revenue and results of operations would suffer.

Failure to realize the anticipated benefits from our planned expansion in the Russian Federation may affect our future results of operations and financial condition.

In connection with our raising capital in an April 2012 private placement of common stock, we have established a wholly-owned subsidiary and company operations in the Russian Federation. The establishment of successful operations in the Russian Federation requires capital expenditure over several years, and is in part dependent on the cooperation of Russian entities that could include the Russia government and other third parties. If there are delays in our efforts to establish operations in the Russian Federation, the anticipated benefits of our Russian expansion may not be realized or may take longer to realize than expected. The anticipated benefits of our Russian expansion could be materially reduced by a number of factors, including the following:

· the future revenue and gross margins of products produced in the Russian Federation may be materially different from those we originally anticipated;

· we could incur material unanticipated expenses; and
· we could have difficulty managing a business in the Russian Federation, where we did not previously have a material business presence.

In addition, in connection with the private placement transaction, we entered into a rights agreement with the sponsoring investor. Pursuant to the rights agreement, we have agreed to make a $30.0 million investment towards our Russian operations. We are currently required to satisfy this total investment commitment over a period from 2012 to 2019. Pursuant to the rights agreement, failure to perform our investment commitments for specific years within this time period may result in an obligation to pay damages to the investor, up to a maximum amount of penalties of $5.0 million.

Our business operations conducted in Russia are relatively small compared to our overall business. A portion of our revenue in the twelve months ended December 31, 2015 was recognized from customers for whom we shipped products to a location in Russia. Additionally, a portion of our property, plant and equipment was located in Russia. We expect to make further investments in Russia in the foreseeable future. Therefore, our business, financial condition, results of operations and prospects are to a degree subject to economic, political, legal, and social events and developments in Russia. In recent years the Russian Federation has undergone substantial political, economic and social change. The business, legal and regulatory infrastructure in the Russian Federation is less well-developed that would generally exist in a more mature free market economy. In addition, the tax, currency and customs legislation within the Russian Federation is subject to varying interpretations and changes, which can occur frequently. The future economic direction of the Russian Federation remains largely dependent upon the effectiveness of economic, financial and monetary measures undertaken by the government, together with tax, legal, regulatory and political developments. Our failure to manage the risks associated with our planned Russian expansion could have a material adverse effect upon our results of operations.

We could be adversely affected by any actions taken by Russia in response to U.S. or international sanctions, including but not limited to actions such as restrictions placed by Russia on U.S. companies doing business in Russia.

The occurrence of any or all of these events may have an adverse effect on our business, and results of operations and financial condition.

Potential changes in our effective tax rate could negatively affect our future results.

We are subject to income taxes in the U.S., China, Japan and other various foreign jurisdictions, and our domestic and international tax liabilities are subject to the allocation of expenses in differing jurisdictions. Our tax rate is affected by changes in the mix of earnings and losses in countries with differing statutory tax rates, certain non-deductible expenses and the valuation of deferred tax assets and liabilities, including our ability to utilize our net operating losses. Increases in our effective tax rate could negatively affect our results of operations.

Our future results of operations may be subject to volatility as a result of exposure to fluctuations in foreign exchange rates, primarily the Chinese Renminbi (RMB) and Japanese Yen (JPY) exchange rates.

We are exposed to foreign exchange risks. Foreign currency fluctuations may adversely affect our revenue and our costs and expenses, and hence our results of operations. A substantial portion of our business is conducted through our subsidiaries based in China, whose functional currency is the RMB and Japan, whose functional currency is the JPY. The value of the RMB against the U.S. dollar and other currencies and the value of the JPY against the U.S. dollar and other currencies fluctuate and are affected by, among other things, changes in political and economic conditions.

The People's Bank of China regularly intervenes in the foreign exchange market to manage fluctuations in RMB exchange rates and achieve policy goals. In the year ended December 31, 2015, the Chinese government had allowed the RMB to devalue against the U.S. dollar by approximately 6%. It is difficult to predict how market forces or Chinese or U.S. government policy may impact the exchange rate between the RMB and the U.S. dollar in the future. There remains significant international pressure on the Chinese government to adopt a more flexible currency policy, which could result in greater fluctuation of the RMB against the U.S. dollar.

To the extent that transactions by our subsidiaries in China and Japan are denominated in currencies other than the RMB and JPY, we bear the risk that fluctuations in the exchange rates of the RMB and JPY in relation to other currencies could decrease our revenue or increase our costs and expenses, therefore having an adverse effect on our future results of operations.

While we generate a significant portion of our revenue in U.S dollars, a significant portion of our cost of goods sold are in RMB. Therefore appreciation in RMB against the U.S. dollar would negatively impact our cost of goods sold upon translation to U.S. dollars.

We also transact in other currencies that have had historical volatility, including the Russian Rubles (RUB). Fluctuations in the exchange rates of these currencies may cause us to recognize additional transaction gains or losses which could impact our results of operations. While the RUB weakened against the U.S. dollar, the related impact on our operating results has been immaterial. However, as we expect to expand our Russian operations, our risk associated with fluctuation of the RUB against the U.S. dollar could increase in the future.

To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedging transactions may be limited and we may not be able to successfully hedge our exposure. In addition, our currency exchange variations may be magnified by Chinese exchange control regulations that restrict our ability to convert RMB into foreign currency.

We face a variety of risks associated with international sales and operations, which if not adequately managed could adversely affect our business and financial results.

We currently derive, and expect to continue to derive, a significant portion of our revenue from international sales in various markets. In addition, a major portion of our operations is based in Shenzhen and Dongguan, China as well as our having additional operations in Japan, Russia and Canada. Our international revenue and operations are subject to a number of material risks, including, but not limited to:

- difficulties in staffing, managing and supporting operations in more than one country;
- difficulties in enforcing agreements and collecting receivables through foreign legal systems;
- fewer legal protections for intellectual property in foreign jurisdictions;
- compliance with local regulations;
- foreign and U.S. taxation issues and international trade barriers;
- general economic and political conditions in the markets in which we operate;
- difficulties in obtaining any necessary governmental authorizations for the export of our products to certain foreign jurisdictions;
- imposition of export restrictions on sales to any of our major foreign customers;
- fluctuations in foreign economies;
- fluctuations in the value of foreign currencies and interest rates;
- trade and travel restrictions;
- outbreaks of contagious disease;
- domestic and international economic or political changes, hostilities and other disruptions; and
- difficulties and increased expenses in complying with a variety of U.S. and foreign laws, regulations and trade standards, including the Foreign Corrupt Practices Act. Negative developments in any of these areas in China, Japan, Russia or other countries could result in a reduction in demand for our products, the cancellation or

delay of orders already placed, difficulties in producing and delivering our products, threats to our intellectual property, difficulty in collecting receivables, and a higher cost of doing business.
In addition, although we maintain an anti-corruption compliance program throughout our company, violations of our compliance program may result in criminal or civil sanctions, including material monetary fines, penalties and other costs against us or our employees, and may have a material adverse effect on our business.

If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. For instance, during 2013, we identified material weaknesses in our internal control over financial reporting, which resulted in material misstatements in our consolidated financial statements for the first two quarters of 2013, which required us to file restatements of these financial statements. We subsequently remediated these material weaknesses, and our management concluded that our internal control over financial reporting was effective as of the end of both 2014 and 2015. However, if material weaknesses in our internal control are discovered or occur in the future, our consolidated financial statements may contain material misstatements and we could be required to restate our financial results.

We may also experience difficulties in implementing effective internal controls over financial reporting as part of our integration of acquired businesses or products, particularly the product lines acquired from EMCORE or EigenLight. The product lines we acquired from EMCORE or EigenLight were not subject as a stand-alone entity to the internal control requirements of a U.S. public company. We could also experience unanticipated additional operating costs in implementing and managing effective internal controls over financial reporting or EMCORE or EigenLight operations, which could adversely affect our financial performance.

If a material misstatement occurs in the future, we may fail to meet our future reporting obligations, we may need to restate our financial results and the price of our common stock may decline. Our internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in the implementation, our business and operating results may be harmed and we may fail to meet our financial reporting obligations. Any failure of our internal controls could also adversely affect the results of the periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that is now applicable to us under the rules of the Securities and Exchange Commission, or the SEC. Effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and results of operations could be harmed, investors could lose confidence in our reported financial information, and the trading price of our stock could drop significantly.

We may be subject to disruptions or failures in information technology systems and network infrastructures that could have a material adverse effect on our business and financial condition.

We rely on the efficient and uninterrupted operation of complex information technology systems and network infrastructures to operate our business. A disruption, infiltration or failure of our information technology systems as a result of software or hardware malfunctions, system implementations or upgrades, computer viruses, cyber attacks, third-party security breaches, employee error, theft or misuse, malfeasance, power disruptions, natural disasters or accidents could cause breaches of data security, loss of intellectual property and critical data and the release and misappropriation of sensitive competitive information and partner, customer and employee personal data. Any of these events could harm our competitive position, result in a loss of customer confidence, cause us to incur significant costs to remedy any damages and ultimately materially adversely affect our business and financial condition.

Covenants in our credit facilities may limit our flexibility in responding to business opportunities and competitive developments and increase our vulnerability to adverse economic or industry conditions.

We have lending arrangements with several financial institutions, including a revolving credit agreement with Comerica Bank in the U.S. Our U.S. revolving credit agreement requires us to maintain certain financial covenants and limits our ability to take certain actions such as incurring some kinds of additional debt, paying dividends, or engaging in certain transactions like mergers and acquisitions, investments and asset sales without the lenders' consent.

These restrictions may limit our flexibility in responding to business opportunities, competitive developments and adverse economic or industry conditions. In addition, our obligations under our U.S. revolving credit agreement with Comerica Bank are secured by substantially all of our assets other than intellectual property assets, which limit our ability to provide collateral for additional financing. A breach of any of these covenants, or a failure to pay interest or indebtedness when due under any of our credit facilities, could result in a variety of adverse consequences, including the acceleration of our indebtedness.

We may be unable to utilize our net operating loss carryforwards to reduce our income taxes, which could adversely affect our future financial results.

As of December 31, 2015, we had net operating loss, or NOL, carryforwards for U.S. federal and state tax purposes of $207.0 million and $69.2 million, respectively. As these net operating losses have not been utilized, a portion expired in 2015 and will continue to expire further in the current and future years. The utilization of the NOL and tax credit carryforwards are subject to a substantial limitation imposed by Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, and similar state provisions. We recorded deferred tax assets, net of valuation allowance, for the NOL carryforwards currently available after considering the existing Section 382 limitation. If we incur an additional limitation under Section 382, then the NOL carryforwards, as disclosed, could be reduced by the impact of any future limitation that would result in existing NOL carryforwards and tax credit carryforwards expiring unutilized and increases in future tax liabilities.

We are subject to government regulations that could adversely impact our business.

The Federal Communications Commission, or FCC, has jurisdiction over the entire U.S. telecommunications industry and, as a result, our products and our U.S. customers are subject to FCC rules and regulations. Current and future FCC regulations affecting communications services, our products or our customers' businesses could negatively affect our business. In addition, international regulatory standards could impair our ability to develop products for international customers in the future. Delays caused by our compliance with regulatory requirements could result in postponements or cancellations of product orders. Further, we may not be successful in obtaining or maintaining any regulatory approvals that may, in the future, be required to operate our business. Any failure to obtain such approvals could harm our business and results of operations.

We may utilize conflict minerals in our production or rely on suppliers who utilize conflict minerals in their production, and the use of such conflict minerals may negatively impact our results of operations.

In August 2012, the SEC adopted its final rule to implement Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act regarding reporting obligations for the use of conflict minerals originating in the Democratic Republic of the Congo and adjoining countries, and beginning on January 1, 2013, we became subject to these reporting obligations and subsequently have timely filed our conflict minerals reports with the SEC. In connection with these requirements, we regularly communicate with customers and suppliers regarding the new conflict mineral rules and reporting obligations and continue to work with these customers and suppliers to implement any necessary or requested compliance programs. As a result of these new rules, our results in operations may suffer for a variety of reasons, including:

· difficulty in obtaining supplies that are conflict-free;
· shipping delays or the cancellation of orders for our products;
· costs associated with the implementation of the conflict minerals reporting obligations; and
· reputational damage in the event that we determine our products do incorporate conflict minerals or cannot be verified as not incorporating conflict minerals.

In some instances, we rely on third-party sales representatives to assist in selling our products, and the failure of these representatives to perform as expected could reduce our future revenue.

Although we primarily sell our products through direct sales to systems vendors, we also sell our products to some of our customers through third-party sales representatives. Many of our third-party sales representatives also market and sell competing products from our competitors. Our third-party sales representatives may terminate their relationships with us at any time, or with short notice. Our future performance will also depend, in part, on our ability to attract additional third-party sales representatives that will be able to market and support our products effectively, especially in markets in which we have not previously distributed our products. If our current third-party sales representatives fail to perform as expected, our revenue and results of operations could be harmed.

We are subject to environmental, health and safety laws and regulations, which could subject us to liabilities, increase our costs, or restrict our business or operations in the future.

Our manufacturing operations and our products are subject to a variety of federal, state, local and international environmental, health and safety laws and regulations in each of the jurisdictions in which we operate or sell our products. Our failure to comply with present and future environmental, health or safety requirements, or the identification of contamination, could cause us to incur substantial costs, including cleanup costs, monetary fines, civil or criminal penalties, or curtailment of operations. In addition, the enactment of more stringent laws and regulations, or other unanticipated events could restrict our ability to expand our facilities, require us to install costly pollution control equipment or incur other additional expenses, or require us to modify our manufacturing processes or the contents of our products, which could have a material adverse effect on our business, financial condition and results of operations.

With our acquisition of NeoPhotonics Semiconductor, we own and operate a semiconductor facility in Japan which is subject to local environmental laws and regulations, including the Japanese Environmental Quality Standards (“JEQS”) and the Water Pollution Control Law (“Water Law”), which includes provisions for periodic monitoring of groundwater quality. The JEQS provides guidelines for specified substances in groundwater, primarily including metals and volatile organic compounds, include some that are either used in our operations or have been used in our facilities in prior years. In addition, the Soil Contamination Countermeasures Law includes regulatory standards for many of the same substances regulated under the Water Law, some that are either used in our operations or have been used in our facilities in prior years. Should any of these regulated materials be detected in local water or soil, we could be subject to local law remedies, which could affect our ability to operate or could negatively affect our results of operations.

Additionally, increasing efforts to control emissions of greenhouse gases, or GHG, may also impact us. Additional climate change or GHG control requirements are under consideration at the federal level in the U.S. and in China. Additional restrictions, limits, taxes, or other controls on GHG emissions could increase our operating costs and, while it is not possible to estimate the specific impact any final GHG regulations will have on our operations, there can be no assurance that these measures will not have significant additional impact on us.

Adoption of international labor standards may increase our direct labor costs.

International standards of corporate social responsibility include strict requirements on labor work practices and overtime. As global service providers and their network equipment vendors adopt these standards, we have in the past incurred and may be required in the future to incur additional direct labor costs associated with our compliance with these standards.

Risks related to our operations in China

Our business operations conducted in China are critical to our success. A significant portion of our revenue in the twelve months ended December 31, 2015 was recognized from customers for whom we shipped products to a location in China. Additionally, a substantial portion of our property, plant and equipment, approximately 39% as of December 31, 2015, was located in China. We expect to make further investments in China in the foreseeable future. Therefore, our business, financial condition, results of operations and prospects are to a significant degree subject to economic, political, legal, and social events and developments in China.

Adverse changes in economic and political policies in China, or Chinese laws or regulations could have a material adverse effect on business conditions and the overall economic growth of China, which could adversely affect our business.

The Chinese economy differs from the economies of most developed countries in many respects, including the level of government involvement, level of development, growth rate and control of foreign exchange and allocation of resources. The Chinese economy has been transitioning from a planned economy to a more market-oriented economy. Despite reforms, the government continues to exercise significant control over China's economic growth by way of the allocation of resources, control over foreign currency-denominated obligations and monetary policy and provision of preferential treatment to particular industries or companies. Moreover, the laws, regulations and legal requirements in China, including the laws that apply to foreign-invested enterprises are relatively new and are subject to frequent changes. The interpretation and enforcement of such laws is uncertain. Any adverse changes to these laws, regulations and legal requirements, including tax laws, or their interpretation or enforcement, or the creation of new laws or regulations relating to our business, could have a material adverse effect on our business. For example, the Chinese government's recent crackdown on alleged antitrust violations and bribery of local officials by multinational companies could signal a broad trend toward elevated scrutiny of foreign corporations operating in the country.

Furthermore, while China's economy has experienced rapid growth in the past 20 years, its rate of growth has slowed over the past several quarters. Any continuing or worsening slowdown could significantly reduce domestic commerce in China. An economic downturn, whether actual or perceived, a further decrease in economic growth rates or an otherwise uncertain economic outlook in China could have a material adverse effect on our business, financial condition and results of operation.

Our cost advantage from having our manufacturing and part of our research and development in China may diminish over time due to increasing labor costs, which could materially and adversely affect our operating results.

The labor market in China, particularly in the manufacturing-heavy Southeast region of China where our manufacturing facilities are located, has experienced higher costs due to increased wages. We were required to pay additional employee benefits taxes beginning in late 2010 and were subject to increases in the minimum wage in each year from 2011 to 2015. We expect that we will be subject to further increases in personnel costs and taxes in the future due to market conditions and/or government mandates. If labor costs in China continue to increase, our gross margins and profit margins and results of operations may be adversely affected. In addition, our competitive advantage against competitors with manufacturing in traditionally higher cost countries would be diminished.

The termination, expiration or unavailability of our preferential income tax treatment in China may have a material adverse effect on our operating results.

Effective January 1, 2008, the China Enterprise Income Tax Law, or the EIT law, imposes a single uniform income tax rate of 25% on all Chinese enterprises, including foreign-invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatment available under the previous tax laws and regulations. As a result, our subsidiaries in China may be subject to the uniform income tax rate of 25% unless we are able to qualify for preferential status. Historically, we have qualified for a preferential 15% tax rate that is available for new and high technology enterprises. The preferential tax rate applied to 2015, 2014 and 2013. We realized benefits from this 10% reduction in tax rate of $0.9 million, $0.5 million and $0.2 million for 2015, 2014 and 2013, respectively. In order to retain the preferential tax rate, we must meet certain operating conditions, satisfy certain product requirements, meet certain headcount requirements and maintain certain levels of research expenditures. The preferential tax rate that we enjoy could be modified or discontinued altogether at any time, which could materially and adversely affect our financial condition and results of operations.

Our subsidiaries in China may be subject to restrictions on dividend payments, on making other payments to us or any other affiliated company, and on borrowing or allocating tax losses among our subsidiaries.

Current Chinese regulations permit our subsidiaries in China to pay dividends only out of their accumulated profits, if any, determined in accordance with Chinese accounting standards and regulations, which are different than U.S. accounting standards and regulations. In addition, our subsidiaries in China are required to set aside at least 10% of their respective accumulated profits each year, if any, to fund their statutory common reserves until such reserves have reached at least 50% of their respective registered capital, as well as to allocate a discretional portion of their after-tax profits to their staff welfare and bonus fund. As of December 31, 2015, our Chinese subsidiaries' common reserves had not reached this threshold and, accordingly, these entities are required to continue funding such reserves with accumulated net profits. The statutory common reserves are not distributable as cash dividends except in the event of liquidation. In addition, current Chinese regulations prohibit inter-company borrowings or allocation of tax losses among subsidiaries in China. Further, if our subsidiaries in China incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other payments to us. Accordingly, we may not be able to move our capital easily, which could harm our business.

Restrictions on currency exchange may limit our ability to receive and use our revenue and cash effectively.

Because a substantial portion of our revenue is denominated in RMB, any restrictions on currency exchange may limit our ability to use revenue generated in RMB to fund any business activities we may have outside China or to make dividend payments in U.S. dollars. Under relevant Chinese rules and regulations, the RMB is currently convertible under the "current account," which includes dividends, trade and service-related foreign exchange transactions, but not under the "capital account," which includes foreign direct investment and loans, without the prior approval of the State Administration of Foreign Exchange, or SAFE. Currently, our subsidiaries in China may purchase foreign exchange for settlement of "current account transactions," including the payment of dividends to us, without the approval of SAFE. Although Chinese government regulations now allow greater convertibility of the RMB for current account transactions, significant restrictions remain. For example, foreign exchange transactions under our primary Chinese subsidiary's capital account, including principal payments in respect of foreign currency-denominated obligations, remain subject to significant foreign exchange controls and the approval of SAFE. These limitations could affect the ability of our subsidiaries in China to obtain foreign exchange for capital expenditures through debt or equity financing, including by means of loans or capital contributions from us. We cannot be certain that Chinese regulatory authorities will not impose more stringent restrictions on the convertibility of the RMB, especially with respect to foreign exchange transactions. If such restrictions are imposed, our ability to adjust our capital structure or engage in foreign exchange transactions may be limited.

In August 2008, SAFE promulgated the Circular on the Relevant Operating Issues Concerning the Improvement of the Administration of Payment and Settlement of Foreign Currency Capital of Foreign-invested Enterprises, or Circular 142, a notice regulating the conversion by foreign-invested enterprises or FIE of foreign currency into RMB by restricting how the converted RMB may be used. Circular 142 requires that RMB converted from the foreign currency-dominated capital of a FIE may only be used for purposes within the business scope approved by the applicable government authority and may not be used for equity investments within China unless specifically provided for otherwise. In addition, SAFE strengthened its oversight over the flow and use of RMB funds converted from the foreign currency-dominated capital of a FIE. The use of such RMB may not be changed without approval from SAFE.

Violations of Circular 142 may result in severe penalties, including substantial fines set forth in the Foreign Exchange Administration Regulations. As a result of Circular 142, our subsidiaries in China may not be able to convert our capital contributions to them into RMB for equity investments or acquisitions in China.

The Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the M&A Rules, establish complex procedures for some acquisitions of Chinese companies by foreign investors, which could make it more difficult for us to pursue growth through acquisitions in China.

The M&A Rules establish procedures and requirements that could make some acquisitions of Chinese companies by foreign investors more time-consuming and complex, including requirements in some instances that the Ministry of Commerce be notified in advance of any change-of-control transaction in which a foreign investor takes control of a Chinese domestic enterprise. We may seek to expand our business in part by acquiring complementary businesses. Complying with the requirements of the M&A Rules to complete such transactions could be time-consuming, and any required approval processes, including obtaining approval from the Ministry of Commerce, may delay or inhibit our ability to complete such transactions, which could affect our ability to expand our business or maintain our market share.

Uncertainties with respect to China's legal system could adversely affect the legal protection available to us.

Our operations in China are governed by Chinese laws and regulations. Our subsidiaries in China are generally subject to laws and regulations applicable to foreign investments in China and, in particular, laws applicable to wholly foreign-owned enterprises. China's legal system is a civil law system based on written statutes. Unlike common law systems, it is a legal system where decided legal cases have limited value as precedents. Since 1979, Chinese legislation and regulations have significantly enhanced the protections afforded to various forms of foreign investments in China. However, China has not developed a fully-integrated legal system, and recently-enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. In particular, because these laws and regulations are relatively new, the interpretation and enforcement of these laws and regulations involve uncertainties, including regional variations within China. For example, we may have to resort to administrative and court proceedings to enforce the legal protection under contracts or law. However, since Chinese administrative and court authorities have significant discretion in interpreting and implementing statutory and contract terms, it may be more difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we would receive compared to more developed legal systems. These uncertainties may impede our ability to enforce the contracts we have entered into with our distributors, business partners, customers and suppliers. In addition, protections of intellectual property rights and confidentiality in China may not be as effective as in the U.S. or other countries or regions with more developed legal systems. Furthermore, the legal system in China is based in part on government policies and internal rules (some of which are not published on a timely basis or at all) that may have a retroactive effect. As a result, we may not be aware of our violation of these policies and rules until sometime after the violation. In addition, any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention. All the uncertainties described above could limit the legal protections available to us and could materially and adversely affect our business and operations.

Chinese regulations relating to offshore investment activities by Chinese residents and employee stock options granted by overseas-listed companies may increase our administrative burden, restrict our overseas and cross-border investment activity or otherwise adversely affect the implementation of our acquisition strategy. If our stockholders who are Chinese residents, or our Chinese employees who are granted or exercise stock options, fail to make any required registrations or filings under such regulations, we may be unable to distribute profits and may become subject to liability under Chinese laws.

Chinese foreign exchange regulations require Chinese residents and corporate entities to register with local branches of SAFE in connection with their direct or indirect offshore investment activities. These regulations apply to our stockholders who are Chinese residents and may apply to any offshore acquisitions that we make in the future.

Pursuant to these foreign exchange regulations, Chinese residents who make, or have previously made, direct or indirect investments in offshore companies, will be required to register those investments. In addition, any Chinese resident who is a direct or indirect stockholder of an offshore company is required to file or update the registration with the local branch of SAFE, with respect to that offshore company, including any material change involving its round-trip investment, capital variation, such as an increase or decrease in capital, transfer or swap of shares, merger, division, long-term equity or debt investment or creation of any security interest. If any Chinese stockholder fails to make the required SAFE registration or file or update the registration, subsidiaries in China of that offshore parent company may be prohibited from distributing their profits and the proceeds from any reduction in capital, share transfer or liquidation, to their offshore parent company, and the offshore parent company may also be prohibited from injecting additional capital into their subsidiaries in China. Moreover, failure to comply with the various foreign exchange registration requirements described above could result in liability under Chinese laws for evasion of applicable foreign exchange restrictions. We cannot provide any assurances that all of our stockholders who are Chinese residents have made or obtained, or will make or obtain, any applicable registrations or approvals required by these foreign exchange regulations. The failure or inability of our stockholders in China to comply with the required registration procedures may subject us to fines and legal sanctions, restrict our cross-border investment activities, or limit our Chinese subsidiaries' ability to distribute dividends or obtain foreign-exchange-dominated loans. Moreover, because of the uncertainties in the interpretation and implementation of these foreign exchange regulations, we cannot predict how they will affect our business operations or future strategy. For example, we may be subject to a more stringent review and approval process with respect to our foreign exchange activities, such as remittance of dividends and foreign-currency-denominated borrowings, which may adversely affect our results of operations and financial condition. In addition, if we decide to acquire a domestic company in China, we cannot assure you that we or the owners of such company, as the case may be, will be able to obtain the necessary approvals or complete the necessary filings and registrations required by these foreign exchange regulations. This may restrict our ability to implement our acquisition strategy and could adversely affect our business and prospects.

On March 28, 2007, SAFE promulgated the Application Procedure of Foreign Exchange Administration for Domestic Individuals Participating in Employee Stock Holding Plan or Stock Option Plan of Overseas-Listed Company, or the Stock Option Rule. Under the Stock Option Rule, Chinese residents who are granted stock options by an overseas publicly-listed company are required, through a Chinese agent or Chinese subsidiary of such overseas publicly-listed company, to register with SAFE and complete certain other procedures. We and our Chinese employees who have been granted stock options are subject to the Stock Option Rule. We have completed the process of registering our stock option and appreciation plans with SAFE. On February 20, 2012, SAFE issued the Circular on Relevant Issues concerning Foreign Exchange Administration for Individuals in PRC Participating in Equity Incentive Plan of Overseas-Listed Companies, or Circular 7, which provides detailed procedures for conducting foreign exchange matters related to domestic individuals' participation in the equity incentive plans of overseas listed companies and supersedes the Stock Option Rule in its entirety. If we or our optionees in China fail to comply with the applicable regulations, we or our optionees in China may be subject to fines and legal sanctions. Several of our employees in China have exercised their stock options prior to our becoming an overseas publicly-listed company. Since there is not yet a clear regulation on how and whether Chinese employees can exercise their stock options granted by overseas private companies, it is unclear whether such exercises were permitted by Chinese laws and it is uncertain how SAFE or other government authorities will interpret or administer such regulations. Therefore, we cannot predict how such exercises will affect our business or operations. For example, we may be subject to more stringent review and approval processes with respect to our foreign exchange activities, such as remittance of dividends and foreign-currency-denominated borrowings, which may affect our results of operations and financial condition.

We may be obligated to withhold and pay individual income tax in China on behalf of our employees who are subject to individual income tax in China arising from the exercise of stock options. If we fail to withhold or pay such individual income tax in accordance with applicable Chinese regulations, we may be subject to certain sanctions and other penalties and may become subject to liability under Chinese laws.

The State Administration of Taxation has issued several circulars concerning employee stock options. Under these circulars, our Chinese employees (which could include both employees in China and expatriate employees subject to individual income tax in China) who exercise stock options will be subject to individual income tax in China. Our subsidiaries in China have obligations to file documents related to employee stock options with relevant tax authorities and withhold and pay individual income taxes for those employees who exercise their stock options. However, since there was not yet a clear regulation on how and whether Chinese employees could exercise stock options granted by overseas private companies and how Chinese employers shall withhold and pay individual taxes, the relevant tax authority verbally advised us that due to the difficulty in determining the fair market value of our shares as a private company, we did not need to withhold and pay the individual income tax for the exercises until after we completed our initial public offering in February 2011. Thus, we have not withheld or paid the individual income tax for the option exercises through the date of our initial public offering. However, we cannot be assured that the Chinese tax authorities will not act otherwise and request us to pay the individual income tax immediately and impose sanctions on us.

If the Chinese government determines that we failed to obtain approvals of, or registrations with, the requisite Chinese regulatory authority with respect to our current and past import and export of technologies, we could be subject to sanctions, which could adversely affect our business.

China imposes controls on technology import and export. The term “technology import and export” is broadly defined to include, without limitation, the transfer or license of patents, software and know-how, and the provision of services in relation to technology. Depending on the nature of the relevant technology, the import and export of technology to or from China requires either approval by, or registration with, the relevant Chinese governmental authorities.

If we are found to be, or to have been, in violation of Chinese laws or regulations, the relevant regulatory authorities have broad discretion in dealing with such violation, including, but not limited to, issuing a warning, levying fines, restricting us from benefiting from these technologies inside or outside of China, confiscating our earnings generated from the import or export of such technology or even restricting our future export and import of any technology. If the Chinese government determines that our past import and export of technology were inconsistent with, or insufficient for, the proper operation of our business, we could be subject to similar sanctions. Any of these or similar sanctions could cause significant disruption to our business operations or render us unable to conduct a substantial portion of our business operations and may adversely affect our business and result of operations.

China regulation of loans and direct investment by offshore holding companies to China entities may delay or prevent us from using the proceeds we received from our initial public offering to make loans or additional capital contributions to our China subsidiaries.

From time to time, we may make loans or additional capital contributions to our China subsidiaries. Any loans to our China subsidiaries are subject to China regulations and approvals. For example, any loans to our China subsidiaries to finance their activities cannot exceed statutory limits, must be registered with SAFE, or its local counterpart, and must be approved by the relevant government authorities. Any capital contributions to our China subsidiaries must be approved by the Ministry of Commerce of China or its local counterpart. In addition, under Circular 142, our China subsidiaries, as FIEs, may not be able to convert our capital contributions to them into RMB for equity investments or acquisitions in China.

We cannot assure you that we will be able to obtain these government registrations or approvals on a timely basis, if at all, with respect to our future loans or capital contributions to our China subsidiaries. If we fail to receive such registrations or approvals, our ability to capitalize our China subsidiaries may be negatively affected, which could materially and adversely affect our liquidity and ability to fund and expand our business.

Dividends paid to us by our Chinese subsidiaries may be subject to Chinese withholding tax.

The EIT Law and the implementation regulations provide that a 10% withholding tax may apply to dividends payable to investors that are “non-resident enterprises,” to the extent such dividends are derived from sources within China and in the absence of any tax treaty that may reduce such withholding tax rate. The comprehensive Double Taxation Arrangement between China and Hong Kong generally reduces the withholding tax on dividends paid from a Chinese company to a Hong Kong company to 5%. Dividends paid to us by our Chinese subsidiaries will be subject to Chinese withholding tax if, as expected, we are considered a “non-resident enterprise” under the EIT Law. If dividends from our Chinese subsidiaries are subject to Chinese withholding tax, our financial condition may be adversely impacted to the extent of such tax.

Our worldwide income may be subject to Chinese tax under the EIT Law.

The EIT Law provides that enterprises established outside of China whose “de facto management bodies” are located in China are considered “resident enterprises” and are generally subject to the uniform 25% enterprise income tax on their worldwide income. Under the implementation regulations for the EIT Law issued by the State Council, a “de facto management body” is defined as a body that has material and overall management and control over the manufacturing and business operations, personnel and human resources, finances and treasury, and acquisition and disposition of properties and other assets of an enterprise. If we are deemed to be a resident enterprise for Chinese tax purposes, we will be subject to Chinese tax on our worldwide income at the 25% uniform tax rate, which could have an impact on our effective tax rate and an adverse effect on our net income (loss), however, dividends paid to us by our Chinese subsidiaries may not be subject to withholding if we are deemed to be a resident enterprise.

Dividends payable by us to our investors and gains on the sale of our common stock by our foreign investors may be subject to tax under Chinese law.

Under the EIT Law and implementation regulations issued by the State Council, a 10% withholding tax is applicable to dividends payable to investors that are “non-resident enterprises.” Similarly, any gain realized on the transfer of common stock by such investors is also subject to a 10% withholding tax if such gain is regarded as income derived from sources within China. If we are determined to be a “resident enterprise,” dividends and other income we pay on our common stock, or the gain you may realize from the transfer of our common stock, would be treated as income derived from sources within China. If we are required under the EIT Law to withhold tax from dividends payable to investors that are “non-resident enterprises,” or if a gain realized on the transfer of our common stock is subject to withholding, the value of your investment in our common stock may be materially and adversely affected.

Our contractual arrangements with our subsidiaries in China may be subject to audit or challenge by the Chinese tax authorities, and a finding that our subsidiaries in China owe additional taxes could substantially reduce our net income and the value of our stockholders’ investment.

Under the applicable laws and regulations in China, arrangements and transactions among related parties may be subject to audit or challenge by the Chinese tax authorities. We would be subject to adverse tax consequences if the Chinese tax authorities were to determine that the contracts with or between our subsidiaries were not executed on an arm’s length basis, and as a result the Chinese tax authorities could require that our Chinese subsidiaries adjust their taxable income upward for Chinese tax purposes. Such an adjustment could adversely affect us by increasing our tax expenses.

Because a substantial portion of our business is located in China, we may have difficulty maintaining adequate management, legal and financial controls, which we are required to do in order to comply with Section 404 of the Sarbanes-Oxley Act and securities laws, and which could cause a material adverse impact on our consolidated financial statements, the trading price of our common stock and our business.

Chinese companies have historically not adopted a western style of management and financial reporting concepts and practices, which includes strong corporate governance, internal controls and computer, financial and other control systems. Most of our middle management staff and some of our top management staff in China are not educated and trained in the western system, and we may have difficulty hiring new employees in China with experience and expertise relating to accounting principles generally accepted in the U.S. and U.S. public-company reporting requirements. As a result of these factors, we may experience difficulty in maintaining management, legal and financial controls, collecting financial data and preparing financial statements, books of account and corporate records and instituting business practices that meet U.S. public-company reporting requirements. We may, in turn, experience difficulties in maintaining adequate internal controls as required under Section 404 of the Sarbanes-Oxley Act. This may result in material weaknesses in our internal controls which could impact the reliability of our consolidated financial statements and prevent us from complying with SEC rules and regulations and the requirements of the Sarbanes-Oxley Act. Any such material weaknesses or lack of compliance with SEC rules and regulations could result in restatements of our historical consolidated financial statements, cause investors to lose confidence in our reported financial information, have an adverse impact on the trading price of our common stock, adversely affect our ability to access the capital markets and our ability to recruit personnel, lead to the delisting of our securities from the stock exchange on which they are traded. This could lead to litigation claims, thereby diverting management's attention and resources, and which may lead to the payment of damages to the extent such claims are not resolved in our favor, lead to regulatory proceedings, which may result in sanctions, monetary or otherwise, and have a material adverse effect on our reputation and business.

See also the risk factor "If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected."

Our consolidated affiliated entities in China are audited by auditors who are not inspected by the Public Company Accounting Oversight Board and, as such, you are deprived of the benefits of such inspection.

Publicly traded companies in the United States are audited by independent registered public accounting firms registered with the U.S. Public Company Accounting Oversight Board, or the PCAOB, and are required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and professional standards. Because the auditors of our consolidated affiliated entities in China are located in China, a jurisdiction where the PCAOB is currently unable to conduct inspections without the approval of the Chinese authorities, such auditors are not currently inspected by the PCAOB. On May 24, 2013, the PCAOB announced that it had entered into a memorandum of understanding on enforcement cooperation with the China Securities Regulatory Commission and the Ministry of Finance of China that establishes a cooperative framework between the parties for the production and exchange of audit documents relevant to investigations in the United States and China. However, direct PCAOB inspections of independent registered accounting firms in China are still not permitted by Chinese authorities.

Inspections of auditing firms that the PCAOB has conducted outside China have identified deficiencies in those firms' audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. This lack of PCAOB inspections in China prevents the PCAOB from regularly evaluating our Chinese auditor's audits and its quality control procedures. As a result, investors may be deprived of the benefits of PCAOB inspections.

The turnover of direct labor in manufacturing industries in China is high, which could adversely affect our production, shipments, and results of operations.

Employee turnover of direct labor in the manufacturing sector in China is typically high and retention of such personnel is a challenge to companies located in or with operations in China. Although direct labor cost does not represent a high proportion of our overall manufacturing costs, direct labor is required for the manufacture of our products. If our direct labor turnover rates are higher than we expect, or we otherwise fail to adequately manage our direct labor turnover rates, then our results of operations could be adversely affected.

Our subsidiaries in China are subject to Chinese labor laws and regulations. Changes to Chinese labor laws and regulations may increase our operating costs in China, which could adversely affect our financial results.

China Labor Contract Law, effective January 1, 2008, together with its implementing rules, effective September 18, 2008 and its amendments, effective July 1, 2013, provides certain protections to Chinese employees. Under the current rules, the probation period varies depending on contract terms and the employment contract can only be terminated during the probation period for cause upon three days' notice. Additionally, an employer may not be able to terminate a contract during the probation period on the grounds of a material change of circumstances or a mass layoff. The current law also has specific provisions on conditions when an employer has to sign an employment contract with open-ended terms. If an employer fails to enter into an open-ended contract in certain circumstances, the employer must pay the employee twice their monthly wage beginning from the time the employer should have executed an open-ended contract. Additionally an employer must pay severance for nearly all terminations, including when an employer decides not to renew a fixed-term contract.

On January 1, 2008, the Regulations on Paid Annual Leaves of Staff and Workers also took effect, followed by its implementing measures effective September 18, 2008. These regulations provide that employees who have worked consecutively for one year or more are entitled to paid annual leave. An employer must guarantee that employees receive the same wage income during the annual leave period as that for the normal working period. Where an employer cannot arrange annual leave for an employee due to production needs, upon agreement with the employee, the employer must pay daily wages equal to 300% of the employee's daily salary for each day of annual leave forfeited by such employee.

The Shenzhen municipal government, effective December 2010, issued a measure to require all government agencies, public institutions, and enterprises in Shenzhen to pay a monthly housing fund. The housing fund is designed to enhance the welfare and increase the funds available to Shenzhen employees when buying, building, renovating, or overhauling owner-occupied houses. Employee and employers are required to make equal contributions to the housing fund, which generally can range between 5% and 20% of the employees' average salary of the most recent year and we commenced making these contributions in the fourth quarter of 2010.

From time to time, the Chinese government has implemented requirements to increase the minimum wage for employees in China. These requirements have resulted in the past, and may result in the future, in higher employee costs for our personnel in China. Minimum wage rates generally vary by city and province within China and have historically increased as much as 20% on an annual basis. We were required to increase wages to comply with these requirements and it may be necessary for us to increase wages more than the minimum wage adjustment requires due to market conditions or additional government mandates. If labor costs in China continue to increase, our gross margins, profit margins and results of operations may be adversely affected. In addition, our competitive advantage against competitors with personnel costs or manufacturing in traditionally higher cost countries may be diminished. Future changes to labor laws and regulations may materially increase the costs of our operations in China.

If any of our subsidiaries in China becomes the subject of a bankruptcy or liquidation procedures, we may lose or diminish the ability to use its assets.

Because a substantial portion of our business and revenue are derived from China, if any of our subsidiaries in China goes bankrupt and all or part of its assets become subject to liens or rights of third-party creditors, we may be unable to continue some or all of our operations in China. Any delay, interruption or cessation of all or a part of our operations in China would negatively impact our ability to generate revenue and otherwise adversely affect our business.

We may be exposed to liabilities under the FCPA and Chinese anti-corruption laws, and any determination that we violated these laws could have a material adverse effect on our business.

We are subject to the Foreign Corrupt Practice Act of 1977, or FCPA, and other laws that prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. persons and issuers as defined by the statute, for the purpose of obtaining or retaining business. We have operations, agreements with third parties and we make significant sales in China. China also strictly prohibits bribery of government officials. Our activities in China create the risk of unauthorized payments or offers of payments by our employees, consultants, sales agents or distributors, even though they may not always be subject to our control. Although we have implemented policies and procedures to discourage these practices by our employees, our existing safeguards and any future improvements may prove to be less than effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Violations of the FCPA or Chinese anti-corruption laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In addition, the U.S. government may seek to hold us liable for successor liability FCPA violations committed by companies in which we invest or that we acquire.

Risks related to ownership of our common stock

Our financial results may vary significantly from quarter-to-quarter due to a number of factors, which may lead to volatility in our stock price.

Our quarterly revenue and results of operations have varied in the past and may continue to vary significantly from quarter to quarter. This variability may lead to volatility in our stock price as research analysts and investors respond to these quarterly fluctuations. These fluctuations are due to numerous factors, including:

- fluctuations in demand for our products;
- the timing, size and product mix of sales of our products;
- changes in our pricing and sales policies or the pricing and sales policies of our competitors;
- our ability to design, manufacture and deliver products to our customers in a timely and cost-effective manner and that meet customer requirements;
- quality control or yield problems in our manufacturing operations;
- our ability to timely obtain adequate quantities of the components used in our products;
- length and variability of the sales cycles of our products;
- unanticipated increases in costs or expenses; and
- fluctuations in foreign currency exchange rates.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly and annual results of operations in the future. In addition, a significant amount of our operating expenses is relatively fixed in nature due to our internal manufacturing, research and development, sales and general administrative efforts. Any failure to adjust spending quickly enough to compensate for a revenue shortfall could magnify the adverse impact of such revenue shortfall on our results of operations. Moreover, our results of operations may not meet our announced financial outlook or the expectations of research analysts or investors, in which case the price of our common stock could decrease significantly. There can be no assurance that we will be able to successfully address these risks.

Our failure to comply with conditions required for our common stock to be listed on the NYSE could result in delisting of our common stock from the NYSE and have a significant negative effect on the value and liquidity of our securities as well as other matters.

We are required to comply with the NYSE Listed Company Manual as a condition for our common stock to continue to be listed on the NYSE. If we are unable to comply with such conditions such as non-timely filing of our Annual Report on Form 10-K or our Quarterly Reports on Form 10-Q, then our shares of common stock are subject to delisting from the NYSE.

If our common stock is delisted from the NYSE, such securities may be traded over-the-counter on the “pink sheets.” The alternative market, however, is generally considered to be less efficient than, and not as broad as, the NYSE. Accordingly, delisting of our common stock from the NYSE could have a significant negative effect on the value and liquidity of our securities. In addition, the delisting of such stock could adversely affect our ability to raise capital on terms acceptable to us or at all. In addition, delisting of our common stock may preclude us from using exemptions from certain state and federal securities regulations.

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Our stock price may be volatile.

The market price of our common stock could be subject to wide fluctuations in response to, among other things, the risk factors described in this section of our Annual Report on Form 10-K, and other factors beyond our control, such as fluctuations in the valuation of companies perceived by investors to be comparable to us.

The stock markets have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions, such as recessions, sovereign debt or liquidity issues, interest rate changes or international currency fluctuations, may negatively affect the market price of our common stock.

In the past, many companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may become the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management’s attention from other business concerns, which could seriously harm our business.

If research analysts do not publish research about our business or if they issue unfavorable commentary or downgrade our common stock, our stock price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that research analysts publish about us and our business. The price of our common stock could decline if one or more research analysts downgrade our stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more of the research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our common stock could decrease, which could cause our stock price or trading volume to decline.

The concentration of our capital stock ownership with our principal stockholders, executive officers and directors and their affiliates may limit other stockholders’ ability to influence corporate matters.

As of December 31, 2015, our executive officers and directors, and entities that are affiliated with them or that have a right to designate a director, beneficially own an aggregate of approximately 34% of our outstanding common stock. This significant concentration of share ownership may adversely affect the trading price for our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders. Also, as a result, these stockholders, acting together, may be able to control our management and affairs and matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. Consequently, this concentration of ownership may have the effect of delaying or preventing a change in control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control, even if such a change in control would benefit our other stockholders.

We currently do not intend to pay dividends on our common stock and, consequently, your only opportunity to achieve a return on your investment is if the price of our common stock appreciates.

We currently do not plan to declare dividends on shares of our common stock in the foreseeable future. In addition, the terms of our U.S. revolving credit agreement with Comerica Bank restrict our ability to pay dividends. Consequently, your only opportunity to achieve a return on your investment in our company will be if the market price of our common stock appreciates and you sell your shares at a profit. There is no guarantee that the price of our common stock that will prevail in the market will ever exceed the price that you pay.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- providing for a classified board of directors with staggered, three-year terms;
- not providing for cumulative voting in the election of directors;
- authorizing our board of directors to issue, without stockholder approval, preferred stock rights senior to those of common stock;
- prohibiting stockholder action by written consent;
- limiting the persons who may call special meetings of stockholders; and
- requiring advance notification of stockholder nominations and proposals.

In addition, we have been governed by the provisions of Section 203 of the Delaware General Corporate Law since the completion of our initial public offering. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding common stock, from engaging in certain business combinations without approval of substantially all of our stockholders for a certain period of time.

These and other provisions in our amended and restated certificate of incorporation, our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions.

## ITEM 1B.UNRESOLVED STAFF COMMENTS

Not applicable.

## ITEM 2.PROPERTIES

Our properties consist primarily of owned and leased office and manufacturing facilities. Our corporate headquarters are located in San Jose, California and our manufacturing facilities are primarily located in Shenzhen and Dongguan, China and Tokyo, Japan. The following schedule presents the approximate square footage of our facilities as of December 31, 2015:

| Location | Square Feet | Commitment and Use |
| --- | --- | --- |

| | | |
|---|---|---|
| San Jose, California | 39,314 | Leased; 1 building used for corporate headquarters offices and wafer fabrication. |
| Fremont, California | 73,186 | Leased; 2 buildings used for wafer fabrication and research and development. |
| Shenzhen, China (1) | 236,853 | Owned; 1 building and 1 floor of a building. Used for manufacturing, research and development, and sales and marketing. |
| Shenzhen, China | 26,253 | Leased; 3 buildings used for staff dormitory. |
| Dongguan, China | 93,431 | Leased; 2 buildings used for manufacturing and staff dormitory. |
| Tokyo, Japan | 143,875 | Owned; 1 building used for manufacturing, research and development and marketing. |
| Moscow, Russia | 8,859 | Leased; 2 floors of buildings used for manufacturing, research and development and administrative. |

(1) The owned floor of the building in Shenzhen, representing 23,361 square feet, was leased to a tenant effective February 2014.

In addition, we lease a number of smaller offices for warehouse, manufacturing, research and other functions.

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## ITEM 3.LEGAL PROCEEDINGS

From time to time, we are involved in litigation that we believe is of the type common to companies engaged in our line of business, including commercial disputes and employment issues. As of the date of this Annual Report on Form 10-K, other than as described below, we are not involved in any pending legal proceedings that we believe could have a material adverse effect on our financial condition, results of operations or cash flows. However, as described below, a certain dispute involves a claim by a third party that our activities infringe their intellectual property rights. This and other types of intellectual property rights claims generally involve the demand by a third party that we cease the manufacture, use or sale of the allegedly infringing products, processes or technologies and/or pay substantial damages or royalties for past, present and future use of the allegedly infringing intellectual property. Claims that our products or processes infringe or misappropriate any third-party intellectual property rights (including claims arising through our contractual indemnification of our customers) often involve highly complex, technical issues, the outcome of which is inherently uncertain. Moreover, from time to time, we may pursue litigation to assert our intellectual property rights. Regardless of the merit or resolution of any such litigation, complex intellectual property litigation is generally costly and diverts the efforts and attention of our management and technical personnel which could adversely affect our business.

For a discussion of our current legal proceedings, please refer to the information set forth under the “Litigation” section in Note 12, Commitments and Contingencies, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K, which is incorporated herein by reference.

## ITEM 4.MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5.MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

As of February 29, 2016, there were approximately 95 holders of record of our common stock (not including beneficial holders of our common stock holder in street names). We have not paid cash dividends on our common stock since our inception, and we do not anticipate paying any in the foreseeable future. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects, consent from our existing credit facility lender in the U.S., and other factors our board of directors may deem relevant.

The following table sets forth, for the periods indicated, the high and low closing prices of our common stock as reported by the New York Stock Exchange.

| | Low | High |
|---|---|---|
| Fiscal Year 2015: | | |
| First Quarter | $ 2.81 | $ 6.88 |
| Second Quarter | $ 5.45 | $ 11.05 |
| Third Quarter | $ 5.76 | $ 9.44 |
| Fourth Quarter | $ 6.57 | $ 11.40 |
| Fiscal Year 2014: | | |
| First Quarter | $ 6.61 | $ 8.41 |
| Second Quarter | $ 3.82 | $ 8.10 |
| Third Quarter | $ 2.42 | $ 4.04 |
| Fourth Quarter | $ 2.46 | $ 3.78 |

The graph below shows the cumulative total stockholder return of an investment of $100 (and the reinvestment of any dividends thereafter) on February 2, 2011 (the first trading day of NeoPhotonics Corporation common stock) in (i) our common stock, (ii) the S&P 500 Index and (iii) the NASDAQ Telecommunications Index. Our stock price performance shown in the graph below is not indicative of future stock price performance. The following graph and related information shall not be deemed "soliciting material" or be deemed to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing, except to the extent that we specifically state that such graph and related information are incorporated by reference into such filing.

| | NeoPhotonics | S&P 500 | NASDAQ Telecom |
|---|---|---|---|
| 2/2/2011 | $ 100 | $ 100 | $ 100 |
| 12/31/2011 | $ 35 | $ 96 | $ 83 |
| 12/31/2012 | $ 43 | $ 109 | $ 84 |
| 12/31/2013 | $ 53 | $ 142 | $ 105 |
| 12/31/2014 | $ 26 | $ 158 | $ 114 |
| 12/31/2015 | $ 82 | $ 157 | $ 105 |

For equity compensation plan information refer to Item 12 of this Annual Report on Form 10-K.

Use of Proceeds

In 2015, we completed our follow-on offering of 6,866,689 shares of our common stock in a registered public offering at $7.25 per share. We raised approximately $45.6 million, net of underwriting costs and other offering expenses of approximately $4.1 million. We held the proceeds received our follow-on public offering as cash, cash equivalent and short-term investments and intend to continue to invest the funds in money market accounts and short-term marketable securities including money market funds, Government-sponsored enterprise obligations, commercial paper and U.S. government securities. There has been no material change in the planned use of proceeds from our follow-on public offering as described in our final prospectus filed with the SEC on May 22, 2015 pursuant to Rule 424(b).

In 2015, we filed a resale registration statement, which registered 4,972,905 shares of the Company’s common stock, at a par value of $0.0025 per share, held by Rusnano. We do not receive any proceeds from any sales of our common stock held by Rusnano.

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ITEM 6.SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read together with our consolidated financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this Annual Report on Form 10-K. The selected consolidated financial data in this section is not intended to replace our consolidated financial statements and the related notes.

We derived the consolidated statements of operations data for the years ended December 31, 2015, 2014 and 2013 and the consolidated balance sheet data as of December 31, 2015 and 2014 from our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2012 and 2011 and the consolidated balance sheet data as of December 31, 2013, 2012 and 2011 are derived from our consolidated financial statements, which are not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of our future results.

| | Years ended December 31, | | | | |
|---|---|---|---|---|---|
| Consolidated Statement of Operations Data: | 2015 (1) | 2014 (2) | 2013 (3) | 2012 (9) | 2011 (4)(9) |
| | (in thousands, except per share data) | | | | |
| Revenue | $ 339,439 | $ 306,177 | $ 282,242 | $ 245,423 | $ 201,029 |
| Cost of goods sold | 240,358 | 235,059 | 217,069 | 184,163 | 150,944 |
| Gross profit | 99,081 | 71,118 | 65,173 | 61,260 | 50,085 |
| Operating expenses | 95,128 | 90,250 | 98,846 | 78,167 | 78,551 |
| Income (loss) from operations | 3,953 | (19,132) | (33,673) | (16,907) | (28,466) |
| Interest and other income (expense), net (5) | 2,819 | 1,932 | 538 | 599 | 14,231 |
| Provision for income taxes | (3,104) | (2,519) | (1,204) | (1,364) | (1,155) |
| Income (loss) from continuing operations | 3,668 | (19,719) | (34,339) | (17,672) | (15,390) |
| Income from discontinued operations, net of tax | — | — | — | 142 | 636 |
| Net income (loss) | $ 3,668 | $ (19,719) | $ (34,339) | $ (17,530) | $ (14,754) |
| Basic net income (loss) per share from continuing operations (6) | $ 0.10 | $ (0.61) | $ (1.11) | $ (0.62) | $ (1.45) |
| Diluted net income (loss) per share from continuing operations (6) | $ 0.09 | $ (0.61) | $ (1.11) | $ (0.62) | $ (1.45) |
| Basic net income (loss) per share | $ 0.10 | $ (0.61) | $ (1.11) | $ (0.62) | $ (1.42) |
| Diluted net income (loss) per share | $ 0.09 | $ (0.61) | $ (1.11) | $ (0.62) | $ (1.42) |

Years ended December 31,

| Consolidated Balance Sheet Data: | 2015 | 2014 | 2013 | 2012 | 2011 |
|---|---|---|---|---|---|
| | (in thousands) | | | | |
| Cash and cash equivalents | $ 76,088 | $ 43,035 | $ 57,101 | $ 36,940 | $ 32,321 |
| Short-term investments | 23,294 | — | 17,916 | 64,301 | 54,063 |
| Restricted cash and investments | 2,660 | 21,254 | 2,138 | 2,626 | 3,227 |
| Working capital (7) | 151,211 | 102,130 | 124,298 | 152,374 | 124,199 |
| Total assets | 341,878 | 286,284 | 302,227 | 295,632 | 277,049 |
| Long-term debt (including current portion) | 11,519 | 23,336 | 34,475 | 22,167 | 27,166 |
| Common stock and additional paid-in capital (8) | 511,852 | 456,271 | 447,546 | 438,934 | 392,854 |
| Total equity | 211,656 | 159,456 | 176,811 | 202,680 | 173,654 |

(1) We acquired the tunable laser product lines of EMCORE Corporation on January 2, 2015 and the optical power monitoring business of EigenLight Corporation on November 2, 2015 and the results of operations from these acquisitions are included from the date of acquisition.

(2) In 2014, we recognized total escrow settlement gain of $4.9 million, of which $3.9 million pertained to certain indemnification claims by us in connection with the acquisition of Santur in 2011 and $1.0 million pertained to our acquisition of NeoPhotonics Semiconductor in 2013.

(3) We acquired NeoPhotonics Semiconductor on March 29, 2013 and its results of operations are included from the date of acquisition.

(4) We acquired Santur on October 12, 2011 and its results of operations are included from the date of acquisition. Due to the decrease in our market capitalization as of the end of the fourth quarter of 2011, we determined that the indicators of impairment existed and that the carrying value of our goodwill was not recoverable. As a result, we recorded a goodwill impairment charge of $13.1 million, of which $8.8 million was related to the acquisition of Santur in October 2011.

(5) In 2010, we purchased shares of Ignis ASA ("Ignis"), a Norwegian company traded on the Oslo Borse (Norway stock exchange) for $8.1 million. In 2011, we sold our shares in Ignis for $21.3 million and recognized a gain of $13.8 million. The gain was recognized as other income in the consolidated statement of operations for the year ended December 31, 2011.

(6) See Note 5 to the Consolidated Financial Statements for a description of our calculation of net income (loss) per share.

(7) Working capital is defined as total current assets less total current liabilities.

(8) In connection with the closing of our initial public offering in February 2011, all of the shares of Series 1, Series 2, Series 3 and Series X preferred stock outstanding automatically converted into shares of common stock.

(9) In the fourth quarter of 2011, we initiated a plan to sell a component of our business, Shenzhen Photon Broadband Technology Co., Ltd. (Broadband), a subsidiary in China. In January 2012, we entered into a purchase agreement with a third party to dispose of our 100% equity interest in Broadband for a total cash consideration of RMB 13.0 million ($2.1 million), and the transaction closed in March 2012. As such, the net assets of Broadband were classified as held-for-sale in our consolidated balance sheets and the results of operations associated with Broadband were presented as discontinued operations in our consolidated statements of operations for all periods presented through 2012.

## ITEM 7.MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis by our management of our financial condition and results of operations in conjunction with our consolidated financial statements and the accompanying notes.

The following discussion contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in the forward-looking statements. Please also see the cautionary language at the beginning of Part I of this Annual Report on Form 10-K regarding forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in “Risk Factors” of this Annual Report on Form 10-K.

### Business overview

We develop, manufacture and sell optoelectronic products that transmit, receive and switch high speed digital optical signals for communications networks. We sell our products to the world’s leading network equipment manufacturers, including Alcatel-Lucent SA (which was acquired by Nokia Corporation in January 2016), Ciena Corporation, Cisco Systems, Inc., HiSilicon Technologies, Ltd., an affiliate of Huawei Technologies, Co., Ltd. and Huawei Technologies Co., Ltd. (collectively “Huawei”). These companies are among our largest customers and a focus of our strategy due to their leading market positions.

We have research and development and wafer fabrication facilities in San Jose and Fremont, California and in Tokyo, Japan that coordinate with our research and development and manufacturing facilities in Dongguan, Shenzhen and Wuhan, China and Ottawa, Canada. We use proprietary design tools and design-for-manufacturing techniques to align our design process with our precision nanoscale, vertically integrated manufacturing and testing. We believe we are one of the highest volume PIC manufacturers in the world and that we can further expand our manufacturing capacity to meet market needs.

Recognizing our focus on growth in our 100Gbps (“100G”) and beyond products, we realigned our product group reporting for 2015 to “High Speed Products” which includes products designed for 100G and beyond applications and “Network Products and Solutions”, which comprises all products designed for applications below 100G, and includes 40G products previously included in our “High Speed Products” group.  In 2015, High Speed Products represented approximately 58% of total revenue and Network Products and Solutions represented approximately 42% of total revenue. In 2014, High Speed Products represented approximately 42% of total revenue and Network Products and Solutions represented approximately 58% of total revenue.

On January 2, 2015, we closed an acquisition of the tunable laser product lines of EMCORE Corporation (“EMCORE”) for $17.0 million. Consideration for the transaction consisted of $1.5 million in cash and a final promissory note (the “EMCORE Note”) of approximately $15.5 million, which had a maturity of two years from the closing of the transaction and an interest rate of 5% per annum for the first year and 13% per annum for the second year. We accounted for the acquisition as a business combination and included EMCORE’s revenue and expense for the acquired products in our consolidated financial results from the acquisition close date. The EMCORE Note was repaid in full in April 2015.

On November 2, 2015, we closed an acquisition of the optical power monitoring business of EigenLight Corporation (“EigenLight”) for approximately $0.4 million in cash. We accounted for the acquisition as a business combination and included revenue and expense of the acquired business in our consolidated financial results from the acquisition close date.

In 2015, our revenue growth of 11% compared to 2014 was driven primarily by demand for our High Speed Products, which includes the tunable laser products acquired from EMCORE in January 2015, as carriers continued to accelerate deployment of high capacity optical transport networks worldwide, particularly in China. Our gross margin increased to 29.2% in the year ended December 31, 2015 compared to 23.2% in the year ended December 31, 2014, primarily attributable to a volume increase in High Speed Products designed for 100G and above operation, our efforts to phase out low margin products and our ongoing efforts to reduce costs.

In 2016, we expect continued volume growth for our High Speed Products, although quarter-to-quarter results may show considerable variability as is usual in a rapid initial ramp-up for a new technology. Similar to revenue, our gross margins may fluctuate materially depending on a variety of factors including average selling price changes, product mix, volume, manufacturing utilization and ongoing manufacturing process improvements.

We have completed the phase-out of certain products that accounted for approximately $4 million and $23 million of total revenue in 2015 and 2014, respectively. In addition, we are expecting to phase out additional products that accounted for approximately $15 million of total revenue in 2015. These products, which are in the end of life, had relatively low gross margins. We recognized a $2.8 million inventory write-down within cost of goods sold in 2015 as a result of the phasing-out of our earlier-generation tunable laser products.

Follow-On Public Offering

On May 27, 2015, we completed our follow-on offering of 5,971,034 shares of our common stock in a registered public offering at $7.25 per share. On May 27, 2015, the underwriters in our follow-on offering exercised an option to purchase 895,655 shares of our common stock at a price of $7.25 per share, which was completed on June 1, 2015. We raised approximately $45.6 million, net of underwriting costs and other directly related costs of approximately $4.1 million.

Amendment to Rights Agreement with Rusnano

In July 2015, we entered into an Amendment to Rights Agreement relating to the Rights Agreement dated as of April 27, 2012 between us and Joint Stock Company “RUSNANO” (formerly Open Joint Stock Company “RUSNANO”), or Rusnano. The Amendment to Rights Agreement became effective on June 30, 2015. It provides for an updated investment plan for our Russian subsidiaries that includes the licensing of non-cash intellectual property, non-cash transfers of existing equipment and commitments to complete the remaining investment milestones of approximately one-half of the overall investment requirement of $30.0 million through fiscal year 2019, and provides that the maximum amount of penalties to be paid by us will not exceed $5.0 million in the aggregate. We achieved our investment milestone for 2015. If certain of the investment commitments are not achieved in the indicated time frames in 2016 and 2019, we also have the ability to pay exit fees. For more information, see “—Liquidity and capital resources—Rusnano Rights Agreement” below.

Debt Refinancing Arrangements

In 2015, we restructured our term loan led by Comerica Bank to eliminate a restricted cash requirement and increased our borrowing capacity from $20.0 million as of December 31, 2014 to $30.0 million as of December 31, 2015. In February 2015, we entered into a financing arrangement with Bank of Tokyo-Mitsubishi UFJ, Ltd. (the “Mitsubishi Bank”) through two long-term mortgage instruments totaling 1.5 billion JPY ($12.6 million) to pay off our mortgage from the semiconductor Optical Components Business Unit of LAPIS Semiconductor Co., Ltd. (“LAPIS”), a wholly-owned subsidiary of Rohm Co., Ltd. of Japan and increase our available cash balances. By restructuring our debt, we eliminated certain cash restrictions and improved our cash availability for 2015.

Critical accounting policies and estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. (“U.S. GAAP”). These principles require us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses and cash flow, and related disclosure of contingent assets and liabilities. Our estimates include those related to revenue recognition, stock-based compensation expense, impairment analysis of goodwill and long-lived assets, valuation of inventory, purchased intangibles, warranty liabilities and accounting for income taxes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

We believe that of our significant accounting policies, which are described in Note 2 of Notes to Consolidated Financial Statements, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, we believe these are the most critical to fully understand and evaluate our financial condition and results of operations.

Revenue recognition

We recognize revenue from the sale of our products provided that persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. Contracts and/or customer purchase orders are used to determine the existence of an arrangement. Shipping documents and customer acceptance, when applicable, are used to verify delivery. We assess whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the sales price is subject to refund or adjustment. We assess collectability based primarily on the creditworthiness of the customer as determined by credit checks and the customer’s payment history.

We recognize revenue when the product is shipped and title has transferred to the buyer. We bear all costs and risks of loss or damage to the goods up to that point. On most orders, our terms of sale provide that title passes to the buyer upon shipment by us. In certain cases, our terms of sale may provide that title passes to the buyer upon delivery of the goods to the buyer. Revenue related to the sale of consignment inventory at customer vendor managed locations is not recognized until the product is pulled from inventory stock by customers. Payments made to third-party sales representatives are recorded to sales and marketing expense and not a reduction of revenue as the sales agent services they provide have an identifiable benefit and are made at similar rates of other sales agent service providers. Shipping and handling costs are included in the cost of goods sold. We present revenue net of sales taxes and any similar assessments.

Stock-based compensation expense

We grant stock options, stock appreciation units and restricted stock units to employees, directors and consultants. Stock purchase rights are granted to our employees. Stock-based awards are accounted for at fair value as of the measurement date using the Black-Scholes-Merton option-pricing model, the lattice-binominal option-pricing model or stock prices. For stock options and restricted stock units, the measurement date is the grant date and for employee stock purchase rights the measurement date is the first day of the offering period. Stock appreciation units are subject to re-measurement each reporting period.

We recognize the fair value over the period during which an employee is required to provide services in exchange for the award, known as the requisite service period (usually the vesting period) on a straight-line basis. Stock-based compensation expense includes the impact of estimated forfeitures. We estimate future forfeitures at the date of grant and revise the estimates, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Determining the appropriate fair value model and calculating the fair value of stock-based awards requires judgment, including estimating stock price volatility, forfeiture rates and expected life. If any of these assumptions, or the market price of our common shares, used in the option-pricing models change, our stock-based compensation expense could change on our consolidated financial statements.

Business Combinations

We allocate the fair value of purchase consideration to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, management makes significant estimates and assumptions, especially with respect to intangible assets.

Fair value estimates are based on the assumptions management believes a market participant would use in pricing the asset or liability. Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from customer relationships and acquired patents and developed technology; and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Amounts recorded in a business combination may change during the measurement period, which is a period not to exceed one year from the date of acquisition, as additional information about conditions existing at the acquisition date becomes available.

Goodwill and long-lived assets

Our methodology for allocating the purchase price relating to purchase acquisitions is determined through established valuation techniques. Goodwill represents a residual value as of the acquisition date, which generally results in measuring goodwill as an excess of the purchase consideration transferred plus the fair value of any noncontrolling interest in the acquired company over the fair value of net assets acquired, including any contingent consideration.

We perform annual goodwill impairment test in the fourth fiscal quarter by reporting unit. We could be subject to additional goodwill impairment tests in the event of changes in industry and market conditions, our business and reporting structure. During the fourth quarter of fiscal 2015, we performed a sensitivity analysis for goodwill impairment and determined that the estimated fair value substantially exceeded the carrying value of the underlying goodwill and a hypothetical 10% decline in the fair value of each reporting unit would not result in an impairment of goodwill.

We assess the impairment of long-lived assets whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss would be recognized when the sum of the future net cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. The estimated future cash flows are based upon, among other things, assumptions about expected future operating performance and may differ from actual cash flows. If our estimates regarding future cash flows derived from such assets were to change, we may record an impairment to the value of these assets.

Valuation of inventories

We record inventories at the lower of cost (using the first-in, first-out method) or market, after we give appropriate consideration to obsolescence and inventories in excess of anticipated future demand. In assessing the ultimate recoverability of inventories, we are required to make estimates regarding future customer demand, the timing of new product introductions, economic trends and market conditions. If the actual product demand is significantly lower than forecasted, we could be required to record additional inventory write-downs which would be charged to cost of goods sold. Obsolescence is determined from several factors, including competitiveness of product offerings, market conditions and product life cycles. Write-downs of excess and obsolete inventory are charged to cost of goods sold. At the point of the loss recognition, a new, lower cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis. If this lower-cost inventory is subsequently sold, it will result in lower costs and higher gross margin for those products. Any write-downs would have an adverse impact on our gross margin. In 2015, we recorded inventory write-down charges of $6.5 million, which included a $2.8 million charge resulting from the phasing-out of our earlier-generation tunable laser products. In 2014 and 2013, inventory write-down charges were $1.5 million and $3.2 million, respectively.

Warranty liabilities

We provide warranties to cover defects in workmanship, materials and manufacturing of our products for a period of one to two years to meet stated functionality specifications. From time to time, we have agreed, and may agree, to warranty provisions providing for extended terms or with a greater scope. We test products against specified functionality requirements prior to delivery, but we nevertheless from time to time experience claims under our warranty guarantees. We accrue for estimated warranty costs under those guarantees based upon historical experience, and for specific items at the time their existence is known and the amounts are determinable. We charge a provision for estimated future costs related to warranty activities to cost of goods sold based upon historical product failure rates and historical costs incurred in correcting product failures. If we experience an increase in warranty claims compared with our historical experience, or if the cost of servicing warranty claims is greater than expected, our gross margin and profitability would be adversely affected. We recorded warranty expense of $0.1 million, $0.9 million and $1.5 million for each of the years ended December 31, 2015, 2014 and 2013, respectively.

Accounting for income taxes

We record income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our consolidated financial statements or tax returns. In estimating future tax consequences, generally we consider all expected future events, other than enactments or changes in tax law or rates. We provide valuation allowances when necessary to reduce deferred tax assets to the amount expected to be realized.

We operate in various tax jurisdictions and are subject to audit by various tax authorities. We provide for tax contingencies whenever it is deemed probable that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Tax contingencies are based upon their technical merits, relevant tax law and the specific facts and circumstances as of each reporting period. Changes in facts and circumstances could result in material changes to the amounts recorded for such tax contingencies.

As part of the process of preparing our consolidated financial statements, we are required to estimate our taxes in each of the jurisdictions in which we operate. We estimate actual current tax exposure together with assessing temporary differences resulting from differing treatment of items, such as accruals and allowances not currently deductible for tax purposes. These differences result in deferred tax assets.

We make estimates and judgments about our future taxable income that are based on assumptions that are consistent with our plans and estimates. Should the actual amounts differ from our estimates, the amount of our valuation allowance could be materially impacted. Any adjustment to the deferred tax asset valuation allowance would be recorded in the consolidated statement of operations in the period that the adjustment is determined to be required.

Results of operations

We acquired the tunable laser product lines of EMCORE Corporation in January 2015 and the optical power monitoring business of EigenLight Corporation in November 2015 and the results of operations from these acquisitions are included from the date of acquisition. The following table presents certain consolidated statements of operations data for the periods indicated as a percentage of total revenue:

| | Years Ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | | 2014 | | 2013 | |
| Revenue | 100 | % | 100 | % | 100 | % |
| Gross profit | 29 | % | 23 | % | 23 | % |
| Operating expenses | 28 | % | 29 | % | 35 | % |
| Income (loss) from operations | 1 | % | (6) | % | (12) | % |
| Interest and other income (expense), net | 1 | % | 1 | % | — | % |
| Income (loss) before income taxes | 2 | % | (5) | % | (12) | % |
| Net income (loss) | 1 | % | (6) | % | (12) | % |

Revenue

| (in thousands, except percentages) | 2015 | % Change 2015 to 2014 | 2014 | % Change 2014 to 2013 | 2013 |
|---|---|---|---|---|---|
| Total revenue | $ 339,439 | 11% | $ 306,177 | 8% | $ 282,242 |

We sell substantially all of our products to original equipment manufacturers, or OEMs. We recognize revenue upon delivery of our products to the OEM. We price our products based on market and competitive conditions and may periodically reduce the price of our products as market and competitive conditions change and as manufacturing costs are reduced. Our sales transactions to customers are denominated primarily in U.S. dollars, Chinese Renminbi ("RMB") and JPY. Revenue is driven by the volume of shipments and may be impacted by pricing pressures. We have generated most of our revenue from a limited number of customers.

Customers accounting for more than 10% of our total revenue and revenue from our top ten customers for the years ended December 31, 2015, 2014 and 2013 were as follows:

| | Years Ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | | 2014 | | 2013 | |
| Percent of revenue from customers accounting for 10% or more of total revenue: | | | | | | |
| Huawei Technologies Co., Ltd(1) | 44 | % | 38 | % | 27 | % |
| Ciena Corporation | 21 | % | 15 | % | 16 | % |
| Alcatel-Lucent SA | * | % | 10 | % | 14 | % |
| Percent of revenue from top ten customers | 91 | % | 88 | % | 86 | % |

* revenue less than 10%

(1) Huawei's percentage of revenue included its affiliate, HiSilicon. Revenue from HiSilicon represented approximately 23%, 15% and 8% of total revenue, respectively, in 2015, 2014 and 2013.

For the years ended December 31, 2015, 2014 and 2013, our percentage of sales from our China-based subsidiaries, the majority of which were denominated in RMB, were 5%, 20% and 31%, respectively.

Total revenue increased by $33.3 million, or 11%, in 2015 compared to 2014. The increase was primarily attributable to an increase in revenue from our High Speed Products driven by customer demand and acquisition of the tunable laser products from EMCORE. Our High Speed Products increased from 42% in 2014 to 58% of total revenue in 2015 and our Network Products and Solutions revenue decreased from 58% in 2014 to 42% in 2015. The increase in High Speed Products revenue was partially offset by a decrease in Network Products and Solutions revenue largely due to our product phase-out efforts to improve our gross margin. In 2015, revenue from the United States increased $21.3 million, or 38%, and revenue from China increased $21.0 million, or 13%, partially offset by decreases in Japan and other regions, compared to 2014. In 2015, Revenue from China, the United States, Japan and rest of the world was $182.5 million, $77.9 million, $12.7 million and $66.4 million, respectively. Revenue related to products acquired from EMCORE was approximately $55.8 million in 2015.

Total revenue increased by $23.9 million, or 8%, in 2014 compared to 2013. This increase was primarily attributable to an increase in revenue from our High Speed 100Gbps products as carriers continued to accelerate deployments of 4G-LTE networks in China which required increases in backbone capacity, partially offset by a decline in our other products. In 2014, our High Speed Products increased to 42% of total revenue from 38% of total revenue in 2013 while our Network Products and Solutions decreased to 58% of total revenue in 2014, compared to 62% of total revenue in 2013. In 2014, revenue from China increased $39.1 million, or 32%, and revenue from the United States increased $11.6 million, or 26%, due to the relative strength in these regions, partially offset by decreases in Japan and other regions in 2014 compared to 2013. In 2014, Revenue from China, the United States, Japan and rest of the world was $161.5 million, $56.6 million, $16.3 million and $71.8 million, respectively.

In 2016, we expect continued growth in revenue from our High Speed Products. We also expect that a significant portion of our revenue will continue to be derived from a limited number of customers. As a result, the loss of, or a significant reduction in orders from our largest customers, including Huawei, Ciena Corporation and Alcatel-Lucent SA (which was acquired by Nokia Corporation in January 2016), or any of our other key customers would materially affect our revenue and results of operations. We expect a significant portion of our sales to continue to be denominated in foreign currencies, including RMB, and, to a lesser extent, in JPY and therefore may be affected by changes in foreign exchange rates.

Cost of goods sold and gross margin

| (in thousands, except percentages) | 2015 | % Change 2015 to 2014 | 2014 | % Change 2014 to 2013 | 2013 |
|---|---|---|---|---|---|
| Cost of goods sold | $ 240,358 | 2% | $ 235,059 | 8% | $ 217,069 |

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| Gross margin | 29 % | 23 % | 23 % |

Our cost of goods sold consists primarily of the cost to produce wafers and to manufacture and test our products. Additionally, our cost of goods sold includes stock-based compensation, write-downs of excess and obsolete inventory, royalty payments, amortization of certain purchased intangible assets, depreciation, acquisition-related fair value adjustments, restructuring cost, warranty, shipping and allocated facilities costs.

In 2015, gross profit increased $28.0 million, or 39%, to $99.1 million in 2015, compared to 2014, attributable to revenue growth partially offset by a $3.2 million increase in manufacturing costs, a $2.8 million inventory-related charge due to the phase out of our earlier-generation tunable laser products, and a $0.5 million increase in intangible assets related amortization expenses due to our acquisition of the tunable laser products from EMCORE.

Gross margin increased six percentage points to 29% in 2015 from 23% in 2014, primarily attributable to favorable product mix resulting from an increase in sales volume of our High Speed Products, our product cost reduction activities and product phase out efforts of low margin products, partially offset by price adjustments.

Gross margin was consistent at 23% in 2014 compared to 2013, primarily due to a reduction in overall manufacturing costs, lower vendor cost reductions and lower warranty expenses, offset by higher standard costs compared to 2013. In 2014, overall manufacturing costs decreased $5.4 million and warranty expenses decreased $0.7 million, partially offset by a $0.3 million increase in intangible assets related amortization expenses, resulting in a $5.9 million increase in gross profit, compared to 2013.

We expect that our gross margin is likely to continue to fluctuate due to a variety of factors, including the introduction of new products, production volume, production volume compared to sales over time, the mix of products sold, inventory changes, changes in the average selling prices of our products, changes in the cost and volumes of materials purchased from our suppliers, changes in labor costs, changes in overhead costs or requirements, revaluation of stock appreciation unit awards that are impacted by our stock price, write-downs of excess and obsolete inventories and warranty costs. In addition, we periodically negotiate pricing with certain customers which can cause our gross margins to fluctuate, particularly in the quarters subsequent to the periods in which the negotiations occurred.

Operating expenses

| (in thousands, except percentages) | 2015 | % Change 2014 to 2015 | | 2014 | % Change 2013 to 2014 | | 2013 |
|---|---|---|---|---|---|---|---|
| Research and development | $ 44,533 | (3) | % | $ 45,959 | — | % | $ 45,853 |
| Sales and marketing | 15,823 | 15 | % | 13,725 | (4) | % | 14,242 |
| General and administrative | 31,635 | — | % | 31,570 | 5 | % | 30,012 |
| Amortization of purchase intangible assets | 1,791 | 19 | % | 1,502 | (2) | % | 1,532 |
| Acquisition-related costs | 934 | 52 | % | 615 | (89) | % | 5,406 |
| Asset impairment charge | 368 | (67) | % | 1,130 | 100 | % | — |
| Restructuring charges | 44 | (93) | % | 662 | (15) | % | 775 |
| Adjustment to fair value of contingent consideration | — | — | % | — | (100) | % | 1,026 |
| Escrow settlement gain | — | 100 | % | (4,913) | (100) | % | — |
| Total operating expenses | $ 95,128 | 5 | % | $ 90,250 | (9) | % | $ 98,846 |

Research and development

Research and development expense consists of personnel costs, including stock-based compensation, for our research and development personnel, and product development costs, including engineering services, development software and hardware tools, depreciation of equipment and facility costs. We record all research and development expense as incurred.

Research and development expense decreased $1.4 million, or 3%, in 2015 compared to 2014. The decrease was primarily attributable to a $3.3 million decrease in development expenses driven by lower prototype and material spending, a $0.5 million decrease in depreciation expense and a $0.4 million decrease in administrative and travel expenses, partially offset by a $1.8 million increase in consulting fees for new product development and a $1.0 million increase in variable compensation expenses.

Research and development expense increased $0.1 million in 2014 compared to 2013. The increase was attributable to a $0.5 million increase in depreciation and amortization expense and a $0.2 million increase in stock-based compensation expense, offset by a $0.4 million decrease in payroll expenses due to headcount reductions and a $0.2 million reduction in development materials related spending.

We believe that investments in research and development are important to help meet our strategic objectives. In 2016, we plan to continue to invest in research and development activities, including new products that we believe will further enhance our competitive position. As a percentage of total revenue, our research and development expense may vary as our investment and revenue levels change over time.

Sales and marketing

Sales and marketing expense consists primarily of personnel costs, including stock-based compensation and sales commissions, costs related to sales and marketing programs and services and facility costs.

Sales and marketing expense increased by $2.1 million, or 15%, in 2015 compared to 2014, primarily due to a $0.9 million increase in bad debt provision largely due to a customer filing for bankruptcy and specific doubtful accounts, a $0.8 million increase in variable compensation expenses, a $0.5 million increase in payroll and benefits, a $0.4 million increase in stock-based compensation expense largely driven by the increase in the price of our common stock, a $0.3 million increase in product demo spending and a $0.3 million increase in travel costs, partially offset by a $0.7 million decrease in net allocated overhead charges and a $0.5 million decrease in commission expense.

Sales and marketing expense decreased by $0.5 million in 2014 compared to 2013, representing a 4% decrease, primarily due to a $0.6 million decrease in payroll and benefit expenses and a $0.3 million decrease in product demo expenses, partially offset by a $0.3 million increase in stock-based compensation expense.

We expect to continue to focus on controlling our sales and marketing expenses in 2016 even as our business continues to expand geographically. As a percentage of total revenue, our sales and marketing expense may vary as our revenue changes over time.

General and administrative

General and administrative expense consists of personnel costs, including stock-based compensation, for our finance, human resources and information technology personnel and certain executive officers, as well as professional services costs related to accounting, tax, banking, legal and information technology services, depreciation and facility costs.

General and administrative expense increased by $0.1 million in 2015 compared to 2014. The increase was primarily due to a $2.6 million increase in payroll and benefits, a $1.7 million increase in variable compensation expenses, a $0.6 million increase in stock-based compensation primarily driven by higher stock price of our common stock, partially offset by a $2.0 million decrease in audit fees, a $1.3 million decrease in consulting fees, a $0.8 million decrease in depreciation expense, and a $0.7 million decrease in facility charges largely driven by lower utility expenses.

General and administrative expense increased by $1.6 million in 2014 compared to 2013, representing a 5% increase. The increase was primarily due to a $2.6 million increase in audit and tax fees primarily related to the restatement of our Quarterly Reports on Forms 10-Q for the quarters ended March 31 and June 30, 2013, a $1.1 million increase in bonus expense and a $0.9 million in payroll expenses, partially offset by a $2.1 million decrease in consulting fees, a $0.5 million decrease in benefit expenses, and a $0.2 million decrease in computer equipment expenses.

We expect to continue to focus on controlling our general and administrative expense in 2016. As a percentage of total revenue, our general and administrative expense may vary as our revenue changes over time.

Amortization of purchased intangible assets

Our intangible assets are being amortized over their estimated useful lives. Amortization expense relating to technology and patents and leasehold interests are included within cost of goods sold, while customer relationships and non-compete agreements are recorded within operating expenses.

In 2015, amortization of purchased intangible assets was $5.1 million, comprising of $3.3 million in cost of goods sold and $1.8 million in operating expenses. Amortization of purchased intangible assets increased by $0.8 million in 2015 compared to 2014, primarily due to intangible assets from our acquisition of the tunable laser product business from EMCORE in 2015.

In 2014, amortization of purchased intangible assets was $4.3 million, of which $2.8 million was included in cost of goods sold and $1.5 million in operating expenses, which remained relatively consistent compared to 2013.

Acquisition-related costs

In 2015 we incurred $0.9 million in acquisition-related transaction costs related to legal, accounting and other professional services for our acquisition activities, including our acquisitions of EMCORE's tunable laser product lines and EigenLight's optical power monitoring business.

In 2014, we incurred $0.6 million in acquisition-related costs related to our acquisition of EMCORE's tunable laser product lines.

In connection with our acquisition of NeoPhotonics Semiconductor in 2013, we incurred $5.4 million in acquisition-related costs during the year ended December 31, 2013 related to investment banking, legal, accounting and other professional services and fees as well as transfer and acquisition taxes related to real property acquired.

Asset impairment charge

In 2015, we recognized asset impairment charges of $0.4 million of which $0.2 million was attributable to a write-down of held-for-sale assets acquired from EMCORE and $0.2 million was attributable to charges for equipment related to our product phase out effort.

In 2014, we wrote off certain leasehold improvements in our facilities in Fremont, California and recorded an asset impairment charge of $1.1 million in 2014 as a result of our business re-alignment initiatives.

Restructuring charges

In 2014, we initiated a restructuring plan (the "2014 Restructuring Plan") to refocus on our strategy execution, optimize our structure, and improve operational efficiencies. The 2014 Restructuring Plan consisted of workforce reductions primarily in the U.S and in China. We recorded $0.2 million and $1.1 million in related restructuring charges in 2015 and 2014, respectively, within cost of goods sold and operating expenses.

Escrow settlement gain and adjustment to the fair value of contingent consideration

In October 2014, we entered into a settlement agreement covering the outstanding claims in connection with our 2013 acquisition of LAPIS Semiconductor Co., Ltd.  Under the terms of the settlement agreement, we received a payment of $1.0 million (JPY 111.0 million) from the escrow account that was set up under the original merger agreement for disputed excess inventories, which we recorded as an escrow settlement gain in 2014.

In May 2014, we entered into a settlement agreement covering the outstanding claims in connection with our 2011 acquisition of Santur. Under the terms of the settlement agreement, a net amount of $1.9 million was paid to us from the escrow account that was set up under the original merger agreement, which was comprised of $3.9 million related to certain indemnification claims by us ("Indemnification Amount"), partially offset by $2.0 million related to additional consideration for the business acquisition that was contingent upon Santur's gross profit performance during 2012 ("Contingent Consideration Amount"). Prior to this settlement, we had recorded $1.0 million as our estimated fair value of the Contingent Consideration Amount. As a result of this settlement, we recorded an additional $1.0 million in our operating expenses in 2013 to adjust the fair value of the Contingent Consideration Amount to the full $2.0 million settlement amount and recorded the $3.9 million Indemnification Amount in 2014.

Interest and other income, net

| (in thousands, except percentages) | 2015 | % Change 2014 to 2015 | 2014 | % Change 2013 to 2014 | 2013 |
|---|---|---|---|---|---|
| Interest and other income, net | $ 2,819 | 46% | $ 1,932 | 259% | $ 538 |

Interest and other income, net consists of interest income, interest expense and other income, net. Interest income consists of income earned on our cash, cash equivalents and short-term investments. Interest expense consists of amounts incurred for interest on our outstanding debt. Other income, net includes foreign currency transaction gains and losses along with government subsidies. The functional currency of our subsidiaries in China and Japan is the RMB and the JPY, respectively.

Interest and other income, net increased $0.9 million, or 46%, in 2015 from $1.9 million in 2014. The increase was primarily due to a $0.1 million decrease in the penalty payment derivative liability related to the Rights Agreement with Rusnano in 2015, compared to a $0.3 million increase in 2014, and a $0.4 million increase in foreign exchange gain primarily attributable to stronger U.S. dollars in 2015.

Interest and other income, net increased $1.4 million, or 259%, in 2014, from $0.5 million in 2013. The increase was primarily due to a $1.9 million increase in net foreign exchange gain largely attributable to a weaker JPY against the U.S. dollar, partially offset by a $0.3 million increase in interest expense related to higher debt balances and a $0.2 million decrease in interest income.

Income taxes

| (in thousands, except percentages) | Years ended December 31, 2015 | 2014 | 2013 |
|---|---|---|---|
| Provision for income taxes | $ (3,104) | $ (2,519) | $ (1,204) |
| Effective tax rate | 46 % | (15) % | (4) % |

In 2015, our income tax provision was primarily related to the operating profit realized in our foreign subsidiaries in Japan and China. Historically, we have experienced net losses in the U.S. and in the short term, we expect this trend to continue. In China, one of our subsidiaries has qualified for a preferential 15% tax rate available for high technology enterprises. The preferential rate applied to 2015, 2014 and 2013. We realized benefits from this 10% reduction in the tax rate of $0.9 million, $0.5 million and $0.2 million for 2015, 2014 and 2013, respectively. In order to retain the preferential rate, we must meet certain operating conditions, satisfy certain product requirements, meet certain employment level requirements and maintain certain levels of research expenditures. The preferential tax rate that we enjoy could be modified or discontinued altogether at any time, which could materially and adversely affect our financial condition and results of operations.

The effective tax rate in 2015 of 46% was 31 percentage points higher than the 2014 effective tax rate due to higher earnings in foreign jurisdictions and reduced net loss generated in the U.S.

The effective tax rate in 2014 of 15% was 11 percentage points higher than the 4% effective rate in 2013, primarily due to higher earnings in foreign subsidiaries.

Liquidity and capital resources

At December 31, 2015, we had working capital of $151.2 million and total cash, cash equivalents and short-term investments of $99.4 million, of which 15% was held in accounts by our subsidiaries in China and 2% was held in accounts by our subsidiaries in Japan. In the aggregate, approximately 17% of our cash, cash equivalents and short-term investments were held by our foreign subsidiaries.

Approximately $7.9 million of retained earnings with our accumulated deficit at December 31, 2015 was subject to restriction due to the fact that our subsidiaries in China are required to set aside at least 10% of their respective accumulated profits each year to fund statutory common reserves as well as allocate a discretional portion of their after-tax profits to their staff welfare and bonus fund. This restricted amount is not distributable as cash dividends except in the event of liquidation.

On May 27, 2015, we completed our follow-on offering of 5,971,034 shares of our common stock in a registered public offering at $7.25 per share. On May 27, 2015, the underwriters in our follow-on offering exercised an option to purchase 895,655 shares of our common stock at a price of $7.25 per share, which was completed on June 1, 2015. We raised approximately $45.6 million, net of underwriting costs and other directly related costs of approximately $4.1 million.

We have a bank credit agreement with Comerica Bank in the U.S. which restricts our ability to incur certain additional debt or to engage in specified transactions, restricts the payment of dividends and is secured by substantially all of our U.S. assets, other than intellectual property assets. Our original credit agreement with Comerica Bank required the maintenance of specified financial covenants, including a debt to EBITDA ratio and liquidity ratios. On May 19, 2014, we executed an amendment to the credit agreement that waived the testing of certain covenants for compliance, provided that we maintain compensating balances equal to outstanding amounts under the credit agreement in accounts for which the bank will have sole access. In January 2015, we executed an amended credit agreement with Comerica to (1) eliminate the compensating balance requirement and modify the financial covenants to include the maintenance of at least half of our projected EBITDA and a minimum liquidity ratio of 1.50 to 1.0 and (2) replace our $20.0 million revolving credit facility with a $25.0 million senior secured revolving credit line. We repaid the remaining Comerica term loan balance in conjunction with this amendment. In March 2015, we further amended our credit agreement with Comerica to increase our borrowing capacity from $25.0 million to $30.0 million. We were in compliance with our covenants as of December 31, 2015 and expect to be in compliance for the next 12 months.

Amounts borrowed under the Comerica Bank credit facility, as amended, are due on or before November 2, 2016 and borrowings bear interest at an interest rate option of a base rate as defined in the agreement plus 1.75% or LIBOR plus 2.75%. As of December 31, 2015, the rate on the LIBOR option was 2.99% and the outstanding balance was $23.8 million, which was repaid in full in January 2016.

As of December 31, 2015 and 2014, the amount of our cash and investments in compensating balance accounts for the credit arrangement with Comerica Bank was zero and $17.5 million, respectively, which was classified as current and non-current restricted cash and investments on our consolidated balance sheets.

We regularly issue notes payable to our suppliers in China in exchange for accounts payable. These notes are supported by non-interest bearing bank acceptance drafts and are due three to six months after issuance. As a condition of the notes payable arrangements, we are required to keep a compensating balance at the issuing banks that is a percentage of the total notes payable balance until the amounts are settled.

As of December 31, 2015, our subsidiary in China had two short-term line of credit facilities with banking institutions. Under the first agreement, which expires in June 2016, RMB 120.0 million ($18.5 million) can be used for short-term loans, which will bear interest at varying rates or up to RMB 171.4 million ($26.4 million) can be used for bank acceptance drafts (with a 30% compensating balance requirement). Under the second agreement, which expires in September 2016, RMB 133.0 million ($20.5 million) can be used for short-term loans or up to approximately RMB 190.0 million ($29.3 million) can be used for bank acceptance drafts (with a 30% compensating balance requirement). As of December 31, 2015 and 2014, the non-interest bearing bank acceptance drafts issued in connection with our notes payable to our suppliers in China under these line of credit facilities had an outstanding balance of $8.9 million and $12.8 million, respectively.

As of December 31, 2015 and 2014, compensating balances relating to these credit facilities totaled $2.7 million and $3.8 million, respectively. Compensating balances are classified as restricted cash and investments on our consolidated balance sheets.

As of December 31, 2014, our subsidiary in China had $10.0 million outstanding under two short-term advance financing agreements under its line of credit facilities. The borrowings were made against export sales to its parent company and bore interest and other fees at rates ranging from 2.33% to 4.02% per annum. Interest and principal were due and repaid in full in 2015.

On February 25, 2015, we entered into certain loan agreements and related special agreements (collectively, the “Loan Arrangements”) with the Bank of Tokyo-Mitsubishi UFJ, Ltd. (the “Mitsubishi Bank”) that provided for (i) a term loan in the aggregate principal amount of 500 million JPY ($4.2 million) (the “Term Loan A”) and (ii) a term loan in the aggregate principal amount of one billion JPY ($8.4 million) (the “Term Loan B” and together with the Term Loan A, the “Mitsubishi Bank Loans”). The Mitsubishi Bank Loans are secured by a mortgage on certain real property and buildings owned by our Japanese subsidiary in Japan. The full amount of each of the Mitsubishi Bank Loans was drawn on the closing date of February 25, 2015. Interest on the Mitsubishi Bank Loans accrues and is paid monthly based upon the annual rate of the monthly Tokyo Interbank Offer Rate (TIBOR) plus 1.40%. The Term Loan A requires interest only payments until the maturity date of February 23, 2018, with a lump sum payment of the aggregate principal amount on the maturity date. The Term Loan B requires equal monthly payments of principal equal to 8,333,000 JPY until the maturity date of February 25, 2025, with a lump sum payment of the balance of 8,373,000 JPY on the maturity date. Interest on the Term Loan B is accrued based upon monthly TIBOR plus 1.40% and is secured by real estate collateral. In conjunction with the execution of the Mitsubishi Bank Loans, we paid a loan structuring fee, including consumption tax, of 40,500,000 JPY ($0.3 million).

The Mitsubishi Bank Loans contain customary representations and warranties and customary affirmative and negative covenants applicable to our Japanese subsidiary, including, among other things, restrictions on cessation in business, management, mergers or acquisitions. The Mitsubishi Bank Loans contain financial covenants relating to minimum net assets, maximum ordinary loss and a dividends covenant. The Mitsubishi Bank Loans also include customary events of default, including but not limited to the nonpayment of principal or interest, violations of covenants, restraint on business, dissolution, bankruptcy, attachment and misrepresentations. In February 2015, we used a portion of the proceeds of the Mitsubishi Bank Loans to repay the then-outstanding outstanding principal and interest amount of approximately 710 million JPY ($6.0 million) under the loan from the acquisition of NeoPhotonics Semiconductor.

As of December 31, 2015, our total outstanding balance under the two Mitsubishi Banks Loans was 1.4 billion JPY (approximately $11.8 million).

On January 2, 2015, we closed an acquisition of the tunable laser product lines of EMCORE for approximately $17.5 million. Consideration for the transaction consisted of $1.5 million in cash and a promissory note of approximately $16.0 million, which was subject to certain adjustments for inventory, net accounts receivable and pre-closing revenues and was subsequently adjusted to $15.5 million and was fully repaid in April 2015.

From time to time we accept notes receivable in exchange for accounts receivable from certain of our customers in China. These notes receivable are non-interest bearing and are generally due within six months. Historically, we have collected on the notes receivable in full at the time of maturity.

In March 2016, the United States Department of Commerce added Zhongxing Telecommunications Equipment Corporation and its subsidiary, ZTE Kangxun Telecommunications Ltd. (collectively "ZTE") to the list maintained by the Department for actions contrary to the national security and foreign policy interests of the United States. While we had accounts receivable and notes receivable from ZTE totaling approximately $2.3 million as of December 31, 2015, this event is not expected to have a material adverse impact on our liquidity or financial results.

We believe that our existing cash, cash equivalents and cash flows from our operating activities will be sufficient to meet our anticipated cash needs for at least the next 12 months. Our future capital requirements will depend on many factors including our growth rate, the timing and extent of spending to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced products, the costs to increase our manufacturing capacity and our foreign operations, the continuing market acceptance of our products and acquisitions of businesses and technology. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results and financial condition would be adversely affected.

Rusnano Rights Agreement

In April 2012, we entered into a rights agreement with Rusnano, one of our principal stockholders. Under the rights agreement, we agreed to make a $30.0 million investment commitment (the "Investment Commitment") toward our Russian operations. The Investment Commitment can be partially satisfied by cash and/or non-cash investment inside or outside of Russia and/or by way of non-cash asset transfers.

In July 2015, we amended our rights agreement with Rusnano. The amendment to the rights agreement became effective on June 30, 2015 and provides for an updated investment plan for our Russian subsidiaries that includes a non-cash transfer of licensing rights to intellectual property, non-cash transfers of exiting equipment and commitments to complete the remaining milestones of approximately one-half of the overall investment through fiscal year 2019. It also provides that the maximum amount of penalties to be paid by us will not exceed $5.0 million in the aggregate, with the following penalties for failure to meet specified milestones and exit options at the end of the following years, subject to a 90-day cure period (“Cure Period”) following such years:

- By December 31, 2015, if the actual cumulative investment and spending to our Russian subsidiaries was less than $13.0 million, or if we had not sold any products manufactured by our Russian subsidiary, or if we had not completed agreed-upon manufacturing milestones, then we would have been subject to a $5.0 million penalty within 30 days after the end of the applicable Cure Period; if the cumulative investments and spending to our Russian subsidiaries were less than $15.4 million but more than $13.0 million by December 31, 2015 and was not cured within the applicable Cure Period, we would have been subject to a

$1.5 million penalty within 30 days after the end of the applicable Cure Period. We fulfilled this milestone and have contributed over $15.4 million in cash and assets to our Russian subsidiaries as of December 31, 2015.

- By December 31, 2016, if the actual cumulative investment and spending to our Russian subsidiaries is less than $18.8 million, we will be subject to a $1.5 million penalty within 30 days after the end of the applicable Cure Period.
- At the end of 2016, we will be subject to pay an exit fee of $3.5 million to Rusnano should we decide to cease the operations of our Russian subsidiaries, provided that the cumulative investments and spending including the tangible asset transfers, other than intangible asset transfers which is limited to a maximum valuation of $5.7 million, exceed $10.0 million.
- At the end of 2019, we will be subject to pay an exit fee of $2.0 million to Rusnano should we decide to cease the operations of our Russian subsidiaries, if the cumulative investments and spending are less than $30.0 million.

Separately, on December 18, 2014, we entered into a Commitment to file a Registration Statement and Related Waiver of Registration Rights, whereby Rusnano waived certain registration rights in connection with a potential offering by us of shares of our common stock, and we committed to file with the SEC a resale registration statement on Form S-1 covering the resale of all shares of our common stock held by Rusnano. We filed such resale registration statement on April 6, 2015 to register 4,972,905 shares of our common stock held by Rusnano. Rusnano also waived its demand registration rights under the original rights agreement and agreed to enter into a lock up agreement with us whereby it would agree not to sell any shares of our common stock, or engage in certain other transactions relating to our securities, for a period of 60 days from the filing date of the resale registration statement. Rusnano signed such lock up agreement with us on April 2, 2015. In connection with our public stock offering completed in the second quarter of 2015, Rusnano entered into a separate lock up agreement with Needham & Company, LLC, the lead underwriter of the offering, whereby it agreed not to sell any shares of our common stock, or engage in certain other transactions relating to our securities, for a period of 180 days from May 21, 2015. We do not receive any proceeds from any sales of our common stock held by Rusnano.

Cash flow discussion

The table below sets forth selected cash flow data for the periods presented:

| | Years ended December 31, | | |
|---|---|---|---|
| (in thousands) | 2015 | 2014 | 2013 |
| Net cash provided by (used in) operating activities | $ 26,138 | $ (451) | $ 4,511 |
| Net cash (used in) provided by investing activities | (21,906) | (13,945) | 13,304 |
| Net cash provided by financing activities | 29,623 | 3,029 | 2,515 |
| Effect of exchange rates on cash and cash equivalents | (802) | (2,699) | (169) |
| Net increase (decrease) in cash and cash equivalents | $ 33,053 | $ (14,066) | $ 20,161 |

Operating activities

In 2015, net cash provided by operating activities was $26.1 million, a $26.6 million increase compared to 2014. The increase was primarily due to a $23.4 million increase in net income, a $15.8 million increase driven by lower accounts receivable due to collections, a $5.7 million increase in accrued and other liabilities, a $4.2 million increase in prepaid and other assets, partially offset by a $19.9 million decrease related to inventory increases due to anticipated demand and a $5.7 million decrease in accounts payable due to timing of payments.

In 2014, net cash used in operating activities was $0.5 million, which was a $5.0 million decrease compared to the $4.5 million cash provided by operating activities in 2013. The decrease was primarily attributable to an increase in accounts receivable due to higher revenue in 2014 while days sales outstanding improved compared to 2013. Additional contributing factors to the increase in net cash used in operating activities included lower accounts payable related payments and higher accrued and other liabilities in 2013 and an increase in prepaid expenses and other assets in 2014 primarily attributable to sales tax refunds, partially offset by a reduction in net loss, net of non-cash charges, and a lower inventory level in 2014, compared to 2013.

In 2013, net cash provided by operating activities was $4.5 million, which was a $13.3 million increase over the $8.8 million cash used in operating activities in 2012. Contributing to the increase was a decrease in accounts receivable, particularly in China where days sales outstanding declined and revenue was lower at the end of 2013 compared to the end of 2012. Additionally, operating cash flow benefitted from an increase in accounts payable primarily due to higher inventory purchases in China near the end of 2013 and higher accrued and other current liabilities, partially offset by a higher net loss in 2013.

Investing activities

In 2015, net cash used in investing activities was $21.9 million, an $8.0 million increase compared to $13.9 million used in 2014. The increase in net cash used in investment activities was primarily attributable to a $27.5 million increase in purchased marketable securities, a $5.8 million increase in property, plant and equipment purchases and a $5.4 million reduction in proceeds from maturity of securities, partially offset by a $21.0 million increase as a result of decreases in restricted cash balances and an $8.5 million increase in proceeds from sales of marketable securities.

In 2014, net cash used in investing activities was $13.9 million, a $27.2 million decrease compared to the $13.3 million provided by investing activities in 2013, primarily due to a $85.1 million decrease in proceeds from sales and maturities of marketable securities and an $11.4 million increase in restricted cash, partially offset by a $49.2 million decrease in marketable securities purchases and a $8.5 million decrease in capital equipment purchases. In addition, net cash used in acquisition was $1.5 million in 2014 for the asset purchase arrangement with EMCORE, compared to a payment of $12.7 million for the acquisition of NeoPhotonics Semiconductor in 2013.

In 2013, net cash provided by investing activities was $13.3 million, which was a $34.3 million increase from the $21.0 million used in investing activities in 2012. The increase was due to $56.0 million in higher net proceeds from the sale and maturity of marketable securities, partially offset by $13.1 million cash used to purchase NeoPhotonics Semiconductor and $6.8 million in higher purchases of property and equipment in 2013.

Financing activities

In 2015, net cash provided by financing activities was $29.6 million, a $26.6 million increase compared to 2014. The increase was primarily attributable to a $62.2 million increase in net proceeds from bank and acquisition-related loans, a $45.6 million net proceeds from issuance of common stock in public offering, partially offset by a $75.6 million decrease in loans and acquisition-related loan payments, a $4.0 million decrease in proceeds from issuance of notes payable and a $3.4 million decrease in the repayments of notes payable.

In 2014, net cash provided by financing activities was $3.0 million, an increase of $0.5 million compared to $2.5 million in 2013. The increase was primarily attributable to a $5.7 million increase in proceeds from notes payable issuances and a $5.7 million decrease in repayment of bank loans, partially offset by an $8.4 million decrease in proceeds from bank loans, a $2.0 million payment for the contingent consideration liability related to the Santur acquisition and a $0.6 million decrease in net proceeds from exercises of stock options and issuance of restricted stock units.

Net cash provided by financing activities was $2.5 million and $34.1 million in 2013 and 2012, respectively. In 2012, the major factor was $39.6 million generated from the private placement transaction. Additionally, 2013 cash from financing activities benefitted from $7.4 million in lower net payments of bank loans and notes payable and $1.3 million in higher proceeds from the exercise of stock options and stock issued under the ESPP.

Contractual obligations and commitments

The following summarizes our contractual obligations as of December 31, 2015:

| | Payments due by period | | | | |
|---|---|---|---|---|---|
| (in thousands) | Total | Less than 1 Year | 1-3 Years | 3-5 Years | More than 5 Years |
| Notes payable (1) | $ 8,857 | $ 8,857 | $ — | $ — | $ — |
| Bank borrowings (1) | 35,569 | 24,631 | 5,815 | 1,662 | 3,461 |
| Retirement obligations (2) | 5,086 | 497 | 911 | 740 | 2,938 |
| Operating leases (3) | 5,395 | 1,225 | 2,137 | 1,455 | 578 |
| Purchase commitments (4) | 34,759 | 34,759 | — | — | — |
| Penalty payment derivative (5) | 389 | — | — | 389 | — |
| Asset retirement obligations (6) | 933 | 312 | — | 536 | 85 |
| Expected interest payments (7) | 678 | 174 | 258 | 133 | 113 |
| Total | 91,666 | $ 70,455 | $ 9,121 | $ 4,915 | $ 7,175 |
| Restricted retained earnings (uncertainty in timing of future payments) | 7,917 | | | | |
| Deferred compensation plan (uncertainty in timing of future payments) | 447 | | | | |
| Total commitments | $ 100,030 | | | | |

(1) See Note 10, Debt, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our debt.
(2) See Note 11, Pension Plans, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our retirement obligations.
(3) We have entered into various non-cancelable operating lease agreements for our offices in China, U.S. and Canada.
(4) This is an estimate of the amount outstanding under open purchase orders for the purchase of inventory and other goods at December 31, 2015. Certain of these open purchase orders may be cancellable without penalty.
(5) See Note 12, Commitments and contingencies, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our penalty payment derivative.
(6) We have an asset retirement obligation of $0.8 million associated with our facility lease in California which is included in other noncurrent liabilities in the consolidated balance sheet as of December 31, 2015. We also have a $0.1 million asset retirement obligation in Japan.
(7) We calculate the expected interest payments based on our long-term debt at prevailing interest rates as of December 31, 2015.

Uncertain Tax Positions

As of December 31, 2015, the liability for uncertain tax positions was $0.2 million. We cannot conclude on the timing of cash payments associated with our uncertain tax positions.

Rusnano Rights Agreement

In connection with our April 2012 common stock private placement transaction, we entered into a rights agreement with Rusnano. Refer to the discussion in the “Liquidity and Capital Resources – Rusnano Rights Agreement” section.

Off-balance sheet arrangements

During the years ended December 31, 2015 and 2014, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K.

Recent accounting pronouncements

See Note 2, Summary of Significant Accounting Policies, in Notes to the Consolidated Financial Statements in Item 8 of Part II of this Report, for a full description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on financial condition and results of operations, which is incorporated herein by reference.

ITEM 7A.QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest rate fluctuation risk

The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. To achieve this objective, we invest our excess cash in a variety of securities, including U.S. government agency securities, corporate notes and bonds and money market funds meeting certain criteria. These securities are classified as available-for-sale which are recorded on the balance sheet at fair value. We have determined that the gross unrealized gains or losses on the available-for-sale securities at December 31, 2015 are temporary in nature. We may sell these marketable securities investments in the future to fund future operating needs.

As of December 31, 2015 we had $23.8 million outstanding under our U.S. credit facilities and $11.8 million outstanding under our term loans with the Mitsubishi Bank, which were subject to fluctuations in interest rates. For the year ended December 31, 2015, a hypothetical 10% increase in the interest rate could result in approximately $89,000 of additional annual interest expense. The hypothetical assumptions made above will be different from what actually occurs in the future. Furthermore, the computations do not anticipate actions that may be taken by our management should the hypothetical market changes actually occur over time. As a result, actual impacts on our results of operations in the future will differ from those quantified above.

Foreign currency exchange risk

Foreign currency exchange rates are subject to fluctuation and may cause us to recognize transaction gains and losses in our statements of operations. A large portion of our business is conducted through our subsidiaries in China, whose functional currency is the RMB and Japan, whose functional currency is the JPY. To the extent that transactions by these subsidiaries are in currencies other than their functional currencies, we bear the risk that fluctuations in the exchange rates of the RMB and JPY in relation to other currencies could increase our costs and expenses. During the year ended December 31, 2015, we recognized foreign currency transaction gains of $3.4 million. We use the U.S. dollar as the reporting currency for our consolidated financial statements. Any significant revaluation of the RMB or JPY may materially and adversely affect our results of operations upon translation of these subsidiaries' financial statements into U.S. dollars. While we generate a significant portion of our revenue in U.S. dollars, a significant portion of our cost of goods sold are in RMB. Therefore appreciation in RMB against the U.S. dollar would negatively impact our cost of goods sold upon translation to U.S. dollars. For example, for the year ended December 31, 2015, a 10% appreciation in RMB against the U.S. dollar would have resulted in an approximately $1.7 million increase in our cost of goods sold.

To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedging transactions may be limited and we may not be able to successfully hedge our exposure. In addition, our currency exchange variations may be magnified by any Chinese exchange control regulations that restrict our ability to convert RMB into foreign currency.

Inflation risk

Inflationary factors, such as increases in our cost of goods sold and operating expenses, may adversely affect our results of operations. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, an increase in the rate of inflation in the future, particularly in China, may have an adverse effect on our levels of gross profit and operating profit as a percentage of revenue if the sales prices for our products do not proportionately increase with these increased expenses.

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

### INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of NeoPhotonics Corporation

San Jose, California

We have audited the accompanying consolidated balance sheets of NeoPhotonics Corporation and subsidiaries (the "Company") as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2015. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of NeoPhotonics Corporation and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2015 based on the criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 14, 2016 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

March 14, 2016

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NEOPHOTONICS CORPORATION

CONSOLIDATED BALANCE SHEETS

| (In thousands, except par data) | December 31, 2015 | 2014 |
|---|---|---|
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | $ 76,088 | $ 43,035 |
| Short-term investments | 23,294 | — |
| Restricted cash and investments | 2,660 | 5,504 |
| Accounts receivable, net of allowance for doubtful accounts | 83,161 | 77,597 |
| Inventories | 65,602 | 57,347 |
| Prepaid expenses and other current assets | 12,393 | 15,540 |
| Total current assets | 263,198 | 199,023 |
| Property, plant and equipment, net | 62,618 | 57,657 |
| Restricted cash and investments, non-current | — | 15,750 |
| Purchased intangible assets, net | 9,852 | 10,263 |
| Goodwill | 1,115 | — |
| Other long-term assets | 5,095 | 3,591 |
| Total assets | $ 341,878 | $ 286,284 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | $ 50,620 | $ 48,949 |
| Notes payable and short-term borrowing | 32,657 | 22,771 |
| Current portion of long-term debt | 760 | 2,445 |
| Accrued and other current liabilities | 27,950 | 22,728 |
| Total current liabilities | 111,987 | 96,893 |
| Long-term debt, net of current portion | 10,759 | 20,891 |
| Deferred income tax liabilities | 88 | 1,818 |
| Other noncurrent liabilities | 7,388 | 7,226 |
| Total liabilities | 130,222 | 126,828 |
| Commitments and contingencies (Note 12) | | |
| Stockholders' equity: | | |
| Preferred stock, $0.0025 par value, 10,000 shares authorized, no shares issued or outstanding | — | — |
| Common stock, $0.0025 par value, 100,000 shares authorized | 102 | 82 |

| | | |
|---|---|---|
| At December 31, 2015, 40,986 shares issued and outstanding; at December 31, 2014, 32,752 shares issued and outstanding | | |
| Additional paid-in capital | 511,750 | 456,189 |
| Accumulated other comprehensive (loss) income | (1,723) | 5,326 |
| Accumulated deficit | (298,473) | (302,141) |
| Total stockholders' equity | 211,656 | 159,456 |
| Total liabilities and stockholders' equity | $ 341,878 | $ 286,284 |

See Accompanying Notes to Consolidated Financial Statements.

NEOPHOTONICS CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

| | Years Ended December 31, | | |
|---|---|---|---|
| (In thousands, except per share data) | 2015 | 2014 | 2013 |
| Revenue | $ 339,439 | $ 306,177 | $ 282,242 |
| Cost of goods sold | 240,358 | 235,059 | 217,069 |
| Gross profit | 99,081 | 71,118 | 65,173 |
| Operating expenses: | | | |
| Research and development | 44,533 | 45,959 | 45,853 |
| Sales and marketing | 15,823 | 13,725 | 14,242 |
| General and administrative | 31,635 | 31,570 | 30,012 |
| Amortization of purchased intangible assets | 1,791 | 1,502 | 1,532 |
| Acquisition-related costs | 934 | 615 | 5,406 |
| Asset impairment charge | 368 | 1,130 | — |
| Restructuring charges | 44 | 662 | 775 |
| Adjustment to fair value of contingent consideration | — | — | 1,026 |
| Escrow settlement gain | — | (4,913) | — |
| Total operating expenses | 95,128 | 90,250 | 98,846 |
| Income (loss) from operations | 3,953 | (19,132) | (33,673) |
| Interest income | 121 | 189 | 348 |
| Interest expense | (1,243) | (1,269) | (996) |
| Other income, net | 3,941 | 3,012 | 1,186 |
| Total interest and other income (expense), net | 2,819 | 1,932 | 538 |
| Income (loss) before income taxes | 6,772 | (17,200) | (33,135) |
| Provision for income taxes | (3,104) | (2,519) | (1,204) |
| Net income (loss) | $ 3,668 | $ (19,719) | $ (34,339) |
| | | | |
| Basic net income (loss) per share | $ 0.10 | $ (0.61) | $ (1.11) |
| Diluted net income (loss) per share | $ 0.09 | $ (0.61) | $ (1.11) |
| Weighted average shares used to compute basic net income (loss) per share | 37,421 | 32,109 | 31,000 |
| Weighted average shares used to compute diluted net income (loss) per share | 38,686 | 32,109 | 31,000 |

See Accompanying Notes to Consolidated Financial Statements.

NEOPHOTONICS CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

| | Years ended December 31, | | |
|---|---|---|---|
| (in thousands) | 2015 | 2014 | 2013 |
| Net income (loss) | $ 3,668 | $ (19,719) | $ (34,339) |
| Other comprehensive loss: | | | |
| Foreign currency translation adjustments, net of zero tax | (6,987) | (6,411) | 41 |
| Unrealized (losses) gains on available-for-sale securities, net of zero tax | (35) | 3 | (65) |
| Defined benefit pension plans: | | | |
| Loss arising during the period | (40) | (113) | (191) |
| Curtailments, settlements and other | — | 191 | — |
| Tax | 13 | (31) | 73 |
| Total other comprehensive loss | (7,049) | (6,361) | (142) |
| Comprehensive loss | $ (3,381) | $ (26,080) | $ (34,481) |

See Accompanying Notes to Consolidated Financial Statements.

NEOPHOTONICS CORPORATION

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

| | Common stock | | Additional paid-in | Accumulated other comprehensive income | Accumulated | Total stockholders' |
|---|---|---|---|---|---|---|
| (In thousands) | Shares | Amount | capital | (loss) | deficit | equity |
| Balances at December 31, 2012 | 30,546 | $ 76 | $ 438,858 | $ 11,829 | $ (248,083) | $ 202,680 |
| Comprehensive loss | — | — | — | (142) | (34,339) | (34,481) |
| Issuance of common stock upon exercise of stock options | 261 | 1 | 1,212 | — | — | 1,213 |
| Issuance of common stock under employee stock purchase plan | 488 | 2 | 2,155 | — | — | 2,157 |
| Issuance of common stock for vested restricted stock units | 277 | — | — | — | — | — |
| Tax withholding related to vesting of restricted stock units | — | — | (565) | — | — | (565) |
| Stock-based compensation costs | — | — | 5,807 | — | — | 5,807 |
| Balances at December 31, 2013 | 31,572 | 79 | 447,467 | 11,687 | (282,422) | 176,811 |
| Comprehensive loss | — | — | — | (6,361) | (19,719) | (26,080) |
| Issuance of common stock upon exercise of stock options | 174 | 1 | 738 | — | — | 739 |
| Issuance of common stock under employee stock purchase plan | 591 | 1 | 1,833 | — | — | 1,834 |
| Issuance of common stock for vested restricted stock units | 524 | 1 | (1) | — | — | — |
| Tax withholding related to vesting of restricted stock units | (109) | — | (387) | — | — | (387) |
| Stock-based compensation costs | — | — | 6,539 | — | — | 6,539 |
| | 32,752 | 82 | 456,189 | 5,326 | (302,141) | 159,456 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Balances at December 31, 2014 | | | | | | |
| Comprehensive loss | — | — | — | (7,049) | 3,668 | (3,381) |
| Issuance of common stock from public stock offering, net of discount and offering costs | 6,867 | 17 | 45,621 | — | — | 45,638 |
| Issuance of common stock upon exercise of stock options | 304 | 1 | 1,177 | — | — | 1,178 |
| Issuance of common stock under employee stock purchase plan | 600 | 1 | 1,538 | — | — | 1,539 |
| Issuance of common stock for vested restricted stock units | 558 | 1 | (1) | — | — | — |
| Tax withholding related to vesting of restricted stock units | (95) | — | (727) | — | — | (727) |
| Stock-based compensation costs | — | — | 7,953 | — | — | 7,953 |
| Balances at December 31, 2015 | 40,986 | $ 102 | $ 511,750 | $ (1,723) | $ (298,473) | $ 211,656 |

See Accompanying Notes to Consolidated Financial Statements.

NEOPHOTONICS CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

| | Years ended December 31, | | |
|---|---|---|---|
| (In thousands) | 2015 | 2014 | 2013 |
| Cash flows from operating activities | | | |
| Net income (loss) | $ 3,668 | $ (19,719) | $ (34,339) |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: | | | |
| Depreciation and amortization | 22,875 | 23,403 | 20,381 |
| Stock-based compensation expense | 7,763 | 6,841 | 5,736 |
| Deferred taxes | (641) | 1,175 | (469) |
| Investment and debt related amortization | 296 | 86 | 1,003 |
| Loss on disposal of property and equipment | 394 | 162 | 710 |
| Asset impairment charges | 368 | 1,130 | — |
| Adjustment to fair value of penalty payment derivative | (141) | 291 | 101 |
| Adjustment to fair value of contingent consideration | — | — | 1,026 |
| Allowance for doubtful accounts | 640 | (266) | (253) |
| Write-down of inventories | 6,486 | 1,517 | 3,207 |
| Foreign currency remeasurement and other, net | (2,992) | (2,343) | (667) |
| Change in assets and liabilities, net of effects of acquisitions: | | | |
| Accounts receivable | 2,529 | (13,269) | 7,234 |
| Inventories | (14,899) | 4,990 | (10,458) |
| Prepaid expenses and other assets | (1,691) | (5,912) | (1,795) |
| Accounts payable | (4,692) | 979 | 7,712 |
| Accrued and other liabilities | 6,175 | 484 | 5,382 |
| Net cash provided by (used in) operating activities | 26,138 | (451) | 4,511 |
| Cash flows from investing activities | | | |
| Purchase of property, plant and equipment | (16,837) | (11,027) | (19,566) |
| Proceeds from sale of property, plant and equipment and other assets | 245 | 9 | 92 |
| Purchase of marketable securities | (37,130) | (9,662) | (58,860) |
| Proceeds from sale of marketable securities | 18,103 | 9,634 | 53,847 |
| Proceeds from maturity of securities | 4,000 | 9,448 | 50,358 |
| Decrease (increase) in restricted cash | 10,135 | (10,847) | 561 |
| Acquisition of business | (422) | (1,500) | (13,128) |
| Net cash (used in) provided by investing activities | (21,906) | (13,945) | 13,304 |
| Cash flows from financing activities | | | |
| Proceeds from (payment for) public stock offering, net of discount and offering costs | 45,648 | (10) | — |
| Proceeds from exercise of stock options and issuance of stock under ESPP | 2,717 | 2,571 | 3,370 |
| Tax withholding on restricted stock units | (727) | (387) | (565) |
| Proceeds from bank loans | 80,256 | 18,089 | 26,443 |

| | | | |
|---|---|---|---|
| Repayment of bank and acquisition-related loans | (94,032) | (18,423) | (24,110) |
| Proceeds from issuance of notes payable | 21,259 | 25,264 | 19,543 |
| Repayment of notes payable | (25,498) | (22,090) | (22,166) |
| Payment of acquisition-related contingent consideration | — | (1,985) | — |
| Net cash provided by financing activities | 29,623 | 3,029 | 2,515 |
| Effect of exchange rates on cash and cash equivalents | (802) | (2,699) | (169) |
| Net increase (decrease) in cash and cash equivalents | 33,053 | (14,066) | 20,161 |
| Cash and cash equivalents at the beginning of the period | 43,035 | 57,101 | 36,940 |
| Cash and cash equivalents at the end of the period | $ 76,088 | $ 43,035 | $ 57,101 |
| Supplemental disclosure of cash flow information: | | | |
| Cash paid for interest | $ 878 | $ 1,176 | $ 837 |
| Cash paid for income taxes | 264 | 3,919 | 1,013 |
| Supplemental disclosure of noncash investing and financing activities: | | | |
| Modification of bank loan with Comerica | 15,786 | — | — |
| Issuance of note to seller of acquired business | 15,482 | — | 11,130 |
| Transfer of restricted investments to short-term investments | 8,296 | — | — |
| Transfer of short-term investments to restricted investments | — | 8,297 | — |
| Unpaid deferred offering costs | — | 364 | — |
| Changes in unpaid property, plant and equipment | (396) | (746) | (1,397) |

See Accompanying Notes to Consolidated Financial Statements.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. The Company and basis of presentation

Business and organization

NeoPhotonics Corporation and its subsidiaries (NeoPhotonics or the Company) develops, manufactures and sells optoelectronic products that transmit, receive and switch high speed digital optical signals for communications networks. The Company sells its products worldwide, primarily to leading network equipment manufacturers.

Certain Significant Risks and Uncertainties

The Company operates in a dynamic industry and, accordingly, can be affected by a variety of factors.  For example, any of the following areas could have a negative effect on the Company in terms of its future financial position, results of operations or cash flows: the general state of the U.S. and world economies, the highly cyclical nature of the industries the Company serves; the loss of any of a small number of its larger customers; ability to obtain additional financing; inability to meet certain debt covenants; failure to successfully integrate completed acquisitions; fundamental changes in the technology underlying the Company's products; the hiring, training and retention of key employees; successful and timely completion of product design efforts; and new product design introductions by competitors.

Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Reclassification

Reclassification has been made within other accrued expense amount to separate income and other taxes payable and accrued warranty from other in the prior year (Note 8) in order to conform to the current year's presentation.

2. Summary of significant accounting policies

Use of estimates

The preparation of financial statements in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported revenue and expenses during the reporting period. Significant estimates made by management include: the useful lives of property, plant and equipment and intangible assets as well as future cash flows to be generated by those assets; fair values of identifiable assets acquired and liabilities assumed in business combinations; allowances for doubtful accounts; valuation allowances for deferred tax assets; write off of excess and obsolete inventories; the valuation of the penalty payment derivative and the valuations and recognition of stock-based compensation, among others. Actual results could differ from these estimates.

Concentration of credit risk and significant customers

Financial instruments that potentially subject the Company to concentrations of credit risk are primarily cash and cash equivalents and trade accounts receivable. The Company's investment policy requires cash and cash equivalents to be placed with high-credit quality institutions and limits on the amount of credit risk from any one issuer. The Company performs ongoing credit evaluations of its customers' financial condition whenever deemed necessary and generally does not require collateral. The Company maintains an allowance for doubtful accounts based upon the expected collectability of all accounts receivable, which takes into consideration an analysis of historical bad debts, specific customer creditworthiness and current economic trends.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

For the year ended December 31, 2015, two customers accounted for 44% and 21% of the Company's total revenue. For the year ended December 31, 2014, three customers accounted for 38%, 15% and 10% of the Company's total revenue. For the year ended December 31, 2013, three customers accounted for 27%, 16% and 14% of the Company's total revenue. No other customers accounted for 10% or more of total revenue in any year presented.

As of December 31, 2015, one customer accounted for 59% of the Company's total accounts receivable and as of December 31, 2014, three customers accounted for 26%, 19% and 10% of the Company's total accounts receivable. No other customers accounted for 10% or more of total accounts receivable as of December 31, 2015 or 2014.

Restricted cash

As a condition of the notes payable lending arrangements of the Company's subsidiaries in China and, in 2014, the Company's bank term loan agreement, the Company is required to keep a compensating balance at the issuing banks. These balances have been excluded from the Company's cash and cash equivalents balance and are classified as restricted cash and investments in the Company's consolidated balance sheets. As of December 31, 2015 and 2014, the amount of restricted cash and investments was $2.7 million and $21.3 million, respectively.

Cash, cash equivalents and investments

Highly liquid investments with a maturity of 90 days or less at the date of purchase are considered cash equivalents, with the exception of money market funds and commercial paper which are classified as short-term investments.

The Company regularly reviews its investment portfolio to identify and evaluate investments that have indications of possible impairment. Factors considered in determining whether a loss is other-than-temporary include: the length of time and extent to which the fair market value has been lower than the cost basis, the financial condition and near-term prospects of the investee, credit quality, likelihood of recovery, and the Company's ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in fair market value.

Unrealized gains and losses, net of tax, are included in accumulated other comprehensive (loss) income as a separate component of stockholders' equity on the consolidated balance sheets. The amortization of premiums and discounts on the investments, and realized gains and losses on available-for-sale securities are included in other income (expense), net in the consolidated statements of operations. The Company uses the specific-identification method to determine cost in calculating realized gains and losses upon sale of its marketable securities.

Marketable securities are reported at fair value and are classified as available-for-sale investments in our current assets because they represent investments of cash available for current operations.

Fair Value Measurements

Fair value is defined as the price at which an asset could be exchanged in a current transaction between knowledgeable, willing parties. A liability's fair value is defined as the amount that would be paid to transfer the liability to a new obligor, not the amount that would be paid to settle the liability with the creditor. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The authoritative accounting guidance describes a fair value hierarchy based on three levels of inputs that may be used to measure fair value, of which the first two are considered observable and the last is considered unobservable. These levels of inputs are as follows:

Level 1—Observable inputs such as unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Level 2—Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the asset or liability. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3—Unobservable inputs that reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

For marketable securities measured at fair value using Level 2 inputs, we review trading activity and pricing for these investments as of the measurement date. When sufficient quoted pricing for identical securities is not available, we use market pricing and other observable market inputs for similar securities obtained from various third party data providers. These inputs either represent quoted prices for similar assets in active markets or have been derived from observable market data.

Accounts receivable

Accounts receivable include trade receivables and notes receivable from customers. The notes are generally due within six months. The Company receives notes receivable in exchange for accounts receivable from certain customers in China that are secured by the customer's affiliated financial institution.

An allowance for doubtful accounts is calculated based on the aging of the Company's trade receivables, historical experience, and management judgment. The Company writes off trade receivables against the allowance when management determines a balance is uncollectible and is no longer actively pursuing collection of the receivable.

Inventories

Inventories consist of on-hand raw materials, work-in-progress inventories and finished goods. Raw materials and work-in-progress inventories are stored mainly on the Company's premises. Finished goods are stored on the Company's premises as well as on consignment at certain customer sites.

Inventories are stated at the lower of standard cost, which approximates actual cost determined on the weighted average basis, or market value. Inventories are recorded using the first-in, first-out method. The Company routinely evaluates quantities and values of inventories in light of current market conditions and market trends, and records a write-down for quantities in excess of demand and product obsolescence. The evaluation may take into consideration historic usage, expected demand, anticipated sales price, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer concentrations, product merchantability and other factors. Market conditions are subject to change and actual consumption of inventory could differ from forecasted demand. The Company also regularly reviews the cost of inventories against their estimated market value and records a lower of cost or market write-down for inventories that have a cost in excess of estimated market value, resulting in a new cost basis for the related inventories which is not reversed.

Business Combinations

We allocate the fair value of purchase consideration to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, management makes significant estimates and assumptions.

Fair value estimates are based on the assumptions management believes a market participant would use in pricing the asset or liability. Critical estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from customer relationships and acquired patents and developed technology; and discount rates. Management’s estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Amounts recorded in a business combination may change during the measurement period, which is a period not to exceed one year from the date of acquisition, as additional information about conditions existing at the acquisition date becomes available.

Goodwill

Goodwill is reviewed for impairment annually in the fourth fiscal quarter or more frequently if events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. The Company will assess the qualitative factors to determine whether it is more likely than not that the fair value of its single reporting operating unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment. If the Company determines that it is more likely than not that its fair value is less than its carrying amount, then the two-step goodwill impairment test is performed. The first step, identifying a potential impairment, compares the fair value of the reporting unit with its carrying amount. If the carrying amount exceeds its fair value, the second step would need to be performed; otherwise, no further steps are required. The second step, measuring the impairment loss, compares the implied fair value of the goodwill with the carrying amount of the goodwill. Any excess of the goodwill carrying amount over the implied fair value is recognized as an impairment loss, and the carrying value of goodwill is written down to fair value. The Company did not have any goodwill impairment in 2015. There was no goodwill as of December 31, 2014.

Long-lived assets

Property, plant and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the following estimated useful lives:

| | |
|---|---|
| Buildings | 20-30 years |
| Machinery and equipment | 2-7 years |
| Furniture, fixtures and office equipment | 3-5 years |
| Software | 5-7 years |
| Leasehold improvements | life of the asset or lease term, if shorter |

Repairs and maintenance costs are expensed as incurred.

Intangible assets acquired in a business combination are recorded at fair value. Identifiable finite-lived intangible assets are amortized over the period of estimated benefit using the straight-line method, reflecting the pattern of economic benefits associated with these assets. The estimated useful lives of the Company’s finite-lived intangible assets generally range from two to seven years. The acquired land use rights in China have an estimated useful life of 45 years.

The carrying value of intangible assets and other long-lived assets is reviewed on a regular basis for the existence of facts or circumstances, both internally and externally, that may suggest impairment. Some factors which the Company considers to be triggering events for impairment review include a significant decrease in the market value of an asset, a significant change in the extent or manner in which an asset is used, a significant adverse change in the business climate that could affect the value of an asset, an accumulation of costs for an asset in excess of the amount originally expected, a current period operating loss or cash flow decline combined with a history of operating loss or cash flow uses or a projection that demonstrates continuing losses and a current expectation that, it is more likely than not, a long-lived asset will be disposed of at a loss before the end of its estimated useful life.

If one or more of such facts or circumstances exist, the Company will evaluate the carrying value of long-lived assets to determine if impairment exists by comparing it to estimated undiscounted future cash flows over the remaining useful life of the assets. If the carrying value of the assets is greater than the estimated future cash flow, the assets are written down to the estimated fair value. The Company’s cash flow estimates contain management’s best estimates, using appropriate and customary assumptions and projections at the time. Any write-down would be treated as a permanent reduction in the carrying amount of the asset and an operating loss would be recognized.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The Company recorded asset impairment charges of $0.4 million in 2015 related to certain held-for-sale assets property, plant and equipment and $1.1 million in 2014 related to certain leasehold improvements. The Company had no asset impairment charge in 2013.

Revenue recognition

Revenue is derived from the sale of the Company's products. The Company recognizes revenue provided that persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. Contracts and/or customer purchase orders are used to determine the existence of an arrangement. Delivery is considered to have occurred when title and risk of loss have transferred to the customer. The price is equal to the amount invoiced to the customer and is not subject to adjustment and customers do not have the right of return. The Company evaluates the creditworthiness of its customers to determine that appropriate credit limits are established prior to the acceptance of an order.

Revenue is recognized when the product is shipped and title has transferred to the buyer. The Company bears all costs and risks of loss or damage to the goods up to that point. On most orders, the Company's shipment terms provide that title passes to the buyer upon shipment by the Company. Other shipment terms may provide that title passes to the buyer upon delivery of the goods to the buyer. Revenue related to the sale of consignment inventory at customer vendor managed locations is not recognized until the product is pulled from inventory stock by customers. Shipping and handling costs are included in the cost of goods sold. The Company presents revenue net of sales taxes and any similar assessments.

Product warranties

The Company generally provides warranties to cover defects in workmanship, materials and manufacturing for a period of one to three years to meet the stated functionality as agreed to in each sales arrangement. Products are tested against specified functionality requirements prior to delivery, but the Company nevertheless from time to time experiences claims under its warranty guarantees. The Company accrues for estimated warranty costs under those guarantees based upon historical experience, and for specific items, at the time their existence is known and the amounts are determinable.

Research and development

Research and development expense consists of personnel costs, including stock-based compensation expense, for the Company's research and development personnel and product development costs, including engineering services, development software and hardware tools, depreciation of capital equipment and facility costs. Research and development costs are expensed as incurred.

Advertising costs

Advertising costs are expensed as incurred and, to date, have not been significant.

Stock-based compensation

The Company grants stock-based awards to employees, consultants and directors. The stock-based awards, including stock options, restricted stock units, employee stock purchase rights, stock appreciation units and market-based awards, are accounted for at estimated fair values.

The Company generally determines the fair value of stock options and stock appreciation rights utilizing the Black-Scholes-Merton option-pricing model, or a lattice-binomial option-pricing model for stock-based awards with a market condition. The fair value of employee options is measured on the date of grant and then recognized over the period during which an employee is required to provide services in exchange for the award, known as the requisite service period (usually the vesting period) on a straight-line basis.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The Company records expense and an equal adjustment to the liability for stock appreciation units equal to the fair value of the vested portion of the awards as of each period end. Each reporting period thereafter, compensation expense will be recorded based on the remaining service period and the then fair value of the award until vesting of the award is completed. After vesting is completed, the Company will continue to re-measure the fair value of the liability each reporting period until the award is exercised or expires, with changes in the fair value of the liability recorded in the consolidated statements of operations.

Restricted stock units are valued at the closing sales price as quoted on the New York Stock Exchange on the date of grant, and are converted into shares of common stock upon vesting on a one-for-one basis. Vesting of restricted stock units is subject to the employee’s continuing service to the Company. The compensation expense related to the restricted stock units is determined using the fair value of common stock on the date of grant, and the expense is recognized on a straight-line basis over the vesting period.

Employee stock purchase rights are accounted for at fair value, utilizing the Black-Scholes-Merton option-pricing model. The expense for each purchase period is recognized on a straight-line basis over the requisite service period, from the beginning of the offering period through the respective purchase date.

Stock-based compensation expense for modified stock-based awards are recognized using the pool approach, under which the remaining compensation cost from the original awards plus the incremental costs, if any, of the related modified awards is recognized in its entirety over the remaining portion of the requisition service period of the corresponding modified awards.

Stock-based compensation expense recognized at fair value includes the impact of estimated forfeitures. The Company estimates future forfeitures at the date of grant and revises the estimates, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Income taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the carrying amounts of existing assets and liabilities in the financial statements and their respective tax bases, and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities from a change in tax rates is recognized in the consolidated statement of operations in the period that includes the enactment date.

The Company operates in various tax jurisdictions and is subject to audit by various tax authorities. In preparing the Company's consolidated financial statements, the Company is required to estimate its taxes in each of the jurisdictions in which it operates. The Company estimates actual current tax exposure as well as assesses temporary differences resulting from different treatment of items, such as accruals and allowances not currently deductible for tax purposes. These differences result in deferred tax assets which represent future tax benefits to be received when certain expenses previously recognized in the financial statements become deductible expenses under applicable income tax laws, or loss credit carryforwards are utilized.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of a deferred tax asset will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. A valuation allowance is recorded for loss carryforwards and other deferred tax assets where it is more likely than not that such deferred tax assets will not be realized.

In November 2015, the Financial Accounting Standards Board ("FASB") issued ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes ("ASU 2015-17"). ASU 2015-17 eliminates the current requirement for organizations to present deferred tax liabilities and assets as current and noncurrent in a classified balance sheet. Instead, organizations will be required to classify all deferred tax assets and liabilities as noncurrent.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ASU 2015-17 is effective for the Company’s annual and interim reporting periods beginning after December 15, 2016, with early adoption permitted. The Company early adopted this standard, on a prospective basis, for its financial statements as of and for the year ended December 31, 2015. The Company’s adoption of this standard reduced its prepaid and other current assets and its accrued and other current liabilities while increased its other long-term assets and long term deferred tax liabilities by the corresponding amounts on its consolidated balance sheet as of December 31, 2015.

Foreign currency

Generally the functional currency of the Company’s international subsidiaries is the local currency. The Company translates the financial statements of these subsidiaries to U.S. dollars using month-end rates of exchange for assets and liabilities, and average rates of exchange for revenue, costs, and expenses. Translation gains and losses are recorded in accumulated other comprehensive (loss) income as a component of stockholders’ equity. Net gains resulting from foreign exchange transactions were $3.4 million, $3.1 million, and $0.9 million for the years ended December 31, 2015, 2014, and 2013, respectively. These gains and losses were recorded as other income, net in the Company’s consolidated statements of operations.

Net income (loss) per share

Basic net income (loss) per share is calculated by dividing net income (loss) by the weighted average number of common shares outstanding for the period. Diluted net income (loss) per share is calculated by dividing net income (loss) by the weighted average number of common shares and potential dilutive common share equivalents outstanding during the period if the effect is dilutive.

Recent accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) (“ASU 2016-02”).  ASU 2016-02 introduces a lessee model that requires recognition of assets and liabilities arising from qualified leases on the consolidated balance sheets and consolidated statements of operations and to disclose qualitative and quantitative information about lease transactions. This guidance is effective for interim and annual periods beginning after December 15, 2018. Early adoption is permitted. The Company is in the process of evaluating the impact of adoption on its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities (“ASU 2016-01”).  ASU 2016-01 revises an entity’s accounting related to (1) the classification and measurement of investments in equity securities and (2) the presentation of certain fair value changes for financial liabilities measured at fair value. It also amends certain disclosure requirements associated with the fair value of financial instruments. ASU 2016-01 is effective for the Company's annual and interim reporting periods beginning after December 15, 2017, with early adoption permitted. The Company is in the process of evaluating the impact of adoption on its consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory ("ASU 2015-11"). ASU 2015-11 requires entities to measure most inventory "at the lower of cost and net realizable value" but does not apply to inventories that are measured by using either the last-in, first-out method or the retail inventory method. For the Company, this ASU is effective for annual and interim periods beginning after December 15, 2016. Early adoption is permitted. The Company is in the process of evaluating the impact of adoption on its consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09"). The standard provides companies with a single model for use in accounting for revenue arising from contracts with customers and supersedes current revenue recognition guidance, including industry-specific revenue guidance. The core principle of the model is to recognize revenue when control of the goods or services transfers to the customer, as opposed to recognizing revenue when the risks and rewards transfer to the customer under the existing revenue guidance. ASU 2014-09 is effective for annual and interim reporting periods beginning after December 15, 2016. Early adoption is not

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

permitted. In August 2015, the FASB issued an accounting standard update for a one-year deferral of the effective date of ASU 2014-09 to annual and interim periods beginning after December 15, 2017 and permits entities to early adopt the standard of ASU 2014-09 for annual and interim reporting periods beginning after December 15, 2016. Companies are permitted to either apply the requirements retrospectively to all prior periods presented, or apply the requirements in the year of adoption, through a cumulative adjustment.  The Company is in the process of evaluating the impact of adoption on its consolidated financial statements.

3. Cash, cash equivalents and short-term investments and restricted cash and investments

The following table summarizes the Company's cash, cash equivalents, short-term investments, and restricted cash and investments at December 31, 2015 and 2014 (in thousands):

| | December 31, 2015 | December 31, 2014 |
|---|---|---|
| Cash and cash equivalents: | | |
| Cash | $ 29,133 | $ 43,035 |
| Cash equivalents | 46,955 | — |
| Cash and cash equivalents | $ 76,088 | $ 43,035 |
| Short-term investments | $ 23,294 | $ — |
| Restricted cash and investments: | | |
| Restricted cash and investments, current | $ 2,660 | $ 5,504 |
| Restricted cash and investments, non-current | — | 15,750 |
| Total restricted cash and investments | $ 2,660 | $ 21,254 |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table summarizes the Company's unrealized gains and losses related to the cash equivalents, short-term investments and restricted investments in marketable securities designated as available-for-sale (in thousands):

| | As of December 31, 2015 | | | | As of December 31, 2014 | | | |
|---|---|---|---|---|---|---|---|---|
| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
| Marketable securities: | | | | | | | | |
| Money market accounts | $ 46,955 | $ — | $ — | $ 46,955 | $ — | $ — | $ — | $ — |
| Money market funds | 11,318 | — | — | 11,318 | 4,587 | — | — | 4,587 |
| Corporate bonds | 5,694 | — | (18) | 5,676 | 2,004 | 6 | — | 2,010 |
| Government-sponsored enterprise obligations | 3,290 | — | (6) | 3,284 | — | — | — | — |
| Commercial paper | 1,398 | — | — | 1,398 | — | — | — | — |
| U.S. government securities | 1,000 | — | (3) | 997 | — | — | — | — |
| Sovereign government bonds | 623 | — | (2) | 621 | | | | |
| Variable rate demand notes | — | — | — | — | 1,700 | — | — | 1,700 |
| Total | $ 70,278 | $ — | $ (29) | $ 70,249 | $ 8,291 | $ 6 | $ — | $ 8,297 |
| Reported as: | | | | | | | | |
| Cash equivalents | $ 46,955 | $ — | $ — | $ 46,955 | $ — | $ — | $ — | $ — |
| Short-term investments | 23,323 | — | (29) | 23,294 | — | — | — | — |
| Restricted cash and investments, non-current | — | — | — | — | 8,291 | 6 | — | 8,297 |
| Total | $ 70,278 | $ — | $ (29) | $ 70,249 | $ 8,291 | $ 6 | $ — | $ 8,297 |

As of December 31, 2015 and 2014, maturities of marketable securities were as follows (in thousands):

| | December 31, 2015 | December 31, 2014 |
|---|---|---|
| Less than 1 year | $ 66,974 | $ 6,597 |
| Due in 1 to 2 years | 3,275 | — |
| Due after 5 years | — | 1,700 |
| Total | $ 70,249 | $ 8,297 |

The Company may sell its investments in the future to fund operating needs and for strategic reasons. As a result, the Company recorded all its marketable securities in short-term investments as of December 31, 2015 and 2014, regardless of the contractual maturity date of the securities. Variable rate demand notes ("VRDNs") are floating rate municipal bonds with embedded put options that allow the bondholder to sell the security at par plus accrued interest. All of the put options were secured by a pledged liquidity source.

Realized gains and losses on the sale of marketable securities during the years ended December 31, 2015, 2014 and 2013 were immaterial. The Company did not recognize any impairment losses on its marketable securities during the years ended December 31, 2015, 2014 or 2013. As of December 31, 2015, the Company did not have any investments in marketable securities that were in an unrealized loss position for a period in excess of 12 months.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. Fair value measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table presents the Company's assets that are measured at fair value on a recurring basis (in thousands):

| | As of December 31, 2015 | | | | As of December 31, 2014 | | | |
|---|---|---|---|---|---|---|---|---|
| | Level 1 | Level 2 | Level 3 | Total | Level 1 | Level 2 | Level 3 | Total |
| Cash equivalents, short-term investments and restricted investments: | | | | | | | | |
| Money market funds | $ 11,318 | $ — | $ — | $ 11,318 | $ 4,587 | $ — | $ — | $ 4,587 |
| Money market accounts | — | 46,955 | — | 46,955 | — | — | — | — |
| Corporate bonds | — | 5,676 | — | 5,676 | — | 2,010 | — | 2,010 |
| Government-sponsored enterprise obligations | — | 3,284 | — | 3,284 | — | — | — | — |
| Commercial papers | — | 1,398 | — | 1,398 | — | — | — | — |
| U.S. government securities | 997 | — | — | 997 | — | — | — | — |
| Sovereign government bonds | — | 621 | — | 621 | — | — | — | — |
| Variable rate demand notes | — | — | — | — | — | 1,700 | — | 1,700 |
| Total | $ 12,315 | $ 57,934 | $ — | $ 70,249 | $ 4,587 | $ 3,710 | $ — | $ 8,297 |
| Mutual funds held in Rabbi Trust, recorded in other long-term assets | $ 435 | $ — | $ — | $ 435 | $ 424 | $ — | $ — | $ 424 |

The Company offers a Non-Qualified Deferred Compensation Plan ("NQDC Plan") to a select group of its highly compensated employees. The NQDC Plan provides participants the opportunity to defer payment of certain compensation as defined in the NQDC Plan. A Rabbi Trust has been established to fund the NQDC Plan obligation, which was fully funded at December 31, 2015. The assets held by the Rabbi Trust are in the form of exchange traded mutual funds and are included in the Company's other long-term assets on its consolidated balance sheets at December 31, 2015 and 2014. Level 1 assets are determined by using quoted prices in active markets for identical assets. The fair values of Level 2 assets are priced based on quoted market prices for similar instruments or non-binding market prices that are corroborated by observable market data using inputs such as benchmark yields, broker quotes and other similar data.

The following table presents the Company's liabilities that are measured at fair value on a recurring basis (in thousands):

| | As of December 31, 2015 | | | | As of December 31, 2014 | | | |
|---|---|---|---|---|---|---|---|---|
| | Level 1 | Level 2 | Level 3 | Total | Level 1 | Level 2 | Level 3 | Total |
| Penalty payment derivative (Note 12) | $ — | $ — | $ 389 | $ 389 | $ — | $ — | $ 530 | $ 530 |

In 2015, the Company reduced its liabilities related to the penalty payment derivative and recorded a benefit of $0.1 million within other income, net. There were no transfers between levels of the fair value hierarchy during either 2015 or 2014.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

In 2015, the Company wrote off $0.2 million of property, plant and equipment and $0.2 million of held-for-sale assets recognized and recognized asset impairment charges of $0.4 million within operating expenses (Level 3). In 2014, certain leasehold improvements were written off, resulting in a $1.1 million asset impairment charge within operating expenses (Level 3). These assets were measured at fair value due to events or circumstances the Company identified as having significant impact on their fair value during the respective periods. To arrive at the valuation of these assets, the Company considered the discounted cash flows and categorized the fair value measurement as Level 3 as significant unobservable inputs were used in the valuation.

Assets and Liabilities Not Measured at Fair Value

The carrying values of cash, restricted cash, accounts receivable, accounts payable, notes payable and short-term borrowings approximate their fair values due to the short-term nature and liquidity of these financial instruments.

The fair values of the Company's long-term debt have been calculated using an estimate of the interest rate the Company would have had to pay on the issuance of liabilities with a similar maturity and discounting the cash flows at that rate which it considers to be a level 2 fair value measurement. The fair values do not necessarily give an indication of the amount that the Company would currently have to pay to extinguish any of this debt.

At December 31, 2015 and 2014, the fair value of the Company's variable rate bank borrowings were not materially different than their carrying value as the interest rates approximated rates currently available to the Company and the fair value of the Company's acquisition-related debt at December 31, 2014 approximated its carrying value.

5. Net income (loss) per share

The following table sets forth the computation of the basic and diluted net income (loss) per share attributable to NeoPhotonics Corporation common stockholders for the periods indicated (in thousands, except per share amounts):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Numerator: | | | |
| Net income (loss) | $ 3,668 | $ (19,719) | $ (34,339) |
| Denominator: | | | |
| Weighted average shares used to compute per share amount: | | | |
| Basic | 37,421 | 32,109 | 31,000 |
| Dilutive effect of equity awards | 1,265 | — | — |

| | | | |
|---|---|---|---|
| Diluted | 38,686 | 32,109 | 31,000 |
| Basic net income (loss) per share | $ 0.10 | $ (0.61) | $ (1.11) |
| Diluted net income (loss) per share | $ 0.09 | $ (0.61) | $ (1.11) |

The Company has excluded the impact of the following outstanding employee stock options, restricted stock units, common stock warrants and shares expected to be issued under its employee stock purchase plan from the computation of diluted net income (loss) per share, as their effect would have been antidilutive (in thousands):

| | December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Employee stock options | 2,176 | 4,900 | 4,104 |
| Restricted stock units | 954 | 656 | 1,170 |
| Employee stock purchase plan | 318 | 623 | 403 |
| Common stock warrants | — | — | 4 |
| | 3,448 | 6,179 | 5,681 |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

6. Business Combinations

EMCORE Corporation

On January 2, 2015, the Company closed an acquisition of the tunable laser product lines of EMCORE Corporation ("EMCORE") for an original purchase price of $17.5 million, pursuant to the terms of the Asset Purchase Agreement between the parties dated October 22, 2014, under which the Company purchased certain assets and assumed certain liabilities of EMCORE's tunable laser product lines. Consideration for the transaction consisted of $1.5 million in cash and a promissory note (the "EMCORE Note") of approximately $16.0 million, which was subject to certain adjustments for inventory, net accounts receivable and pre-closing revenues, and was subsequently adjusted to $15.5 million in connection with a True-Up Confirmation Agreement (the "True-Up Agreement") executed by and between the Company and EMCORE on April 16, 2015. The True-Up Agreement made several final adjustments to the Asset Purchase Agreement, including, among other things, (i) adjusting the principal amount of the EMCORE Note from approximately $16.0 million to approximately $15.5 million, (ii) agreeing upon final amounts for inventory value adjustment, net accounts receivable adjustment, and revenue purchase price adjustment, and (iii) resolving the treatment of certain accounts receivable for products sold by EMCORE prior to the closing of the transaction. The adjusted purchase price for the acquisition was approximately $17.0 million.

The Company accounted for this acquisition as a business combination. With the acquisition of the EMCORE ultra narrow linewidth tunable laser products, the Company aims to strengthen its portfolio of High Speed Products.

In connection with the acquisition, the Company incurred approximately $0.9 million in total acquisition-related costs related to legal, accounting and other professional services. The acquisition costs were expensed as incurred and included in operating expenses in the Company's consolidated statement of operations.

The Company's allocation of the purchase price to tangible and identifiable intangible assets acquired and liabilities assumed was based on estimated fair values as of the close of the acquisition. The fair values assigned to intangible assets acquired were based on valuations using estimates and assumptions provided by management, with the assistance of an independent third party appraisal firm. The excess purchase price over those fair values was recorded as goodwill. These estimates were determined through established and generally accepted valuation techniques. While the Company uses best estimates and assumptions as part of the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, estimates and assumptions are subject to refinement, including the acquired property, plant and equipment, prepaid and other current assets, which primarily consisted of held-for-sale assets, and accounts payable, during the Company's process of obtaining further information. As a result, during the measurement period which was completed during 2015, the Company recorded adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Subsequent to the initial allocation of the assets acquired and liabilities assumed, the Company adjusted the acquired net accounts receivable, the acquired net inventories, the assumed sales tax accrual and the acquired prepaid expenses and other current assets by immaterial amounts, and decreased goodwill by a corresponding net amount.

Goodwill recorded consisted of a valuable assembled workforce and market synergy. The amounts assigned to goodwill are deductible for income tax purposes.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table summarizes the allocation of the assets acquired and liabilities assumed as of the acquisition date and subsequent adjustments (in thousands):

| | |
|---|---|
| Total purchase consideration: | |
| Cash paid | $ 1,500 |
| Notes payable | 15,482 |
| Total | $ 16,982 |
| Fair value of assets acquired: | |
| Accounts receivable | $ 9,274 |
| Inventories | 1,693 |
| Prepaid expenses and other current assets | 670 |
| Property, plant and equipment | 6,917 |
| Intangible assets acquired: | |
| Developed technology | 4,100 |
| Customer relationships | 700 |
| Total | $ 23,354 |
| Less: fair value of liabilities assumed: | |
| Accounts payable | $ (7,427) |
| Accrued liabilities | (60) |
| Total | $ (7,487) |
| Goodwill | $ 1,115 |

Purchased intangibles with finite lives will be amortized on a straight-line basis over their respective estimated useful lives. The following table presents details of the purchase price allocated to the acquired intangible assets at the acquisition date:

| | Useful Life (In years) | Purchased intangible assets (In thousands) |
|---|---|---|
| Developed technology | 7 | $ 4,100 |
| Customer relationships | 2 | 700 |
| Total purchased intangible assets | | $ 4,800 |

The following unaudited supplemental pro forma information presents the combined results of operations of NeoPhotonics Corporation for the years ended December 31, 2015 and 2014 as though the companies had been combined as of the beginning of 2014. In the year ended December 31, 2015, revenue related to products acquired from EMCORE was approximately $55.8 million. The pro forma financial information reflects adjustments related to transactions costs of $0.3 million and $0.6 million in the years ended December 31, 2015 and 2014, respectively, as well as immaterial employee expense in the year ended December 31, 2015. Incremental intangible amortization, inventory and depreciation adjustments were also added to the 2014 period. There were no sales between the business acquired from EMCORE and the Company in the years ended December 31, 2015 or 2014.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The unaudited pro forma results do not assume any operating efficiencies as a result of the consolidation of operations (in thousands, except per share data):

| | Year ended December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Revenue | $ 339,439 | $ 353,003 |
| Net income (loss) | $ 4,088 | $ (23,221) |
| Basic net income (loss) per share | $ 0.11 | $ (0.72) |
| Diluted net income (loss) per share | $ 0.11 | $ (0.72) |

EigenLight Corporation

In November 2015 the Company closed an acquisition of the business and products of EigenLight Corporation for cash consideration of $0.4 million in an asset transaction. The Company accounted for this as a business combination and the majority of the purchase price was allocated to inventory and property, plant and equipment.

NeoPhotonics Semiconductor

On March 29, 2013 the Company acquired certain assets and assumed certain liabilities related to the semiconductor Optical Components Business Unit of LAPIS Semiconductor Co., Ltd., a wholly owned subsidiary of Rohm Co., Ltd ("LAPIS") of Japan.

Total consideration for NeoPhotonics Semiconductor was approximately $24.3 million, including cash of $13.1 million and notes payable of $11.1 million. The cash paid included $2.0 million that was withheld and placed into escrow to cover certain indemnity obligations.

In October 2014, the Company entered into a settlement agreement covering certain outstanding claims in connection with this acquisition. Under the terms of the settlement agreement, the Company received a payment of $1.0 million (JPY 111.0 million) from the escrow account that was set up under the original merger agreement for disputed excess inventories, which the Company recorded as an escrow settlement gain in 2014.

In connection with the acquisition, the Company incurred approximately $5.4 million in acquisition-related costs related to investment banking, legal, accounting and other professional services and transfer taxes related to real property acquired. The acquisition costs were expensed as incurred and are included in operating expenses in the Company's 2013 consolidated statement of operations.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The Company accounted for its acquisition of the NeoPhotonics Semiconductor assets and assumed liabilities as a business combination. NeoPhotonics Semiconductor's tangible and identifiable intangible assets acquired and liabilities assumed were recorded based upon their estimated fair values as of the closing date of the acquisition. The estimated fair values of the identifiable assets acquired and liabilities assumed approximated the purchase price; therefore, no goodwill was recorded. The following table summarizes the acquisition accounting and the tangible and intangible assets acquired as of the date of acquisition and subsequent adjustments (in thousands):

| | |
|---|---|
| Total purchase consideration: | |
| Cash paid | $ 13,128 |
| Notes payable | 11,130 |
| | $ 24,258 |
| Liabilities assumed: | |
| Pension and retirement obligations | $ 6,471 |
| Other compensation-related liabilities | 1,083 |
| Other current liabilities | 1,265 |
| | $ 8,819 |
| Fair value of assets acquired: | |
| Inventory | $ 13,309 |
| Other current assets | 35 |
| Land, property, plant and equipment | 14,433 |
| Intangible assets acquired: | |
| Developed technology | 2,120 |
| Customer relationships | 3,180 |
| | $ 33,077 |

The approach for measuring the fair value of the assets acquired and liabilities assumed is described below:

Net Tangible Assets

NeoPhotonics Semiconductor's tangible assets acquired and liabilities assumed as of March 29, 2013 were recorded at estimated fair value. The Company estimated fair value by adjusting NeoPhotonics Semiconductor's historical value of property, plant and equipment to an estimate of depreciated replacement cost, adjusted for economic obsolescence. The Company depreciates property, plant and equipment over estimated lives of 2 to 20 years, and records the expense to cost of goods sold and operating expense. The fair value of inventory acquired was determined using a net realizable value approach based upon the expected sales value of the inventory, less any costs to complete and selling costs along with a reasonable profit margin based on historical and expected results.

Intangible Assets

Developed technology represents products that have reached technological feasibility. NeoPhotonics Semiconductor's current product offerings include high speed semiconductor and high speed laser and photodetector devices for communication networks. The fair value of developed technology intangibles acquired was determined by using a royalty-avoidance method. The share of future revenue relating to current technology was forecasted, using an estimate for obsolescence such that the share declines over time. A royalty rate of two percent was used to calculate royalty savings on that revenue that are avoided since the Company owns the technology and does not need to license it from other parties. The after-tax royalty savings was then discounted to present value using the Company's discount rate. The Company amortizes the developed technology intangible assets over estimated lives of 4 to 5 years, and amortization expense is recorded to cost of goods sold.

The customer relationships asset represents the value of the ability to sell existing, in-process, and future versions of the technology to the NeoPhotonics Semiconductor existing customer base. The Company utilized the excess earnings method, estimating future cash flows that will result from existing customers given assumed retention rates, and then discounting those flows to their present value using the Company's discount rate. The Company amortizes the customer relationships intangible asset over an average estimated life of 6 years, and amortization expense is recorded to operating expenses.

The following unaudited supplemental pro forma information presents the combined results of operations of NeoPhotonics Corporation and NeoPhotonics Semiconductor for the years presented as if the NeoPhotonics Semiconductor acquisition had been completed at the beginning of 2012. The pro forma financial information includes adjustments related to one time charges, amortization of fair value adjustments and elimination of NeoPhotonics Semiconductor's revenues and cost of goods sold from its sales to the Company prior to the acquisition. As a result of the elimination adjustments, revenues were reduced by $1.9 million and cost of goods sold was reduced by $1.8 million for 2013. The pro forma financial information for 2013 also included elimination of $5.4 million in transaction costs and a decrease in cost of goods sold of $3.2 million due to a change in the value of inventory as a result of acquisition accounting. Incremental intangible amortization, inventory and depreciation adjustments of $0.3 million, net of tax impact, were added to the 2015 period for assets that would have been fully amortized.

The following unaudited pro forma results for the years ended December 31, 2015, 2014 and 2013 do not assume any operating efficiencies as a result of the consolidation of operations (in thousands, except per share data):

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| Revenue | $ 339,437 | $ 306,177 | $ 294,933 |
| Net income (loss) | $ 3,931 | $ (19,719 ) | $ (23,340 ) |
| Basic net income (loss) per share | $ 0.11 | $ (0.61 ) | $ (0.75 ) |
| Diluted net income (loss) per share | $ 0.10 | $ (0.61 ) | $ (0.75 ) |

The unaudited pro forma financial information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved had the acquisition taken place as of January 1, 2012, nor does it intend to be a projection of future results.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

7. Purchased intangible assets

Purchased intangible assets consist of the following (in thousands):

| | December 31, 2015 | | | December 31, 2014 | | |
|---|---|---|---|---|---|---|
| | Gross Assets | Accumulated Amortization | Net Assets | Gross Assets | Accumulated Amortization | Net Assets |
| Technology and patents | $ 37,430 | $ (31,061) | $ 6,369 | $ 34,023 | $ (28,402) | $ 5,621 |
| Customer relationships | 15,101 | (12,623) | 2,478 | 14,725 | (11,176) | 3,549 |
| Leasehold interest | 1,312 | (307) | 1,005 | 1,386 | (293) | 1,093 |
| Supplier relationships and other | — | — | — | 862 | (862) | — |
| | $ 53,843 | $ (43,991) | $ 9,852 | $ 50,996 | $ (40,733) | $ 10,263 |

Amortization expense relating to technology and patents and the leasehold interest intangible assets is included within cost of goods sold, and customer relationships and the non-compete agreements within operating expenses. The following table presents details of the amortization expense of the Company's purchased intangible assets as reported in the consolidated statements of operations (in thousands):

| | Years ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Cost of goods sold | $ 3,349 | $ 2,833 | $ 2,543 |
| Operating expenses | 1,791 | 1,502 | 1,532 |
| Total | $ 5,140 | $ 4,335 | $ 4,075 |

The estimated future amortization expense of purchased intangible assets as of December 31, 2015, is as follows (in thousands):

| | |
|---|---|
| 2016 | $ 4,458 |
| 2017 | 1,323 |
| 2018 | 1,146 |
| 2019 | 793 |
| 2020 | 689 |

| | |
|---|---|
| Thereafter | 1,443 |
| | $ 9,852 |

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NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

8. Balance sheet components

Restricted Cash and Investments

Restricted cash and investments were as follows (See Note 10) (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Restricted in connection with notes payable | $ 2,660 | $ 3,754 |
| Restricted in connection with Comerica Bank term loan | — | 17,500 |
| Total restricted cash and investments | $ 2,660 | $ 21,254 |
| Reported as: | | |
| Restricted cash and investments | $ 2,660 | $ 5,504 |
| Restricted cash and investments, non-current | — | 15,750 |
| Total restricted cash and investments | $ 2,660 | $ 21,254 |

Accounts receivable, net

Accounts receivable, net were as follows (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Accounts receivable | $ 82,235 | $ 69,839 |
| Trade notes receivable | 1,769 | 7,999 |
| Allowance for doubtful accounts | (843) | (241) |
| | $ 83,161 | $ 77,597 |

The table below summarizes the movement in the Company’s allowance for doubtful accounts (in thousands):

| | |
|---|---|
| Balance at December 31, 2012 | $ (963) |
| Provision for bad debt | 253 |
| Write-offs, net of recoveries | 179 |
| Balance at December 31, 2013 | (531) |
| Provision for bad debt | 266 |
| Write-offs, net of recoveries | 24 |
| Balance at December 31, 2014 | (241) |
| Provision for bad debt | (640) |
| Write-offs, net of recoveries | 38 |
| Balance at December 31, 2015 | $ (843) |

Inventories

Inventories were as follows (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Raw materials | $ 23,793 | $ 23,804 |
| Work in process | 12,165 | 13,600 |
| Finished goods | 29,644 | 19,943 |
| | $ 65,602 | $ 57,347 |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Included in finished goods was $14.2 million and $6.4 million of inventory at customer vendor managed inventory locations at December 31, 2015 and 2014, respectively.

Property, plant and equipment, net

Property, plant and equipment, net were as follows (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Land | $ 2,768 | $ 2,778 |
| Buildings | 21,791 | 22,338 |
| Machinery and equipment | 117,758 | 105,406 |
| Furniture, fixtures, software and office equipment | 9,661 | 8,730 |
| Leasehold improvements | 10,534 | 8,569 |
| | 162,512 | 147,821 |
| Less: Accumulated depreciation | (99,894) | (90,164) |
| | $ 62,618 | $ 57,657 |

Depreciation expense was $17.7 million $19.1 million and $16.3 million for the years ended December 31, 2015, 2014 and 2013, respectively. In 2014, the Company wrote off certain leasehold improvements in its facility in Fremont, California and recorded an asset impairment charge of $1.1 million in connection with the Company's business re-alignment initiatives.

Accrued and other current liabilities

Accrued and other current liabilities were as follows (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Employee-related | $ 17,420 | $ 13,635 |

| | | |
|---|---|---|
| Income and other taxes payable | 3,720 | 2,071 |
| Accrued warranty | 1,175 | 1,751 |
| Penalty payment derivative | 389 | 530 |
| Deferred income tax liabilities | — | 181 |
| Other accrued expenses | 5,246 | 4,560 |
| | $ 27,950 | $ 22,728 |

Accrued warranty

The table below summarizes the movement in the warranty accrual, which is included in accrued and other current liabilities (in thousands):

| | Years ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Beginning balance | $ 1,751 | $ 1,737 | $ 1,072 |
| Warranty accruals | 79 | 861 | 1,514 |
| Assumed warranty from acquisitions | — | — | 135 |
| Settlements | (655) | (847) | (984) |
| Ending balance | $ 1,175 | $ 1,751 | $ 1,737 |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Other noncurrent liabilities

Other noncurrent liabilities were as follows (in thousands):

| | December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Pension and other employee-related | $ 5,036 | $ 5,355 |
| Other | 2,352 | 1,871 |
| | $ 7,388 | $ 7,226 |

9. Restructuring

In 2014, the Company initiated a restructuring plan (the "2014 Restructuring Plan") to refocus on its strategy execution, optimize its structure, and improve operational efficiencies. The 2014 Restructuring Plan consisted of workforce reductions primarily in the U.S and in China. The Company recorded $0.2 million and $1.1 million in restructuring charges related to the 2014 Restructuring Plan in 2015 and 2014, respectively, which were included within cost of goods sold and operating expenses.

During 2013, the Company exited and closed one facility at its headquarters location to align its facilities usage with its current size. Additionally, the Company approved and implemented a restructuring action to reduce its workforce and close a facility in China and to exit its contract manufacturing activities in Malaysia. The Company recorded a restructuring charge of $1.5 million during 2013 related to these actions, of which $0.8 million was recorded in operating expenses with the remainder recorded in cost of goods sold. The balance related to facilities was fully paid at December 31, 2015.

The following table summarizes the activities associated with the restructuring plans during the years ended December 31, 2015, 2014 and 2013 (in thousands):

| | Workforce Reduction | Facilities | Contract Termination | Total |
|---|---|---|---|---|
| Restructuring obligations, December 31, 2012 | $ — | $ — | $ — | $ — |
| Restructuring costs incurred | 699 | 318 | 457 | 1,474 |
| Cash payments | (699) | (178) | (391) | (1,268) |
| Non-cash settlements and other | — | 71 | — | 71 |
| Restructuring obligations, December 31, 2013 | — | 211 | 66 | 277 |
| Restructuring costs incurred | 1,086 | — | — | 1,086 |
| Cash payments | (1,032) | (111) | (66) | (1,209) |
| Restructuring obligations, December 31, 2014 | 54 | 100 | — | 154 |
| Restructuring costs incurred | 169 | — | — | 169 |
| Cash payments | (223) | (100) | — | (323) |
| Restructuring obligations, December 31, 2015 | $ — | $ — | $ — | $ — |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

## 10. Debt

The table below summarizes the carrying amount and weighted average interest rate of the Company's notes payable and long-term debt (in thousands, except percentages):

| | December 31, 2015 | | | December 31, 2014 | | |
|---|---|---|---|---|---|---|
| | Carrying Amount | Weighted Average Interest Rate | | Carrying Amount | Weighted Average Interest Rate | |
| Notes payable | $ 8,857 | — | | $ 12,771 | — | |
| Bank borrowings-Comerica Bank | 23,800 | 2.99 | % | — | — | |
| Short-term borrowing | — | — | | 10,000 | 3.18 | % |
| Total notes payable and short-term borrowing | $ 32,657 | | | $ 22,771 | | |
| Long-term debt, current and non-current: | | | | | | |
| Bank borrowings-Comerica Bank | $ — | — | | $ 17,500 | 3.16 | % |
| Bank borrowings-Mitsubishi Bank | 11,769 | 1.53 | % | — | — | |
| Acquisition-related debt | — | — | | 5,836 | 1.50 | % |
| Total long-term debt, current and non-current | 11,769 | | | 23,336 | | |
| Unaccreted discount within current portion of long-term debt | (71) | | | — | | |
| Unaccreted discount within long-term debt, net of current portion | (179) | | | — | | |
| Total long-term debt, net of unaccreted discount | $ 11,519 | | | $ 23,336 | | |
| Reported as: | | | | | | |
| Current portion of long-term debt | $ 760 | | | $ 2,445 | | |
| Long-term debt, net of current portion | 10,759 | | | 20,891 | | |
| Total long-term debt, net of unaccreted discount | $ 11,519 | | | $ 23,336 | | |

### Notes payable

The Company regularly issues notes payable to its suppliers in China in exchange for accounts payable. These notes are supported by noninterest bearing bank acceptance drafts issued under the Company's existing line of credit facility and are due three to six months after issuance. As a condition of the notes payable arrangements, the Company is required to keep a compensating balance at the issuing banks that is a percentage of the total notes payable balance until the amounts are settled.

At December 31, 2015, the Company's subsidiary in China had two short-term line of credit facilities with banking institutions. Under the first agreement, which has been renewed to expire in June 2016, RMB 120.0 million ($18.5 million) can be used for short-term loans, which will bear interest at varying rates or up to RMB 171.4 million ($26.4 million) can be used for bank acceptance drafts (with a 30% compensating balance requirement). Under the second agreement, which has been renewed to expire in September 2016, RMB 133.0 million ($20.5 million) can be used for short-term loans or up to approximately RMB 190.0 million ($29.3 million) can be used for bank acceptance drafts (with a 30% compensating balance requirement). As of December 31, 2015 and 2014, the non-interest bearing bank acceptance drafts issued in connection with the Company's notes payable to its suppliers in China under these line of credit facilities had an outstanding balance of $8.9 million and $12.8 million, respectively.

As of December 31, 2015 and 2014, compensating balances relating to these credit facilities totaled $2.7 million and $3.8 million, respectively. Compensating balances are classified as restricted cash and investments on the Company's consolidated balance sheets.

Acquisition-related

As part of the purchase consideration to acquire the tunable laser products of EMCORE in January 2015 (See Note 6), the Company issued the EMCORE Note, as amended, of $15.5 million, which had a maturity of two years from the closing of the transaction and an interest rate of 5% per annum for the first year and 13% per annum for the second

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

year. The interest was payable semi-annually in cash. In addition, the EMCORE Note was subject to prepayment under certain circumstances and was secured by certain of the assets to be sold pursuant to the asset purchase agreement with EMCORE. The EMCORE Note was subordinated to the Company's existing bank debt in the U.S. The EMCORE Note, as amended, was repaid in full in April 2015.

In connection with the acquisition of NeoPhotonics Semiconductor on March 29, 2013, the Company was obligated to pay 1,050 million Japanese Yen (the "JPY") in three equal installments on the anniversaries of the closing date for the purchase of the real estate used by NeoPhotonics Semiconductor of which 700 million JPY( $5.8 million) was outstanding at December 31, 2014. The obligation bore interest at 1.5% per year, payable annually, and was secured by the acquired real estate property. This loan was repaid in full in February 2015.

Bank borrowings

In April 2015, the Company's subsidiary in China executed a $5.0 million advance financing agreement under one of its credit line facilities at an interest rate based on a six-month LIBOR plus 330 basis points, or approximately 3.71%. Both interest and principal were due and repaid in full in 2015.

At December 31, 2014, the Company's subsidiary in China had $10.0 million outstanding under two short-term advance financing agreements under its line of credit facilities. The borrowings were made against export sales to its parent company and bore interest and other fees at rates ranging from 2.33% to 4.02% per annum. Interest and principal were due and repaid in full in 2015.

The Company has a credit agreement with Comerica Bank as lead bank in the U.S. In January 2015, the Company executed an amendment to its credit agreement with Comerica Bank to refinance the then-outstanding Comerica term loan. Under the Credit Amendment, the $20.0 million revolving credit facility was replaced with a $25.0 million senior secured revolving credit line with a maturity date on November 2, 2016. In March 2015, the senior secured revolving credit line was further amended to increase the borrowing capacity from $25.0 million to $30.0 million. Borrowings under the amended revolving credit facility bear interest at an interest rate option of a base rate as defined in the agreement plus 1.75% or LIBOR plus 2.75%. The base rate is the greater of (a) the effective prime rate, (b) the Federal Funds effective rate plus one percent, and (c) the daily adjusting LIBOR rate plus one percent. The Credit Amendment also modified the EBITDA and liquidity covenants and eliminated the need to maintain compensating balances (restricted cash). The credit agreement also restricts the Company's ability to incur certain additional debt or to engage in specified transactions, restricts the payment of dividends to its stockholders in the event of a default and is secured by substantially all of the Company's U.S. assets, other than intellectual property assets.

The components of the Comerica credit facilities are as follows:

- A $30.0 million revolving credit facility subject to covenant requirements, under which there was $23.8 million outstanding at December 31, 2015 which was repaid in full in January 2016. There was no outstanding borrowing as of December 31, 2014. Amounts borrowed are due on or before November 2, 2016 and bear interest at an interest rate option of a base rate as defined in the agreement plus 1.75% or LIBOR plus 2.75%. As of December 31, 2015 the rate on the LIBOR option was 2.99%.
- Under the term loan facility, $17.5 million was outstanding at December 31, 2014 which was repaid in full in January 2015. Prior to the repayment, borrowings under the term loan bore interest at an interest rate option of a base rate as defined in the agreement plus 2.0% or LIBOR plus 3.0%.

The Company's original credit agreement with Comerica Bank required the maintenance of specified financial covenants, including a debt to EBITDA ratio and liquidity ratios. The Company was not in compliance with the debt to EBITDA covenant at December 31, 2014, which noncompliance was effectively waived in an amendment to the credit agreement the Company executed, during 2014, that waived the testing of certain covenants for compliance, provided that the Company maintained compensating balances equal to outstanding amounts under the credit agreement in accounts for which the bank had sole access. The Company's amended credit agreement with Comerica executed in January 2015 modified the financial covenants to replace the compensating balance requirement with the maintenance of at least half of the projected EBITDA and a minimum liquidity ratio of 1.5 to 1.0. The Company was in compliance with

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

the modified covenants as of December 31, 2015 and expects to be in compliance for the next 12 months. As of December 31, 2015 and 2014, the amount of the Company's cash and investments in its compensating balance accounts for the term loan facility with Comerica Bank was zero and $17.5 million, respectively, which was classified as current and non-current restricted cash and investments on the Company's consolidated balance sheet.

On February 25, 2015, the Company entered into certain loan agreements and related special agreements (collectively, the "Loan Arrangements") with the Bank of Tokyo-Mitsubishi UFJ, Ltd. (the "Mitsubishi Bank") that provided for (i) a term loan in the aggregate principal amount of 500 million JPY ($4.2 million) (the "Term Loan A") and (ii) a term loan in the aggregate principal amount of one billion JPY ($8.4 million) (the "Term Loan B" and together with the Term Loan A, the "Mitsubishi Bank Loans"). The Mitsubishi Bank Loans are secured by a mortgage on certain real property and buildings owned by our Japanese subsidiary. The full amount of each of the Mitsubishi Bank Loans was drawn on the closing date of February 25, 2015. Interest on the Mitsubishi Bank Loans accrues and is paid monthly based upon the annual rate of the monthly Tokyo Interbank Offer Rate (TIBOR) plus 1.40%. The Term Loan A requires interest only payments until the maturity date of February 23, 2018, with a lump sum payment of the aggregate principal amount on the maturity date. The Term Loan B requires equal monthly payments of principal equal to 8,333,000 JPY until the maturity date of February 25, 2025, with a lump sum payment of the balance of 8,373,000 JPY on the maturity date. Interest on the Term Loan B is accrued based upon monthly TIBOR plus 1.40% and is secured by real estate collateral. In conjunction with the execution of the Bank Loans, the Company paid a loan structuring fee, including consumption tax, of 40,500,000 JPY ($0.3 million).

The Mitsubishi Bank Loans contain customary representations and warranties and customary affirmative and negative covenants applicable to the Company's Japanese subsidiary, including, among other things, restrictions on cessation in business, management, mergers or acquisitions. The Mitsubishi Bank Loans contain financial covenants relating to minimum net assets, maximum ordinary loss and a dividends covenant. The Mitsubishi Bank Loans also include customary events of default, including but not limited to the nonpayment of principal or interest, violations of covenants, restraint on business, dissolution, bankruptcy, attachment and misrepresentations. In February 2015, the Company used a portion of the proceeds of the Mitsubishi Bank Loans to repay the then-outstanding loan related to the acquisition of NeoPhotonics Semiconductor, which had an outstanding principal and interest amount of approximately 710 million JPY ($6.0 million) and the remainder will be used for general working capital. As of December 31, 2015, the outstanding principal balance under the Mitsubishi Bank Loans was approximately 1.4 billion JPY (approximately $11.8 million) and the Company was in compliance with the related covenants.

At December 31, 2015, maturities of long-term debt were as follows (in thousands):

| | |
|---|---|
| 2016 | $ 831 |
| 2017 | 831 |
| 2018 | 4,984 |
| 2019 | 831 |

| | |
|---|---|
| 2020 | 831 |
| Thereafter | 3,461 |
| | $ 11,769 |

11. Pension Plans

Japan defined benefit pension plans

In connection with its acquisition of NeoPhotonics Semiconductor in 2013, the Company assumed responsibility for two defined benefit plans that provide retirement benefits to its NeoPhotonics Semiconductor employees in Japan: the Retirement Allowance Plan ("RAP") and the Defined Benefit Corporate Pension Plan ("DBCPP"). The RAP is an unfunded plan administered by the Company. Effective February 28, 2014, the DBCPP was converted to a defined contribution plan ("DCP"). In May 2014, LAPIS transferred approximately $2.0 million into the newly formed DCP which was the allowable amount that can be transferred according to the Japanese regulations. LAPIS also paid the Company approximately $0.3 million in connection with the conversion of the plan. Additionally, the Company transferred the net unfunded projected benefit obligation amount from the DBCPP to the RAP and froze the RAP benefit

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

at the February 28, 2014 amount. Under the RAP, lump sum benefits are provided upon retirement or upon certain instances of termination. In 2014, the Company reclassified $0.2 million and $0.1 million from accumulated other comprehensive income to cost of goods sold and operating expenses, respectively.

The funded status of these plans for the years ended December 31, 2015 and 2014 was as follows (in thousands):

| | 2015 RAP | 2014 RAP | DBCPP |
|---|---|---|---|
| Change in projected benefit obligation: | | | |
| Projected benefit obligation, beginning of period | $ 5,054 | $ 5,446 | $ 2,508 |
| Service cost | — | 39 | 14 |
| Interest cost | 10 | 29 | 7 |
| Benefits paid | — | (23) | (76) |
| Actuarial (gain)/loss | 40 | 154 | 88 |
| Curtailment/Settlement | — | (408) | (2,022) |
| Transfer from DBCPP to RAP | — | 490 | (569) |
| Currency translation adjustment | (18) | (673) | 50 |
| Projected benefit obligation, end of period | $ 5,086 | $ 5,054 | $ — |
| Change in plan assets: | | | |
| Plan assets at fair value, beginning of period | $ — | $ — | $ 2,072 |
| Employer contributions | — | — | 15 |
| Benefits paid | — | — | (76) |
| Actual return on plan assets | — | — | — |
| Transfer to DCP | — | — | (1,766) |
| Currency translation adjustment | — | — | (245) |
| Plan assets at calculated amount, end of period | $ — | $ — | $ — |
| Amounts recognized in consolidated balance sheets: | | | |
| Accrued and other current liabilities | $ 497 | $ 123 | $ — |
| Other noncurrent liabilities | $ 4,589 | $ 4,931 | $ — |
| Amount recognized in accumulated other comprehensive loss: | | | |
| Defined benefit pension plans adjustment | $ 153 | $ 113 | $ — |
| Accumulated benefit obligation, end of period | $ 5,086 | $ 5,054 | $ — |

Net periodic pension cost associated with these plans for the years ended December 31, 2015 and 2014 and the period from March 29, 2013 to December 31, 2013 included the following components (in thousands):

| | Year ended December 31, 2015 | Year ended December 31, 2014 | | Period from March 28, 2013 to December 31, 2013 | |
|---|---|---|---|---|---|
| | RAP | RAP | DBCPP | RAP | DBCPP |
| Service cost | $ — | $ 39 | $ 14 | $ 175 | $ 78 |
| Interest cost | 10 | 29 | 7 | 39 | 18 |
| Expected return on plan assets | — | — | — | — | (30) |
| Other | — | — | 1 | — | — |
| Curtailment/settlement (gain) loss | — | (249) | 133 | — | — |
| Net periodic pension (gain) costs | $ 10 | $ (181) | $ 155 | $ 214 | $ 66 |

The projected and accumulated benefit obligations for the RAP were calculated as of December 31, 2015 and 2014 using a discount rate assumption of 0.2% and 0.2%, respectively.

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Estimated future benefit payments under the RAP are as follows (in thousands):

| | |
|---|---|
| 2016 | $ 497 |
| 2017 | 375 |
| 2018 | 536 |
| 2019 | 249 |
| 2020 | 491 |
| 2021 - 2025 | 1,703 |
| Thereafter | 1,235 |
| | $ 5,086 |

401(k) Plan

The Company maintains a savings and retirement plan qualified under Section 401(k) of the Internal Revenue Code of 1986, as amended (the "IRC"). Employees meeting the eligibility requirements, as defined under the IRC, may contribute up to the statutory limits each year. The Company currently matches a portion of all eligible employee contributions which vest immediately. The Company’s matching contributions to the plan totaled $0.3 million for each of the years ended December 31, 2015, 2014, and 2013.

12. Commitments and contingencies

Leases

The Company leases various facilities under non-cancelable operating leases. As of December 31, 2015, the future minimum commitments under the Company’s non-cancelable operating leases are as follows (in thousands):

| | |
|---|---|
| Years ending December 31, | |
| 2016 | $ 1,225 |
| 2017 | 1,058 |
| 2018 | 1,079 |

| | |
|---|---|
| 2019 | 973 |
| 2020 | 482 |
| Thereafter | 578 |
| | $ 5,395 |

The total minimum lease commitment amount above does not include minimum sublease rent income of $1.4 million receivable in the future under non-cancelable sublease agreements.

The Company recognizes rent expense on a straight-line basis over the lease period. Rent expense under the Company's operating leases was $2.2 million in each of the years ended December 31, 2015, 2014, and 2013.

Litigation

From time to time, the Company is subject to various claims and legal proceedings, either asserted or unasserted, that arise in the ordinary course of business. The Company accrues for legal contingencies if the Company can estimate the potential liability and if the Company believes it is probable that the case will be ruled against it. If a legal claim for which the Company did not accrue is resolved against it, the Company would record the expense in the period in which the ruling was made. The Company believes that the likelihood of an ultimate amount of liability, if any, for any pending claims of any type (alone or combined) that will materially affect the Company's financial position, results of operations or cash flows is remote. The ultimate outcome of any litigation is uncertain, however, and unfavorable outcomes could have a material negative impact on the Company's financial condition and operating results. Regardless of outcome, litigation can have an adverse impact on the Company because of defense costs, negative publicity, diversion of management resources and other factors.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

On January 5, 2010, Finisar Corporation, or Finisar, filed a complaint in the U.S. District Court for the Northern District of California against Source Photonics, Inc., MRV Communications, Inc., Oplink Communications, Inc. and the Company, or collectively, the co-defendants. In the complaint Finisar alleged infringement of certain of its U.S. patents. In 2010 the Company filed an answer to the complaint and counterclaims, asserting two claims of patent infringement and additional claims. The court dismissed without prejudice all co-defendants (including the Company) except Source Photonics, Inc., on grounds that such claims should have been asserted in four separate lawsuits, one against each defendant. This dismissal does not prevent Finisar from bringing a new similar lawsuit against the Company. In 2011 the Company and Finisar agreed to suspend their respective claims and in 2012 they further agreed to toll their respective claims. While there has been no action on this matter since 2012, the Company is currently unable to predict the outcome of this dispute and therefore cannot determine the likelihood of loss nor estimate a range of possible loss.

On January 2, 2013, the Company was served with a lawsuit, filed in Belgium by a distributor called Laser 2000 Beneluo SA (“Laser 2000”) claiming unpaid commissions. The distributor agreement was formally terminated as of January 3, 2012. The Company paid $492,000 to Laser 2000 as partial settlement of claims and to avoid penalties from the Court and submitted a legal brief to court on September 16, 2013. Laser 2000 filed a response on December 16, 2013 and the Company filed the final rebuttal brief on January 30, 2014. On March 23, 2015, the Belgian Court issued a ruling awarding Laser 2000 approximately one million euros in damages (approximately $1,100,000 at current exchange rates). The Company was served with the judgment on September 28, 2015. The Company filed an appeal to the verdict in December 2015, but is unable to predict the duration or outcome of the appeal or the overall lawsuit at this time. The Company does not believe it will ultimately be liable for the full amount of damage; however, in light of developments in the case, the Company increased its accrual for estimated probable litigation expense relating to this matter in March 2015.

Indemnifications

In the normal course of business, the Company enters into agreements that contain a variety of representations and warranties and provide for general indemnification. The Company’s exposure under these agreements is unknown because it involves claims that may be made against the Company in the future, but have not yet been made. To date, the Company has not paid any claims or been required to defend any action related to its indemnification obligations. However, the Company may record charges in the future as a result of these indemnification obligations. As of December 31, 2015, the Company does not have any material indemnification claims that were probable or reasonably possible.

Purchase obligations

The Company has open purchase orders with its suppliers for the purchase of inventory and other items in the ordinary course of its business. As of December 31, 2015, the Company's estimate of outstanding amounts under these purchase orders was approximately $34.8 million, primarily expected to be purchased within the next 12 months. Certain of these open purchase orders may be cancellable without penalty.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Penalty Payment Derivative

In connection with a private placement transaction in 2012, the Company agreed to certain performance obligations including establishing a wholly-owned subsidiary in Russia and making a $30.0 million investment commitment (the ‘Investment Commitment’) towards the Company’s Russian operations, which could be partially satisfied by cash and/or non-cash investment inside or outside of Russia and/or by way of non-cash asset transfers.

In March 2015, the Company extended the Investment Commitment deadline from March 31, 2015 to June 30, 2015 and then further amended the Investment Commitment in July 2015. The latter amendment became effective on June 30, 2015 and provides that the maximum amount of penalties (the ‘Penalty Payment’) to be paid by the Company will not exceed $5.0 million in the aggregate. In addition, the amendment also provides for an updated investment plan for the Company’s Russian subsidiaries that includes non-cash transfer of licensing rights to intellectual property, non-cash transfers of existing equipment and commitments to complete the remaining investment milestones through fiscal year 2019. If the Company’s cumulative investment and spending to its Russian subsidiaries is less than $18.8 million by December 31, 2016, the Company will be subject to a $1.5 million penalty within 30 days after the end of a 90-day cure period. If certain of the Investment Commitments are achieved in the indicated time frames in 2016 and 2019, the Company also has the ability to cease the operations of its Russian subsidiaries by paying exit fees of $3.5 million or $2.0 million at the end of 2016 or 2019, respectively. The Company fulfilled the investment commitment required by the end of 2015 and has contributed over $15.4 million in cash and assets to its Russian subsidiaries as of December 31, 2015.

The purchaser of the common stock has non-transferable veto rights over the Company’s Russian subsidiaries’ annual budget during the investment period and must approve non-cash asset transfers to be made in satisfaction of the Investment Commitment.  Spending and/or commitments to spend for general working capital and research and development do not require approval by the purchaser. There are no legal restrictions on the specific usage of the $39.8 million received in the private placement transaction or on withdrawal from the Company’s bank accounts for use in general corporate purposes.

The Company has accounted for the $5.0 million Penalty Payment as an embedded derivative instrument (the “Penalty Payment Derivative”), with the underlying being the performance or nonperformance of meeting the Investment Commitment and initially classified $4.9 million of the $5.0 million as additional paid-in capital and the remaining $0.1 million, representing the estimated fair value of the Penalty Payment derivative, in other noncurrent liabilities. The fair value of the Penalty Payment Derivative has been estimated at the date of the original common stock sale (April 27, 2012) and at each subsequent balance sheet date using a probability-weighted discounted future cash flow approach using unobservable inputs, which are classified as Level 3 within the fair value hierarchy. The primary inputs for this approach include the probability of achieving the Investment Commitment and a discount rate that approximates the Company’s incremental borrowing rate. After the initial measurement, changes in the fair value of this derivative were recorded in other income, net. The estimated fair value of this derivative was $0.4 million and $0.5 million as of December 31, 2015 and December 31, 2014, respectively.

Separately, in December 2014, the Company entered into a Commitment to File a Registration Statement and Related Waiver of Registration Rights, whereby Joint Stock Company “RUSNANO” (formerly Open Joint Stock Company “RUSNANO"), or Rusnano, waived certain registration rights in connection with a potential offering by the Company of shares of the Company’s common stock, and the Company committed to file with the U.S. Securities and Exchange Commission a resale registration statement on Form S-1 covering the resale of all shares of the Company’s common stock held by Rusnano. The Company filed such resale registration statement in April 2015 (See Note 13). Rusnano also waived its demand registration rights under the original rights agreement and agreed to enter into a lock up agreement with the Company whereby it would agree not to sell any shares of the Company's common stock, or engage in certain other transactions relating to the Company's securities, for a period of 60 days from the filing date of the resale registration statement. Rusnano signed such lock up agreement with the Company on April 2, 2015. In addition, in connection with the Company's public stock offering completed in the second quarter of 2015 (see Note 13), Rusnano entered into a separate lock up agreement with Needham & Company, LLC, the lead underwriter of the offering, whereby it agreed not to sell any shares of the Company's common stock, or engage in certain other transactions relating to the Company's securities. The lock-up agreement expired 180 days after May 21, 2015.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Escrow Settlement with Santur

In May 2014, the Company entered into an escrow settlement agreement covering the outstanding claims in connection with its 2011 acquisition of Santur Corporation ("Santur"). Under the terms of the escrow settlement agreement, a net amount of $1.9 million was paid to the Company from the escrow account that was set up under the original merger agreement. This amount comprised a $3.9 million gain related to indemnification claims by the Company ("Indemnification Amount") which was partially offset by $2.0 million in additional consideration to Santur that was contingent upon Santur's gross profit performance during 2012 ("Contingent Consideration Amount"). The Company had recorded the entire $2.0 million Contingent Consideration Amount as of December 31, 2013. The $3.9 million Indemnification Amount was recognized as settlement gain in 2014.

## 13. Stockholders' Equity

### Common stock

As of December 31, 2015, the Company had reserved 6,926,534 shares of common stock for issuance under its stock option plans and 378,503 shares of common stock for issuance under its stock purchase plan.

### Resale Registration Statement

In April 2015, the Company filed a resale registration statement, which registered 4,972,905 shares of the Company's common stock, at a par value of $0.0025 per share, held by Rusnano. The Company does not receive any proceeds from any sales of the Company's common stock held by Rusnano (See Note 12).

### Follow-On Public Offering

In the second quarter of 2015, the Company completed a follow-on offering, in which the Company sold 6,866,689 shares of its common stock, including 895,655 shares of common stock sold upon the exercise in full of the overallotment option by the underwriters, at a public offering price of $7.25 per share. The Company raised approximately $45.6 million, net of underwriting discounts of $3.0 million and other offering expenses of approximately $1.2 million.

Accumulated Other Comprehensive (Loss) Income

The following table shows the components of accumulated other comprehensive (loss) income, net of taxes, as of December 31, 2015, 2014 and 2013 (in thousands):

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| Foreign currency translation adjustments | $ (1,595) | $ 5,391 | $ 11,802 |
| Unrealized gains on available-for-sale securities | (29) | 6 | 3 |
| Defined benefit pension plan adjustment | (99) | (71) | (118) |
| | $ (1,723) | $ 5,326 | $ 11,687 |

No material amounts were reclassified out of accumulated other comprehensive income during the years ended December 31, 2015, 2014 or 2013.

Accumulated Deficit

Approximately $7.9 million and $7.1 million of the Company's retained earnings within its accumulated deficit at December 31, 2015 and 2014, respectively, was subject to restriction due to a requirement that its subsidiaries in China

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

set aside at least 10% of their respective accumulated profits each year to fund statutory common reserves as well as allocate a discretional portion of their after-tax profits to their staff welfare and bonus fund.

## 14. Stock-based compensation

### Equity incentive programs

### 2004 Stock Option Plan

In March 2004, the Company adopted the 2004 Stock Option Plan (the “2004 Plan”) for the benefit of its eligible employees, consultants and independent directors. In February 2011, in connection with the closing of the Company’s initial public offering and execution of the associated underwriting agreement, shares authorized for issuance under the 2004 Plan were cancelled (except for those shares reserved for issuance upon exercise of outstanding stock options). As of December 31, 2015, options to purchase 1,131,570 shares were outstanding under the 2004 Plan and no shares were available for future grant.

### 2007 Stock Appreciation Grants Plan

In October 2007, the Company adopted its 2007 Stock Appreciation Grants Plan (the “2007 Plan”). The 2007 Plan provides for the grant of units (“stock appreciation units”) entitling the holder upon exercise to receive cash in an amount equal to the amount by which the Company’s common stock has appreciated in value. Each stock appreciation unit entitles a participant to a cash payment in the amount of the excess of the fair market value of a share of common stock on the exercise date over the fair market value of a share of common stock on the award date.

The total appreciation available to a participant from the exercise of an award is equal to the number of stock appreciation units being exercised, multiplied by the amount of appreciation per stock appreciation unit. The stock appreciation units granted under the 2007 Plan were primarily granted to employees or consultants of the Company’s subsidiaries in China.

The Company re-measures the fair value (based on the market price of the Company's common stock at the relevant period end) of all vested and outstanding stock appreciation units and adjusts compensation expense and corresponding liability accordingly. The Company also recognizes compensation expense for additional vested stock appreciation units. As of December 31, 2015, 342,316 stock appreciation units were outstanding, of which 17,142 stock appreciation units were vested. The Company does not intend to grant additional stock appreciation units under the 2007 Plan.

2010 Equity Incentive Plan

In April 2010, the Company adopted its 2010 Equity Incentive Plan (the "2010 Plan"). The 2010 Plan will terminate on April 13, 2020, unless sooner terminated by the board of directors.

The 2010 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, market-based stock awards, and other forms of equity compensation, or collectively, stock awards, all of which may be granted to employees, including officers, and to non-employee directors and consultants. Additionally, the 2010 Plan provides for the grant of market-based cash awards. Incentive stock options may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

Under the terms of the 2010 Plan, awards may be granted at prices not less than 100% of the fair value of the Company's common stock, as determined by the Company's board of directors, on the date of grant for an incentive stock option and not less than 85% of the fair value of the Company's common stock on the date of grant for a non-qualified stock option. Options vest over a period of time as determined by the board of directors, generally over a three to four year period, and expire ten years from date of grant.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Initially, the aggregate number of shares of the Company’s common stock that may be issued pursuant to stock awards under the 2010 Plan was 865,420 shares. The number of shares of the Company’s common stock reserved for issuance under the 2010 Plan automatically increase on January 1st each year, starting on January 1, 2012 and continuing through January 1, 2020, by 3.5% of the total number of shares of the Company’s common stock outstanding on December 31 of the preceding calendar year, or such lesser number of shares of common stock as determined by the Company’s board of directors. The maximum number of shares that may be issued pursuant to the exercise of incentive stock options under the 2010 Plan is 8,000,000 shares. As of December 31, 2015, stock options to purchase and restricted stock units to convert to a total of 3,480,080 shares of common stock were outstanding under the 2010 Plan and 323,493 shares were reserved for future issuance.

2010 Employee Stock Purchase Plan

In February 2011, the Company adopted its 2010 Employee Stock Purchase Plan (the “2010 ESPP”). The 2010 ESPP was implemented through a series of offerings of purchase rights to eligible U.S. employees. The offering period is for 12 months beginning November 16th of each year, with two purchase dates on May 15th and November 15th. Due to the delay in filing its 2013 Annual Report on Form 10-K, in May 2014 the Compensation Committee of the Company’s Board of Directors (the “Committee”) rescheduled the May 15 purchase date under the then offering period to June 17, 2014. Additionally, the Committee waived the existing purchase limits for the June 17, 2014 purchase only and created a modification of the purchase price formula for such offering period. In connection with this modification, the Company recorded an immaterial charge as stock based compensation expense in its 2014 consolidated statements of operations.

The 2010 ESPP initially authorized the issuance of 342,568 shares of the Company’s common stock pursuant to purchase rights granted to employees or to employees of designated affiliates. The number of shares of common stock reserved for issuance automatically increase on January 1st of each year, starting January 1, 2012 and continuing through January 1, 2020, in an amount equal to the lesser of (1) 3.5% of the total number of shares of common stock outstanding on December 31st of the preceding calendar year, (2) 600,000 shares of common stock or (3) such lesser number of shares of common stock as determined by the Company’s board of directors. As of December 31, 2015, the Company had 378,503 shares reserved for future issuance. The Company issued 599,879 shares during the year ended December 31, 2015.

2011 Inducement Award Plan

In September 2011, the Company adopted its 2011 Inducement Award Plan (the "2011 Plan"). The 2011 Plan provides for awarding options, stock appreciation rights, restricted stock grants, restricted stock units and other awards to new employees of the Company and its affiliates, including as a result of future business acquisitions. All options under this plan will be designated as non-statutory stock options.

The number of shares initially reserved for issuance under the 2011 Plan was 750,000 shares. The exercise price of awards shall be not less than 100% of the fair market value of the Company's common stock on the date of grant. Each stock appreciation right grant will be denominated in shares of common stock equivalents. Options and stock appreciation rights have a maximum term of ten years measured from the date of grant, subject to earlier termination following the individual's cessation of service with the Company. In 2015, an additional 100,000 shares were authorized for issuance by the Company's board of directors. As of December 31, 2015, stock options to purchase a total of 396,147 shares of common stock were outstanding under the 2011 Plan and 381,558 shares were reserved for future issuance.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Determining Fair Value

The Company estimated the fair value of certain stock-based awards using a Black-Scholes-Merton valuation model with the following assumptions:

| | Years ended December 31, | | |
|---|---|---|---|
| Stock options | 2015 | 2014 | 2013 |
| Weighted-average expected term (years) | 5.33 | 5.36 | 6.49 |
| Weighted-average volatility | 60% | 62% | 74% |
| Risk-free interest rate | 1.37%-1.85% | 1.62% – 2.00% | 1.08% – 1.86% |
| Expected dividends | — % | — % | — % |
| Stock appreciation units | | | |
| Weighted-average expected term (years) | 3.54 | 2.34 | 1.90 |
| Weighted-average volatility | 62% | 56% | 58% |
| Risk-free interest rate | 0.25%-1.57% | 0.13% – 1.07% | 0.10% – 0.63% |
| Expected dividends | — % | — % | — % |
| ESPP | | | |
| Weighted-average expected term (years) | 0.69 | 0.65 | 0.73 |
| Weighted-average volatility | 58% | 54% | 48% |
| Risk-free interest rate | 0.03%-0.14% | 0.05% – 0.13% | 0.09% – 0.16% |
| Expected dividends | — % | — % | — % |

Expected term. The expected term for stock options was estimated using the Company's historical exercise behavior and expected future exercise behavior. Vested stock appreciation units first became exercisable upon the expiration of the lock-up period associated with the initial public offering. Therefore, the Company estimated the term of the award based on an average of the weighted-average exercise period and the remaining contractual term. The expected term for the ESPP represents the period of time from the beginning of the offering period to the purchase date.

Volatility. Due to the limited history of the trading of the Company's common stock since the initial public offering in February 2011, the expected volatility used by the Company is based on a combination of its own volatility and the volatility of similar entities. In evaluating similarity, factors such as industry, stage of life cycle, size, and financial leverage are taken into consideration. The term over which volatility was measured was commensurate with the expected term.

Risk-free interest rate. The risk-free rate that the Company uses in the Black-Scholes-Merton option valuation model is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.

Expected dividends. The Company has never declared or paid any cash dividends and does not plan to pay cash dividends in the foreseeable future, and, therefore, used an expected dividend yield of zero in the valuation model.

Stock-Based Compensation Expense

The following table summarizes the stock-based compensation expense recognized for the years ended December 31, 2015, 2014 and 2013. Unamortized stock-based compensation costs capitalized as part of inventory were immaterial in each of the periods presented (in thousands):

| | Years ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Cost of goods sold | $ 1,335 | $ 1,148 | $ 924 |
| Research and development | 2,049 | 2,269 | 2,060 |
| Sales and marketing | 1,794 | 1,429 | 1,167 |
| General and administrative | 2,585 | 1,995 | 1,585 |

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

| | | |
|---|---|---|
| $ 7,763 | $ 6,841 | $ 5,736 |

2014 Stock Option and Stock Appreciation Rights Repricing Offer

On December 18, 2014, the Company completed an offer to certain of its current employees (or engaged as a consultant to the Company) to receive the opportunity to reduce the exercise price of certain outstanding eligible options or eligible stock appreciation rights to the closing trading price of the Company's common stock on December 18, 2014, in exchange for such holders' agreement to accept a new vesting schedule (the "Repricing Offer"). The eligible stock options and stock appreciation rights covered an aggregate of 2,373,692 shares of the Company's common stock. On December 18, 2014, options to purchase 1,948,631 shares of the Company's common stock and stock appreciation rights to purchase 87,354 shares of the Company's common stock were repriced in the Repricing Offer. The repriced eligible options and eligible stock appreciation rights had a grant date compensation cost, net of forecasted forfeitures, of approximately $2.6 million, which included incremental compensation cost of approximately $0.9 million.

The new exercise price per share for each repriced eligible option or eligible stock appreciation right is $3.50. Each of the repriced eligible options or eligible stock appreciation rights is subject to a new vesting schedule as follows: 50% of the shares subject to such repriced eligible option or eligible stock appreciation right shall vest and become exercisable on January 1, 2016, and the remaining 50% shall vest and become exercisable in 12 equal monthly installments on each monthly anniversary thereafter, in each case subject to continued service with the Company on each applicable vesting date; provided, however, that alternative vesting applies to certain eligible options or eligible stock appreciation rights if the expiration date of such eligible options or eligible stock appreciation rights is after January 30, 2016, but on or before January 1, 2017, then 50% of the shares subject to the repriced awards will vest and become exercisable on January 1, 2016 and the remaining shares will be subject to ratable monthly vesting over the remaining term ending 60 days prior to the expiration date of the repriced awards; if the expiration date of such eligible options or eligible stock appreciation rights is prior to January 30, 2016, then 100% of the shares subject to the repriced awards will vest and become exercisable on the 60th day prior to the expiration date.

Stock Option and Restricted Stock Unit Activity

The following table summarizes the Company's stock option and restricted stock unit, or RSU, activity during the year ended December 31, 2015:

| | | Stock Options | | Restricted Stock Units | |
|---|---|---|---|---|---|
| | Shares Available for Grant | Number of Shares | Weighted Average Exercise Price | Number of Units | Weighted Average Grant Date Fair Value |
| Balance at December 31, 2014 | 895,311 | 4,899,713 | $ 4.07 | 655,729 | $ 6.19 |
| Authorized for issuance | 1,246,325 | — | $ — | — | $ — |
| Granted | (1,699,714) | 550,380 | $ 6.65 | 1,149,334 | $ 7.46 |
| Exercised/Converted | — | (304,385) | $ 3.87 | (557,828) | $ 6.06 |
| Cancelled/Forfeited | 263,129 | (137,911) | $ 4.76 | (33,549) | $ 5.89 |
| Balance at December 31, 2015 | 705,051 | 5,007,797 | $ 4.34 | 1,213,686 | $ 7.46 |

The following table summarizes information about stock options outstanding as of December 31, 2015:

| | Options Outstanding | | | |
|---|---|---|---|---|
| | Number of Shares | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (Years) | Aggregate Intrinsic Value (in Thousands) |
| Vested and expected to vest | 4,609,563 | $ 4.25 | 6.59 | $ 30,510 |
| Exercisable | 849,680 | $ 4.17 | 6.71 | $ 5,713 |

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The fair value of options vested during the years ended December 31, 2015, 2014 and 2013 was $1.3 million, $1.2 million and $1.1 million, respectively. The intrinsic value of options vested and expected to vest and exercisable as of December 31, 2015 is calculated based on the difference between the exercise price and the fair value of the Company's common stock as of December 31, 2015. The intrinsic value of options exercised during the years ended December 31, 2015, 2014 and 2013, was $1.6 million, $0.4 million and $0.7 million, respectively.

The weighted-average fair value of options granted was $3.87, $1.89 and $4.65 per share for the years ended December 31, 2015, 2014 and 2013, respectively. At December 31, 2015, there was $7.1 million of unrecognized stock-based compensation expense for stock options, net of estimated forfeitures, which will be recognized over the remaining weighted-average period of 2.0 years.

Included in the outstanding stock options at December 31, 2015 are 1.1 million shares of market-based stock options granted to key employees. These options will vest if the average closing price of the Company's common stock over a period of 20 consecutive trading days is equal to or greater than $15.00 per share and the recipients remain in continuous service with the Company through such period, or fully accelerate and vest in December 2019. The Company estimated the fair value of its market-based option grants as $4.72 for 2015, $1.65 for 2014 and $4.11-$5.97 for 2013 using a Monte Carlo simulation model with the assumptions discussed above. The Company recorded approximately $0.9 million of compensation expense for these options in 2015.

The following table summarizes information about RSUs outstanding as of December 31, 2015:

| | Restricted Stock Units Outstanding | | | |
|---|---|---|---|---|
| | Number of Shares | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (Years) | Aggregate Intrinsic Value (in Thousands) |
| Vested and expected to vest | 1,074,552 | $ — | 1.66 | $ 11,670 |

The fair value of RSUs vested during the years ended December 31, 2015, 2014 and 2013 was $3.3 million, $3.4 million and $2.1 million, respectively. The intrinsic value of RSUs vested and expected to vest as of December 31, 2015 is calculated based on the fair value of the Company's common stock as of December 31, 2015. The intrinsic value of RSUs converted during the years ended December 31, 2015, 2014 and 2013, was $4.3 million, $1.8 million and $2.9 million, respectively.

The weighted-average fair value of RSUs granted was \$7.46, \$4.54 and \$6.96 per share for the years ended December 31, 2015, 2014 and 2013, respectively. At December 31, 2015, the Company had \$7.1 million of unrecognized stock-based compensation expense for RSUs, net of estimated forfeitures, which will be recognized over the remaining weighted-average period of 2.4 years.

The majority of the Company’s RSUs that were converted during the years ended December 31, 2015, 2014 and 2013 were net share settled. Upon each settlement date, RSUs were withheld to cover the required withholding tax and the remaining amounts were delivered to the recipient as shares of the Company’s common stock. In 2015, 2014 and 2013, the Company withheld 95,227, 108,623 and 68,390 shares, respectively, which represented the employees’ minimum statutory obligation for income and other employment taxes and remitted cash of \$0.7 million, \$0.4 million and \$0.6 million, respectively, to the appropriate tax authorities.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Stock Appreciation Unit Activity

The following table summarizes the Company’s stock appreciation unit activity during the year ended December 31, 2015:

| | Stock Appreciation Units | Weighted-Average Exercise Price |
|---|---|---|
| Stock appreciation units outstanding as of December 31, 2014 | 375,833 | $ 4.85 |
| Stock appreciation units exercised | (24,707) | $ 4.36 |
| Stock appreciation units cancelled | (8,810) | $ 6.39 |
| Stock appreciation units outstanding as of December 31, 2015 | 342,316 | $ 4.85 |

The fair value of stock appreciation units vested in 2015 and 2014 was immaterial. The fair value of stock appreciation units vested in 2013 was $0.1 million. The intrinsic value of stock appreciation units is calculated based on the difference between the exercise price and the fair value of the Company’s common stock as of December 31, 2015. Cash paid for stock appreciation units exercised was $0.1 million in 2015, immaterial in 2014 and $0.1 million in 2013.

As of December 31, 2015 and 2014, the liability for settlement of stock appreciation units was $0.7 million and $0.1 million, respectively, and was included in accrued and other current liabilities on the consolidated balance sheet. Based on the fair value of the stock appreciation units as of December 31, 2015, the Company has $1.7 million of unrecognized stock-based compensation expense for stock appreciation units that will be recognized over the remaining weighted-average period of 3.1 years.

Included in the outstanding stock appreciation units at December 31, 2015 were 0.2 million shares of market-based stock appreciation units granted to key employees which were granted during 2013. These market-based units will vest if the average closing price of the Company’s common stock over a period of 20 consecutive trading days is equal to or greater than $15.00 per share and the recipient remains in continuous service with the Company through such period, or will fully accelerate and vest in December 2019.

Employee Stock Purchase Plan

The Company issued 599,879 shares under the 2010 ESPP during the year ended December 31, 2015. As of December 31, 2015, there was $0.9 million of unrecognized stock-based compensation expense for stock purchase rights that will be recognized over the remaining offering period, through November 2016.

15. Income taxes

The provision for income taxes is based upon the income (loss) before income taxes as follows (in thousands):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| U.S. operations | $ (7,212) | $ (30,046) | $ (39,618) |
| Non-U.S. operations | 13,984 | 12,846 | 6,483 |
| | $ 6,772 | $ (17,200) | $ (33,135) |

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The components of the provision for income taxes consisted of the following (in thousands):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Current | | | |
| Federal | $ (48) | $ (71) | $ 7 |
| State | (8) | (18) | (11) |
| Foreign | (3,725) | (1,218) | (1,658) |
| | (3,781) | (1,307) | (1,662) |
| Deferred | | | |
| Federal | (22) | — | — |
| State | — | — | — |
| Foreign | 699 | (1,212) | 458 |
| Total provision | $ (3,104) | $ (2,519) | $ (1,204) |

The provision for income taxes differs from the amount obtained by applying the U.S. federal statutory tax rate as follows (in thousands, except percentages):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Federal statutory rate | 35 % | 35 % | 35 % |
| Tax at federal statutory rate | $ (2,378) | $ 5,969 | $ 11,597 |
| State taxes, net of federal benefit | (8) | (18) | 1,058 |
| Subpart F income | (66) | (18,986) | — |
| Nondeductible expenses | (135) | (125) | (260) |
| Stock-based compensation | (465) | (542) | (385) |
| Change in valuation allowance | (958) | (724) | (13,042) |
| Research and development | 1,017 | 539 | 1,077 |
| Foreign rate differences | (844) | 1,246 | (2,129) |
| Earn out adjustment not taxable | — | — | (359) |
| Escrow settlement | — | 1,360 | — |
| Foreign tax credit | 30 | 9,208 | — |
| Change in prior year deferred balances | 417 | (308) | 1,756 |
| Acquisition-related costs | — | — | (391) |
| Other | 286 | (138) | (126) |
| Total provision for income taxes from continuing operations | $ (3,104) | $ (2,519) | $ (1,204) |

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NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Deferred income tax assets and liabilities comprise the following (in thousands):

| | December 31, 2015 | 2014 |
|---|---|---|
| Deferred Tax Assets: | | |
| Net operating loss carryforwards | $ 60,063 | $ 67,898 |
| Federal and state credits | 21,752 | 19,443 |
| Reserves, accruals and other | 10,325 | 8,842 |
| Fixed assets and intangibles | 1,459 | 1,161 |
| Total deferred tax assets | 93,599 | 97,344 |
| Valuation allowance | (88,940) | (91,278) |
| Total deferred tax assets, net of valuation allowance | 4,659 | 6,066 |
| Deferred tax liabilities: | | |
| Acquired intangibles | (3,878) | (5,930) |
| Net deferred tax assets | $ 781 | $ 136 |
| | | |
| Reported as: | | |
| Current deferred tax assets, included within prepaid expenses and other current assets | $ — | $ 1,954 |
| Long term deferred tax assets, included within other long-term assets | 869 | 181 |
| Current deferred income tax liabilities | — | (181) |
| Deferred income tax liabilities | (88) | (1,818) |
| Net deferred tax assets | $ 781 | $ 136 |

The net valuation allowance decreased by $2.3 million in 2015, primarily due to the current year utilization and expiration of U.S. deferred tax assets, and increased by $0.2 million in 2014. The Company did not record a full valuation allowance against its net deferred tax assets in foreign jurisdictions as it believes these deferred tax assets were realizable on a more likely than not basis as of December 31, 2015. Based upon the weight of available evidence, which includes the Company's historical operating performance and the reported cumulative net losses to date, the Company continues to maintain a full valuation allowance against its net U.S. deferred tax assets with the exception of indefinite deferred tax liabilities. As of December 31, 2015, the Company had federal and state net operating loss, or NOL, carryforwards of $207.0 million and $69.2 million, respectively. Federal NOL carryforwards start to expire in 2018 and a portion of the California NOL carryforwards will begin to expire in 2016. There are $2.7 million in NOL carryforwards related to excess tax benefits from stock options which will be credited to additional paid-in capital when realized. At December 31, 2015, the Company also had federal and state research credit carryovers of $6.3 million and $13.1 million, respectively. The federal credits will begin to expire in 2018 and the state credits can be carried forward indefinitely. The Company also had $10.2 million of foreign tax credit carryforwards which will start to expire in 2022 if not utilized. Utilization of NOL carryforwards and carried over tax credits may be subject to substantial annual limitation due to federal and state ownership limitations. The annual limitation may result in the expiration of NOL and tax credit carryforwards before utilization. The deferred tax assets listed above do not include NOL carryforwards that are expected to expire unutilized as a result of existing ownership changes.

As of December 31, 2015, the Company's substantial foreign earnings and profits were included in the U.S. taxable income calculation. The undistributed foreign earnings are immaterial. The Company maintains its position for undistributed foreign earnings to be indefinite, accordingly no tax provision for federal and state income taxes have been provided thereon. Upon distribution of those earnings in the forms of dividends or otherwise, the Company would be subject to U.S. income taxes (subject to adjustment for foreign tax credits). The amount is expected to be immaterial.

Effective January 1, 2008, the China Enterprise Income Tax Law, or the EIT law, imposed a single uniform income tax rate of 25% on all China enterprises, including foreign invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatment available under the previous tax laws and regulations. As a result, the Company's China subsidiaries may be subject to the uniform income tax rate of 25% unless they are able to qualify for preferential status. Currently, one of the Company's China subsidiaries qualified for a preferential 15% tax rate that is available for new and high technology enterprises and has been granted for a 15% tax rate for tax years

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

through 2016. The Company realized benefits from the reduced tax rate of $0.9 million, $0.5 million and $0.2 million in the years ended December 31, 2015, 2014 and 2013, respectively.

At December 31, 2015, the Company's gross unrecognized tax benefits were approximately $20.7 million, of which $0.2 million would impact the effective tax rate if recognized. One or more of these unrecognized tax benefits could be subject to a valuation allowance if and when recognized in a future period, which could impact the timing of any related effective tax rate benefit. The Company does not believe that the amount of unrecognized tax benefits will change significantly in the next twelve months. There were no interest or penalties related to unrecognized tax benefits. The Company's policy is to classify interest and penalties associated with unrecognized tax benefits as income tax expense.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

| | |
|---|---|
| Balance at December 31, 2012 | $ 11,993 |
| Gross increases for tax positions of prior years | 155 |
| Gross increases for tax positions of current year | 4,361 |
| Reductions resulting from lapse of applicable statute of limitations | (57) |
| Balance at December 31, 2013 | 16,452 |
| Gross increases for tax positions of prior years | — |
| Gross increases for tax positions of current year | 2,090 |
| Reductions resulting from lapse of applicable statute of limitations | (170) |
| Balance at December 31, 2014 | 18,372 |
| Gross increases for tax positions of prior years | — |
| Gross increases for tax positions of current year | 2,314 |
| Reductions resulting from lapse of applicable statute of limitations | — |
| Balance at December 31, 2015 | $ 20,686 |

The Company's material tax jurisdictions are the United States federal, California, Japan and China. As a result of NOL carryforwards, substantially all of the Company's tax years remain open to US federal and state tax examination. All of Japan's tax years remain open for Japanese tax examination. Tax years for 2010 and forward remain open for Chinese tax examination.

16. Segment and geographic information

The Company’s Chief Executive Officer, who is considered to be the chief operating decision maker, manages the Company’s operations as a whole and reviews financial information presented on a consolidated basis for purposes of evaluating financial performance and allocating resources. In 2015, 2014 and 2013, the Company operated in one reportable segment.

The Company has aligned its products to High Speed Products and Network Products and Solutions. The following presents revenue by product group (in thousands):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Revenue: | | | |
| High Speed Products | $ 195,831 | $ 129,595 | $ 107,705 |
| Network Products and Solutions | 143,608 | 176,582 | 174,537 |
| Total revenue | $ 339,439 | $ 306,177 | $ 282,242 |

The following tables set forth the Company’s revenue and asset information by geographic region. Revenue is classified based on the ship to location of the customer. Such classification recognizes that for many customers,

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

including those in North America or in Europe, designated shipping points are often in China or elsewhere in Asia. Long-lived assets in the table below comprise only property, plant and equipment (in thousands):

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2015 | 2014 | 2013 |
| Revenue: | | | |
| China | $ 182,504 | $ 161,509 | $ 122,387 |
| United States | 77,867 | 56,603 | 45,036 |
| Japan | 12,713 | 16,261 | 25,451 |
| Rest of world | 66,355 | 71,804 | 89,368 |
| Total revenue | $ 339,439 | $ 306,177 | $ 282,242 |

| | As of December 31, | |
|---|---|---|
| | 2015 | 2014 |
| Long-lived assets: | | |
| China | $ 24,334 | $ 28,807 |
| United States | 19,308 | 14,877 |
| Japan | 15,603 | 13,150 |
| Rest of world | 3,373 | 823 |
| Total long-lived assets | $ 62,618 | $ 57,657 |

17. Selected Quarterly Financial Data (unaudited)

The following tables set forth a summary of the Company’s quarterly financial information for each of the four quarters for the years ended December 31, 2015 and 2014:

| Year ended December 31, 2015 | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|
| | | (In thousands, except per share data) | | |
| Net revenues | $ 81,384 | $ 85,372 | $ 83,560 | $ 89,123 |

| | | | | |
|---|---|---|---|---|
| Gross profit | 24,053 | 26,146 | 23,772 | 25,110 |
| Net income | 100 | 1,791 | 1,378 | 399 |
| Basic and diluted net income per share | $ — | $ 0.05 | $ 0.03 | $ 0.01 |
| Weighted averages shares used to compute basic net income per share | 32,780 | 35,684 | 40,367 | 40,739 |
| Weighted averages shares used to compute diluted net income per share | 33,031 | 37,294 | 42,217 | 42,668 |

| Year ended December 31, 2014 | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|
| | | (In thousands, except per share data) | | |
| Net revenues | $ 68,168 | $ 77,451 | $ 81,576 | $ 78,982 |
| Gross profit | 13,800 | 14,568 | 20,064 | 22,686 |
| Net (loss) income | (12,588) | (6,779) | (1,937) | 1,585 |
| Basic and diluted net (loss) income per share | $ (0.40) | $ (0.21) | $ (0.06) | $ 0.05 |
| Weighted averages shares used to compute basic net (loss) income per share | 31,610 | 31,790 | 32,383 | 32,640 |
| Weighted averages shares used to compute diluted net (loss) income per share | 31,610 | 31,790 | 32,383 | 32,710 |

NEOPHOTONICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. Subsequent Event

Subsequent event, through the filing of this report, included the following:

Repayment of Comerica Credit Facility

In January 2016, the Company repaid the outstanding balance under the Comerica credit facility, which was $23.8 million as of December 31, 2015.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2015. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Based upon that evaluation as of the end of the period covered in this Annual Report on Form 10-K, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2015 at a reasonable assurance level.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) as defined in the Exchange Act. Internal control over financial reporting consists of policies and procedures that are designed and operated to provide reasonable assurance regarding the reliability of our financial reporting and our process for the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control — Integrated Framework (2013). Based on the results of our assessment, using the criteria in Internal Control – Integrated Framework (2013), our management has concluded that we maintained effective internal control over financial reporting as of December 31, 2015.

The effectiveness of our internal control over financial reporting as of December 31, 2015 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which appears below.

Changes in Internal Control Over Financial Reporting

There have not been any changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities and Exchange Act of 1934, as amended) in the fourth quarter of 2015 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitation on the Effectiveness of Internal Controls

The effectiveness of any system of internal control over financial reporting is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting can only provide reasonable, not absolute, assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure that such improvements will be sufficient to provide us with effective internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of NeoPhotonics Corporation

San Jose, California

We have audited the internal control over financial reporting of NeoPhotonics Corporation and subsidiaries (the "Company") as of December 31, 2015, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2015 of the Company and our report dated March 14, 2016 expressed an unqualified opinion on those consolidated financial statements.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

March 14, 2016

ITEM 9B. OTHER INFORMATION

Not applicable.

Part III

ITEM 10.DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required regarding our directors is incorporated herein by reference from the information contained in the section entitled “Proposal 1—Election of Directors” in our definitive Proxy Statement for the 2016 Annual Meeting of Stockholders (our “Proxy Statement”), a copy of which will be filed with the SEC on or before April 29, 2016.

The information required regarding our executive officers is incorporated herein by reference from the information contained in the section entitled “Management” in our Proxy Statement.

The information required regarding Section 16(a) beneficial ownership reporting compliance is incorporated by reference from the information contained in the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in our Proxy Statement.

The information required with respect to procedures by which security holders may recommend nominees to our board of directors, the composition of our Audit Committee, and whether the Company has an “audit committee financial expert”, is incorporated by reference from the information contained in the section entitled “Proposal 1—Election of Directors” in our Proxy Statement.

Adoption of Code of Ethics

We have adopted a Code of Business Conduct and Ethics (the “Code”) applicable to all of our board of director members, employees and executive officers, including our Chief Executive Officer (Principal Executive Officer), and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer). We have made the Code available on our website at http://www.neophotonics.com.

We intend to satisfy the public disclosure requirements regarding (1) any amendments to the Code, or (2) any waivers under the Code given to our Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer by posting such information on our website at http://www.neophotonics.com. There were no amendments to the Code or waivers granted thereunder relating to the Principal Executive Officer, Principal Financial Officer or Principal Accounting Officer during 2015.

ITEM 11.EXECUTIVE COMPENSATION

The information required regarding the compensation of our directors and executive officers is incorporated herein by reference from the information contained in the sections entitled “Executive Compensation,” “Director Compensation,” “Compensation Committee Report” and “Compensation Committee Interlocks and Insider Participation” in our Proxy Statement.

ITEM 12.SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required regarding security ownership of our 5% or greater stockholders and of our directors and management is incorporated herein by reference from the information contained in the section entitled “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement.

The information required regarding securities authorized for issuance our equity compensation plans is incorporated herein by reference from the information contained in the section entitled “Equity Compensation Plan Information” in our Proxy Statement.

ITEM 13.CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required regarding related transactions is incorporated herein by reference from the information contained in the section entitled “Certain Relationships and Related Transactions” and, with respect to director independence, the section entitled “Proposal 1—Election of Directors” in our Proxy Statement.

ITEM 14.PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required is incorporated herein by reference from the information contained in the sections entitled “Principal Accountant Fees and Services” and “Pre-Approval Policies and Procedures” in the section entitled “Proposal 2—Ratification of Appointment of Independent Registered Public Accounting Firm” in our Proxy Statement.

PART IV

ITEM 15.EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

We have filed the following documents as part of this Form 10-K:

1. Consolidated Financial Statements:



2. Financial Statement Schedules

All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included.

3. Exhibits

See the Exhibit Index which follows the signature page of this Annual Report on Form 10-K, which is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

NeoPhotonics Corporation

By: /S/ TIMOTHY S. JENKS
Timothy S. Jenks
President, Chief Executive Officer and
Chairman of the Board of Directors

March 14, 2016

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy S. Jenks and Clyde Raymond Wallin, and each of them, jointly and severally, his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on March 14, 2016 on behalf of the Registrant and in the capacities and on the dates indicated:

| Signature | Title | Date |
|---|---|---|
| /s/ TIMOTHY S. JENKS<br>Timothy S. Jenks | President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer) | March 14, 2016 |
| /s/ CLYDE RAYMOND WALLIN<br>Clyde Raymond Wallin | Senior Vice President and Chief Financial Officer (Principal Financial and | March 14, 2016 |

| | | |
|---|---|---|
| | Accounting Officer) | |
| /s/ CHARLES J. ABBE<br>Charles J. Abbe | Director | March 14, 2016 |
| /s/ DMITRY AKHANOV<br>Dmitry Akhanov | Director | March 14, 2016 |
| /s/ BANDEL L. CARANO<br>Bandel L. Carano | Director | March 14, 2016 |
| /s/ RAJIV RAMASWAMI<br>Rajiv Ramaswami | Director | March 14, 2016 |
| /s/ MICHAEL J. SOPHIE<br>Michael J. Sophie | Director | March 14, 2016 |
| /s/ IHAB S. TARAZI<br>Ihab S. Tarazi | Director | March 14, 2016 |
| /s/ LEE SEN TING<br>Lee Sen Ting | Director | March 14, 2016 |

EXHIBIT INDEX

| Exhibit no. | Description of exhibit | Form | SEC File No. | Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 2.1 | Agreement and Plan of Merger, dated as of September 29, 2011, by and among NeoPhotonics Corporation, Dulcimer Acquisition Corp., Santur and Shareholder Representative Services LLC, solely in its capacity as the Stockholder Representative. | Form 8-K | 001-35061 | 2.1 | October 18, 2011 | |
| 2.2 | Agreement and Plan of Demerger, dated as of January 18, 2013, by and among NeoPhotonics Corporation, LAPIS Semiconductor Co., Ltd., and NeoPhotonics Semiconductor GK. | Form 10-K | 001-35061 | 2.2 | March 15, 2013 | |
| 2.3 | Asset Purchase Agreement by and between NeoPhotonics Corporation and EMCORE Corporation, dated October 22, 2014. | Form 8-K | 001-35061 | 10.1 | October 27, 2014 | |
| 2.4 | Amendment to Asset Purchase Agreement by and between NeoPhotonics Corporation and EMCORE Corporation dated January 2, 2015 | Form 8-K | 001-35061 | 99.1 | January 8, 2015 | |
| 2.5 | True-Up Confirmation Agreement, dated as of April 16, 2015, by and between NeoPhotonics Corporation and EMCORE Corporation | Form 8-K | 001-35061 | 10.2 | April 21, 2015 | |
| 3.1 | Amended and Restated Certificate of Incorporation of NeoPhotonics Corporation. | Form 8-K | 001-35061 | 3.1 | February 10, 2011 | |
| 3.2 | Amended and Restated Bylaws of NeoPhotonics | Form S-1 | 333-166096 | 3.4 | November 22, 2010 | |

| | | | | | |
|---|---|---|---|---|---|
| | Corporation. | | | | |
| 4.1 | Specimen Common Stock Certificate of NeoPhotonics Corporation. | Form S-1 | 333-166096 | 4.1 | April 15, 2010 |
| 4.2 | 2008 Investors' Rights Agreement by and between NeoPhotonics Corporation and the investors listed on Exhibit A thereto, dated May 14, 2008. | Form S-1 | 333-166096 | 4.2 | April 15, 2010 |
| 4.3 | Commitment to File Registration Statement and Related Waiver of Registration Rights by and between NeoPhotonics Corporation and Open Join Stock Company "RUSNANO" dated as of December 18, 2014. | Form S-1 | 333-201180 | 4.4 | December 19, 2014 |
| 10.1 | Form of Indemnification Agreement entered into by and between NeoPhotonics Corporation and each of its directors and officers. | Form S-1 | 333-166096 | 10.1 | April 15, 2010 |
| 10.2+ | 2004 Stock Option Plan, as amended, and related documents. | Form S-1 | 333-166096 | 10.2 | April 15, 2010 |
| 10.3+ | 2007 Stock Appreciation Grants Plan and related documents. | Form S-1 | 333-166096 | 10.3 | April 15, 2010 |
| 10.4+ | 2010 Equity Incentive Plan, as amended and forms of agreement thereunder. | Form S-8 | 333-189577 | 99.1 | June 25, 2013 |
| 10.5+ | Amended and Restated Non-Employee Director compensation Policy of NeoPhotonics Corporation. | Form 10-Q | 001-35061 | 10.2 | August 8, 2013 |
| 10.6+ | 2010 Employee Stock Purchase Plan. | Form S-1 | 333-166096 | 10.5 | April 15, 2010 |
| 10.7 | Lease by and between BRE/PCCP Orchard, LLC and NeoPhotonics Corporation, dated April 7, 1999 with the Summary of Basic Lease Terms and Addendum No. 1 to Lease, as amended by First Amendment to Lease dated November 22, 2002, the Second Amendment to Lease dated December 15, | Form S-1 | 333-166096 | 10.6 | July 23, 2010 |

2003, the Third Amendment
to Lease dated March 13,
2007 and the Fourth
Amendment to Lease dated
May 28, 2010.

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| Exhibit no. | Description of exhibit | Form | SEC File No. | Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 10.8 | First Lease Amendment by and between NeoPhotonics Corporation and Landlord as defined in the recitals thereto, dated May 21, 2013. | Form 10-Q | 001-35061 | 10.3 | August 8, 2013 | |
| 10.9* | Maximum Comprehensive Credit Line Contract and Maximum Mortgage Contract by and between Agricultural Bank of China and NeoPhotonics (China) Co., Ltd. dated November 3, 2008 and December 25, 2008, respectively. | Form S-1 | 333-166096 | 10.9 | April 15, 2010 | |
| 10.10 | Property Lease Contract between NeoPhotonics (China) Co., Ltd. and Dongguan Conrad Hi-Tech Park Ltd., dated May 13, 2011. | Form 10-Q | 001-35061 | 10.3 | November 10, 2011 | |
| 10.11 | Building Lease Agreement between NeoPhotonics Japan Godo Kaisha and Jones Lang Lasalle K.K., dated September 8, 2011. | Form 10-Q | 001-35061 | 10.4 | November 10, 2011 | |
| 10.12+ | Employment Letter by and between NeoPhotonics Corporation and Timothy S. Jenks, dated March 30, 2010. | Form S-1 | 333-166096 | 10.17 | April 15, 2010 | |
| 10.13+ | Offer Letter by and between NeoPhotonics Corporation and Clyde R. Wallin, dated December 20, 2013. | Form 10-K | 001-35061 | 10.18 | June 4, 2014 | |
| 10.14+ | Offer Letter by and between NeoPhotonics Corporation and Dr. Wupen Yuen, dated January 2, 2005. | Form S-1 | 333-166096 | 10.19 | April 15, 2010 | |
| 10.15*+ | Offer Letter by and between NeoPhotonics (China) Co., Ltd. and Chi Yue “Raymond” Cheung, dated August 14, 2007. | Form S-1 | 333-166096 | 10.20 | April 15, 2010 | |
| 10.16+ | Severance Agreement by and between NeoPhotonics Corporation and Benjamin L. Sitler dated April 14, 2010. | Form S-1 | 333-166096 | 10.23 | April 15, 2010 | |
| 10.17+ | Amended and Restated Severance Agreement by and between NeoPhotonics Corporation and Dr. Wupen Yuen, dated April 13, | Form S-1 | 333-166096 | 10.24 | April 15, 2010 | |

| | | | | | |
|---|---|---|---|---|---|
| | 2010. | | | | |
| 10.18 | Third Amendment To Loan And Security Agreement And Waiver And Consent by and between NeoPhotonics Corporation and Comerica Bank, dated September 29, 2011. | Form 10-Q | 001-35061 | 10.5 | November 10, 2011 |
| 10.19 | Libor/Prime Referenced Rate Addendum To Loan And Security Agreement by and between NeoPhotonics Corporation and Comerica Bank, dated September 29, 2011. | Form 10-Q | 001-35061 | 10.6 | November 10, 2011 |
| 10.20+ | 2011 Inducement Award Plan and related documents. | Form S-8 | 333-177306 | 99.1 | October 13, 2011 |
| 10.21 | Lease between Santur Corporation and 40915 Encyclopedia Circle, LLC, dated June 28, 2010. | Form 10-K | 001-35061 | 10.35 | March 30, 2012 |
| 10.22+ | Amendment to Severance Rights Agreement, dated April 30, 2012, by and between the Company and Timothy S. Jenks. | Form 10-Q | 001-35061 | 10.1 | May 10, 2012 |
| 10.23 | Industrial Space Lease between Santur Corporation and The Kaye Building, LLC, dated March 7, 2001. | Form 10-K | 001-35061 | 10.36 | March 30, 2012 |
| 10.24+ | Amendment to Severance Rights Agreement, dated April 30, 2012, by and between the Company and Dr. Wupen Yuen. | Form 10-Q | 001-35061 | 10.3 | May 10, 2012 |
| 10.25 | Share Purchase Agreement, dated April 27, 2012 by and between the Company and Open Joint Stock Company "RUSNANO". | Form 8-K | 001-35061 | 10.1 | May 1, 2012 |

| Exhibit no. | Description of exhibit | Form | SEC File No. | Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 10.26 | Rights Agreement, dated April 27, 2012 by and between the Company and Open Joint Stock Company “RUSNANO”. | Form 8-K | 001-35061 | 10.2 | May 1, 2012 | |
| 10.27 | Revolving Credit and Term Loan Agreement, dated March 21, 2013, by and among NeoPhotonics Corporation, Comerica Bank, as agent, and the lenders party thereto. | Form 8-K | 001-35061 | 10.1 | March 27, 2013 | |
| 10.28 | First Amendment to Credit Agreement, dated January 16, 2014, by and among NeoPhotonics Corporation, Comerica Bank, as Agent, and the lenders party thereto. | Form 8-K | 001-35061 | 10.1 | January 17, 2014 | |
| 10.29 | Second Amendment to Credit Agreement, dated February 14, 2014, by and among NeoPhotonics Corporation, Comerica Bank, as Agent, and the lenders party thereto. | Form 8-K | 001-35061 | 10.1 | February 18, 2014 | |
| 10.30 | Third Amendment to Credit Agreement, dated March 6, 2014, by and among NeoPhotonics Corporation, Comerica Bank, as Agent, and the lenders party thereto. | Form 8-K | 001-35061 | 10.1 | March 10, 2014 | |
| 10.31 | Fourth Amendment to Credit Agreement, dated May 19, 2014, by and among NeoPhotonics Corporation, Comerica Bank, as Agent, and the lenders party thereto. | Form 8-K | 001-35061 | 10.1 | May 20, 2014 | |
| 10.32+ | Severance Rights Agreement, dated January 6, 2014, by and between NeoPhotonics Corporation and Clyde R. Wallin. | Form 10-Q | 001-35061 | 10.4 | June 24, 2014 | |
| 10.33+ | Amended and Restated Severance Agreement by and between NeoPhotonics Corporation and Benjamin L. Sitler dated October 8, 2014 | Form 10-Q | 001-35061 | 10.1 | November 10, 2014 | |
| 10.34** | Loan Agreement by and between NeoPhotonics Semiconductor GK and The Bank of Tokyo-Mitsubishi UFJ, Ltd. dated February 25, 2015 (Contract A) | Form 10-K | 001-35061 | 10.42 | March 16, 2015 | |
| 10.35** | Loan Agreement by and between NeoPhotonics Semiconductor GK and The Bank of Tokyo-Mitsubishi UFJ, Ltd. dated February 25, 2015 (Contract B) | Form 10-K | 001-35061 | 10.43 | March 16, 2015 | |
| 10.36 | Letter Agreement by and between NeoPhotonics Corporation and Open Joint Stock Company RUSNANO dated March 2, 2015 | Form 10-K | 001-35061 | 10.44 | March 16, 2015 | |
| 10.37 | Amendment to Rights Agreement, dated as of July 13, 2015, by and between NeoPhotonics Corporation and Open Joint Stock Company “RUSNANO”. | Form 8-K | 001-35061 | 10.1 | July 15, 2015 | |

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|---|---|---|---|---|---|---|
| 10.38* | Amendment to Credit Agreement and Amendment to Security Agreement, dated October 20, 2015, by and between NeoPhotonics Corporation and CITIC Bank. | Form 10-Q | 001-35061 | 10.2 | November 6, 2015 | |
| 10.39 | Sixth Amendment to Credit Agreement and Amendment to Security Agreement, dated January 23, 2015, by and between NeoPhotonics Corporation, Comerica Bank, as Agent and sole Lender. | Form 8-K | 001-35061 | 10.2 | January 28, 2015 | |
| 10.40 | Seventh Amendment to Credit Agreement and Amendment to Security Agreement, dated March 31, 2015, by and between NeoPhotonics Corporation, Comerica Bank, as Agent and sole Lender. | Form 8-K | 001-35061 | 10.1 | April 1, 2015 | |
| 10.41+ | 2015 Executive Officer Bonus Program. | Form 10-Q | 001-35061 | 10.7 | May 11, 2015 | |
| 10.42* | Comprehensive Credit Granting Contract, dated October 20, 2015, by and between Neophotonics (China) Co., Ltd., Neophotonics Dongguan Co., Ltd. and Shenzhen Branch CITIC Bank. | | | | | X |

| Exhibit no. | Description of exhibit | Form | SEC File No. | Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 10.43* | Credit Line Agreement, dated July 9, 2015, by and between NeoPhotonics (China) Co., Ltd and Shanghai Pudong Development Bank Corporation. | | | | | X |
| 10.44 | First Lease Amendment to the Industrial Space Lease between NeoPhotonics Corporation, a successor-in-interest to Santur Corporation, and The Kaye Building, LLC, dated February 20, 2014. | | | | | X |
| 21.1 | List of subsidiaries of NeoPhotonics Corporation. | | | | | X |
| 23.1 | Consent of Deloitte & Touche LLP, independent registered public accounting firm. | | | | | X |
| 24.1 | Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K). | | | | | X |
| 31.1 | Certification pursuant to Rule 13a-14(a)/15d-14(a). | | | | | X |
| 31.2 | Certification pursuant to Rule 13a-14(a)/15d-14(a). | | | | | X |
| 32.1 | Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 101.INS | XBRL Instance Document. | | | | | |
| 101.SCH | XBRL Taxonomy Extension Schema Document. | | | | | |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document. | | | | | |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document. | | | | | |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document. | | | | | |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document. | | | | | |

*Translation to English of an original Chinese document.

**Translation to English of an original Japanese document.

+Management compensatory plan or arrangement.