

ADVANCED PHOTONIX INC  
Form 10-K  
June 29, 2011

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 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 March 31, 2011  
OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission file number 1-11056

ADVANCED PHOTONIX, INC. ®  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

33-0325826  
(I.R.S. Employer  
Identification No.)

2925 Boardwalk, Ann Arbor, Michigan 48104  
(Address of principal executive offices)

(734) 864-5600  
(Registrants' telephone number, including area code)

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

| Title of each class             | Name of each exchange on which registered |
|---------------------------------|---|
| Common Stock, \$0.001 par value | NYSE Amex: API                            |

Securities registered pursuant to Section 12(g) of the Exchange Act:  
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
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

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Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities 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 (§ 229.405 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

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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       Smaller reporting company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).  
YES  NO

The aggregate market value of the voting stock held by non--affiliates of the registrant as of October 1, 2010 was approximately \$22,279,200.

Number of shares outstanding of the registrant's Common Stock as of June 22, 2011: 30,692,546 shares of Class A Common Stock and zero shares of Class B Common Stock.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement to be filed pursuant to Regulation 14A promulgated under the Securities Exchange Act of 1934 in connection with the 2011 Annual Meeting of Stockholders of registrant have been incorporated by reference into Part III of this Form 10-K.

ADVANCED PHOTONIX, INC.  
ANNUAL REPORT ON FORM 10-K  
FISCAL YEAR ENDED MARCH 31, 2011

TABLE OF CONTENTS

|  | Page |
|--|------|
| Part I   |      |
| Item 1. Business   | 4    |
| Item 1A. Risk Factors  | 12   |
| Item 2. Properties   | 21   |
| Item 3. Legal Proceedings  | 21   |
| Item 4. Reserved   | 21   |
| Part II  |      |
| Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities | 22   |
| Item 6. Selected Financial Data  | 23   |
| Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations                        | 23   |
| Item 7A. Quantitative and Qualitative Disclosures about Market Risk  | 34   |
| Item 8. Financial Statements and Supplementary Data  | 35   |
| Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure                         | 61   |
| Item 9A. Controls and Procedures   | 61   |
| Item 9B. Other Information   | 61   |
| Part III   |      |
| Item 10. Directors, Executive Officers and Corporate Governance  | 62   |
| Item 11. Executive Compensation  | 62   |
| Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters              | 62   |
| Item 13. Certain Relationships and Related Transactions, and Director Independence                                   | 63   |
| Item 14. Principal Accountant Fees and Services  | 63   |
| Part IV  |      |
| Item 15. Exhibits and Financial Statement Schedules  | 64   |
| Signatures   | 71   |
| Ex-21.1 List of Subsidiaries of Registrant   |      |
| Ex-23.1 Consent of BDO USA, LLP  |      |
| Ex-31.1 Section 302 Certification of CEO   |      |
| Ex-31.2 Section 302 Certification of CFO   |      |
| Ex-32.1 Section 906 Certification of CEO   |      |
| Ex-32.2 Section 906 Certification of CFO   |      |



## PART I

The information in this annual report contains certain forward-looking statements, including statements related to our business prospects, the markets for our products, and trends in our business that involve risks and uncertainties. Our actual results may differ materially from the results discussed in these forward-looking statements. Factors that might cause such a difference include those discussed in “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere in this annual report.

### Item 1. Business

#### General

Advanced Photonix, Inc. ® (the Company, we or API) was incorporated under the laws of the State of Delaware in June 1988. The Company is engaged in the development and manufacture of optoelectronic devices and value-added sub-systems and systems. The Company serves a variety of global Original Equipment Manufacturers (OEMs) in a variety of industries. The Company supports its customers from the initial concept and design phase of the product, through testing to full-scale production. API has two manufacturing facilities located in Camarillo, California and Ann Arbor, Michigan.

#### Products and Technology

##### Our Business

API is a leading supplier of optoelectronic semiconductors packaged into high-speed optical receivers, custom optoelectronic subsystems and Terahertz instrumentation, serving a variety of global OEM markets. Our patented high-speed optical receivers include Avalanche Photodiode technology (APD) and PIN photodiode technology based upon III-V materials, including InP, InAlAs, and GaAs. Our optoelectronic subsystems are based on our silicon Large Area Avalanche Photodiode (LAAPD), PIN (positive-intrinsic-negative) photodiode, FILTRODE® detectors and LED assemblies. Our Terahertz sensor product line is targeted at the industrial Non-Destructive Testing (NDT), quality control, homeland security and military markets. Using our patented fiber coupled technology and high speed Terahertz generation and detection sensors, we are engaged in transferring Terahertz technology from the application development laboratory to the factory floor.

We support the customer from the initial concept and design of the semiconductor, hybridization of support electronics, packaging and signal conditioning or processing from prototype through full-scale production and validation testing. The target markets served by us are Industrial Sensing/NDT, Military/Aerospace, Telecom, Medical and Homeland Security.

#### Technology & Manufacturing Capabilities

Our basic technologies and manufacturing capabilities include the following:

- Optoelectronic semiconductor design and micro fabrication of III-V compound semiconductor (InP and GaAs) and Silicon (Si) devices including photodetectors and terahertz transmitters/receiver antenna,

- MBE growth of high-speed III-V compound semiconductor material including GaAs, InAlAs and InP,

- High speed semiconductor analog amplifier specification, evaluation and design for outside fabrication,

- Coherent mixer and delay line interferometer (DLI) specification, evaluation and design for outside fabrication for use in 40Gb/s and 100 Gb/s line side optical receivers,

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Opto-electronic hybrid packaging of semiconductor devices combining opto-electronic devices with high-speed electronics and fiber optics,

Vapor deposition and/or ion implantation for Silicon based PIN & APD photo-detectors,

Terahertz (THz) systems, subsystems, transmitters and receivers, transceivers and motion control hardware and software,

Femtosecond laser specification, valuation, design and manufacture and

Chromatic dispersion, polarization dispersion and optical delay management in complex optical systems.

## Core Products

The core product technologies used in the majority of our products are opto-electronic semiconductor devices, including photodiodes and antennae made of Si or III-V compound semiconductor material and high speed semiconductor analog amplifiers. Photodiodes and antennae sense light of varying wavelengths and intensity and convert that light and/or Terahertz wave into electrical signals. Analog amplifiers increase the converted electrical signals output power to a level required to communicate with follow on electrical components. We manufacture photodiodes of varying complexity, from basic PIN photodiode to the more sophisticated APD and antennae that transmit and receive Terahertz signals (Transceiver). The APD is a specialized photodiode capable of detecting very low light levels due to an internal gain phenomenon known as avalanching. All photodiode and THz devices are designed by our experienced engineering staff, and fabricated in state-of-the-art clean rooms. Some of our analog amplifiers are specified and tested by our engineering staff, designed by subcontractors and fabricated by outside suppliers. Our products include the following:

- High Speed Optical Receivers (10Gb/s, 40Gb/s & 100Gb/s) which are packaged InP, InAlAs, or GaAs PIN and/or APD photodiodes with amplifiers

  - Packaged PIN and APD photodiodes in Si and III-V materials (InP, InAlAs, GaAs)

    - Packaged Si APD components, with and without thermo-electric coolers

      - Packaged Si LAAPD components

- Packaged Si photodiodes with patented FILTRODE® technology integrating optical filters directly on photodiode chips

  - Terahertz Systems & subsystems utilizing III-V materials for Terahertz transmitters &/or receivers

## Terahertz Technology

One of the high growth technologies the Company is pursuing is Terahertz (THz) based on our T-Ray® 4000 product platform. THz is a region of the electromagnetic (EM) Spectrum that lies between microwave and infrared waves, which is in the early stages of adoption. While microwaves and infrared waves have been explored and commercialized for decades, THz waves are in the early stages of being explored and commercialized due to the fact that they have historically been very difficult to generate and detect. Recent advances in femtosecond lasers and ultra-fast semiconductor and electro-optic devices combined with fiber-optic packaging technologies have enabled the development of practical T-Ray® instrumentation for the research market and as a result application/market development of THz technology, led by traditional early adopters such as the military and aerospace markets, is accelerating. THz can be used to “look” through and beneath materials with high 2-dimensional (2-D) and 3-dimensional (3-D) spatial resolution roughly equivalent to the resolution of the human eye or better. It can also uniquely identify the chemical composition of many hidden or subsurface objects and has been determined to have non-ionizing radiation, which is not harmful to humans at the power levels commonly used today. THz imaging and spectroscopy market applications include industrial quality control through non-destructive testing (including aerospace and pharmaceutical markets); homeland security and defense screening of people, packages and bags for weapons and weapons of mass destruction; medical imaging and other scientific applications.

We have had significant Terahertz technology and product development since 1997, resulting in over 64 patents or patents pending to date. In 2001, we sold the first commercial THz product, the T-Ray®2000, as a laboratory bench top instrument for application development with spectroscopy and imaging capabilities targeted at the research and development and off-line diagnostic markets. In 2004, we sold the first T-Ray Manufacturing Inspection System (QA1000) for on-line, real-time inspection to NASA for the space shuttle fuel tank inspection in the Return to Flight Program. In March 2008, the Company shipped its next generation THz imaging and spectroscopy system (T-Ray® 4000). The T-Ray® 4000 is significantly smaller, lighter, and more powerful than previous THz generations and incorporates significant technological advancements. The system weighs 55 pounds and is the size of a briefcase,



which is a significant reduction from the 800 pound refrigerator size QA 1000. This system is targeted at the research and industrial NDT quality control market. The T-Ray® 4000 product will also serve as a platform for future industrial process and quality control, homeland security and defense applications. In 2009, the Company entered into a multi-year application development contract with the U.S. Air Force for use of the T-Ray® 4000 product platform for manufacturing quality control on the next generation joint strike fighter (F-35). In November 2010, the Company entered into a twelve month development agreement with In-Q-Tel Inc. (In-Q-Tel) for the delivery of three (3) Anomaly Detection Systems, using the T-Ray® 4000 product platform, for evaluation purposes by the Transportation Security Administration (TSA). In January 2011, the Company's T-Ray ®4000 product platform was selected by a leading manufacturer to assist it in improving its manufacturing process and in saving materials.

## Markets

Our products serve customers in a variety of global markets, typically North America, Asia, Europe and Australia. The target markets and applications served by us are as follows:

### Military:

Space  
Defense

### Industrial/NDT:

Manufacturing  
Instrumentation  
Display

### Medical:

Diagnostic & Monitoring  
Ophthalmic Equipment  
Medical Imaging

### Telecommunications:

Telecom Equipment  
Test and Measurement

### Homeland Security:

Baggage/Cargo Scanning  
Passenger Screening

## Recent Developments

S-3 Filing - On January 6, 2011, the Company entered into an underwriting agreement (the “Underwriting Agreement”) with B. Riley & Co., LLC, (the “Underwriter”) as sole underwriter for the offer and sale in a firm commitment underwritten public offering of 2,702,703 shares of the Company’s Class A Common Stock, par value \$0.001 per share (the “Common Stock”) at a price to the public of \$1.48 per share (\$1.391 per share, net of underwriting discounts) (the “January Offering”). Pursuant to the January Underwriting Agreement, the Company also (i) granted to the Underwriter a 30-day option to purchase up to an additional 405,405 shares of Common Stock to cover over-allotments, if any, at the same price and (ii) agreed to reimburse the Underwriter for certain of its out-of-pocket expenses. The January Underwriting Agreement also contains customary (i) representations, warranties, and agreements by the Company, (ii) conditions to closing, and (iii) indemnification provisions of the Company and the Underwriter, including for liabilities under the Securities Act of 1933, as amended (the Security Act).

The January Offering was made pursuant to a prospectus supplement dated January 6, 2011, an additional prospectus supplement dated January 11, 2011 and an accompanying prospectus dated December 23, 2010 pursuant to the Revised Registration Statement.

On January 10, 2011, the Underwriter gave notice to the Company that it was exercising its over-allotment option to purchase an additional 405,405 shares of the Company’s Common Stock.



The net proceeds to the Company from the January Offering, completed during the 4th quarter of fiscal 2011, after underwriting discounts and transaction expenses, were approximately \$4,154,000. The Company intends to use the net proceeds of the January Offering for general corporate purposes including, but not limited to, reducing its outstanding indebtedness, increasing its working capital and expanding its products. The January Offering was expected to close on or about January 18, 2011, or such earlier date as the Underwriter and the Company agreed to, subject to the satisfaction of customary closing conditions including, but not limited to, NYSE Amex approval of the Company's additional listing application to list the Common Stock issued accordance with the Underwriting Agreement on NYSE Amex (the "January Additional Listing Application"). On January 10, 2011, NYSE Amex approved the January Additional Listing Application and the January Offering closed on January 11, 2011, when the Company and Underwriter satisfied the other closing conditions.

On February 25, 2011, the Company entered into an underwriting agreement (the "February Underwriting Agreement") with B. Riley & Co., LLC, (the "Underwriter") as sole underwriter for the offer and sale in a firm commitment underwritten public offering of 1,200,000 shares of the Company's Class A Common Stock, par value \$0.001 per share (the "Common Stock") at a price to the public of \$1.97 per share (\$1.8518 per share, net of underwriting discounts) (the "February Offering"). Pursuant to the February Underwriting Agreement, the Company also agreed to reimburse the Underwriter for certain of its out-of-pocket expenses. The February Underwriting Agreement also contains customary (i) representations, warranties, and agreements by the Company, (ii) conditions to closing, and (iii) indemnification provisions of the Company and the Underwriter, including for liabilities under the Securities Act of 1933, as amended.

The February Offering was made pursuant to a prospectus supplement dated February 25, 2011 and an accompanying prospectus dated December 23, 2010 pursuant to the Revised Registration Statement.

The net proceeds to the Company from the February Offering, completed during the 4th quarter of fiscal 2011, after underwriting discounts and transaction expenses, were approximately \$2,136,000. The Company intends to use the net proceeds of the February Offering for general corporate purposes including, but not limited to, (i) working capital needed to support the rapid growth of the Company's HSOR products in foreign markets, (ii) accelerated development and marketing of Terahertz applications, (iii) capital expenditures needed to further automate the Company's manufacturing processes, and increase the Company's productivity.

#### Deregistration of Revised Registration Statement

On March 28, 2011, the Company filed a post-effective amendment on Form S-3 (the Post-Effective Amendment) to deregister the remaining securities under our Revised Registration Statement. On March 28, 2011, the Post-Effective Amendment was declared effective by the SEC.

#### Raw Materials

The principal raw materials used by the Company in the manufacture of its semiconductor components and sensor assemblies are silicon and III-V material (InP, GaAs) wafers, chemicals, gases and metals used in processing wafers, gold wire, solders, electronic components, high speed specialized semiconductor amplifiers and a variety of packages and substrates, including metal, printed circuit board, flex circuits, ceramic and plastic packages. All of these raw materials can be obtained from several suppliers. However, we depend on suppliers whose components have been qualified into our products and who could disrupt our business if they stop, decrease or delay shipments or if the components they ship have quality or consistency issues. From time to time, particularly during periods of increased industry-wide demand, silicon wafers, III-V wafers (InP, GaAs), certain metal packages and other materials have been in short supply. During fiscal 2011, the Company experienced increasing demand in the HSOR product platform. The Company is closely monitoring supply chain lead times which have been increasing primarily due to rising demand combined with capacity reductions caused by the natural disaster that occurred in Japan in 2011. As is

typical in the industry, the Company allows for a significant lead-time (2 months or greater) between order and delivery of raw materials. In the short term, any significant increase in lead times on critical components could reduce future growth.

#### Research and Development

Since its inception in June 1988, the Company has incurred material research and development (R&D) expenses, with the intent of commercializing these investments into profitable new standard and custom product offerings. During the fiscal years ended in 2011 and 2010, the Company's research and development expenses were \$5.6 million and \$4.7 million, respectively, which we believe was adequate to maintain the necessary investment in our future growth platforms. The Company expects that an increase in research and development funding will be required for new projects/products as well as the continuing development of new derivatives of the Company's current product line. The Company has in the past, and will continue to pursue government funded, as well as internally funded, research and development projects when they are in support of the Company's development objectives.

As the Company begins the new 2012 fiscal year, the following research and development projects are currently underway:

HSOR - next generation photodiodes and high-speed optical receivers for both the 40G and 100G telecommunications market:

- o 1st generation 100G DP-QPSK long haul and metro markets
- o 1st generation 100G NRZ short reach market
- o 2nd generation integrated 40G DPSK and DQPSK long haul and metro markets
- o 4th generation integrated 40G NRZ short reach market
- o Cost Reduction and performance enhancements through vertical integration of strategic 40G and 100G components, including amplifiers and integrated passive optical components (i.e.: Delay Line Interferometers and optical mixers)

THz –

- o Application development utilizing the T-Ray® 4000 product platform for industrial quality and process control targeted at the aerospace, industrial and consumer product markets
- o T-Ray® 4000 cost reduction, including laser and sub-systems initiatives for high volume markets
- o T-Ray® 4000 product platform research and development for homeland security and military markets

Custom optoelectronics - Si PIN and APD photodiode developments to meet unique customer requirements, such as higher speeds, lower electrical noise, and unique multi-element geometries.

#### Environmental Regulations

The photonics industry, as well as the semiconductor industry in general, is subject to governmental regulations for the protection of the environment, including those relating to air and water quality, solid and hazardous waste handling, and the promotion of occupational safety. Various federal, state and local laws and regulations require that the Company maintain certain environmental permits. The Company believes that it has obtained all necessary environmental permits required to conduct its manufacturing processes. Changes in the aforementioned laws and regulations or the enactment of new laws, regulations or policies could require increases in operating costs and additional capital expenditures and could possibly entail delays or interruptions of operations.

#### Backlog and Customers

The Company's sales are made primarily pursuant to standard purchase orders for delivery of products. A substantial portion of our revenues are derived from sales to OEMs pursuant to individual purchase orders with short lead times. However, by industry practice, orders may be canceled or modified at any time. Accordingly, we do not believe that the backlog of undelivered product under these purchase orders is a meaningful indicator of our future financial performance. When customers cancel an order, they are responsible for all finished goods, all costs, direct and indirect, incurred by the Company, as well as a reasonable allowance for anticipated profits. No assurance can be given that the Company will receive these amounts after cancellation.

Customers normally purchase the Company's products and incorporate them into products that they in turn sell in their own markets on an ongoing basis. As a result, the Company's sales are dependent upon the success of its customers'

products and our future performance is dependent upon our success in finding new customers and receiving new orders from existing customers.

#### Marketing

The Company markets its products in the United States and Canada through its own technical sales engineers and through independent sales representatives. International sales, including Europe, the Middle East, Far East and Asia, are conducted directly by the Company and through foreign distributors and representatives. The Company's products are primarily sold as components or sub-assemblies to OEM's. The Company markets its products and capabilities through industry specific channels, including the Internet, industry trade shows, and in print through trade journals.

## Competition

In its target markets, the Company competes with different companies in each of its product platforms; custom optoelectronic, high-speed optical receiver and THz systems. The Company believes that its principal competitors for sales of custom optoelectronic products are small private companies and medium size public companies. In the high-speed optical receiver market the Company believes that its competitors are small private companies and medium to large size public companies. Because the THz product offering includes developing technology applications and markets, the Company believes the competition is mainly from small private companies and divisions of large public companies.

Because the Company specializes in devices requiring a high degree of engineering expertise to meet the requirements of specific applications, it generally does not compete with other large United States, European or Asian manufacturers of standard “off the shelf” optoelectronic components or silicon photodetectors.

## Proprietary Technology

The Company utilizes proprietary design rules and processing steps in the development and fabrication of its PIN and APD photodiodes, THz transmitters and receivers, fiber-coupled THz subsystems/systems, and THz applications. The Company has a significant number of patents pending and owns the following patents and registered trademarks:

| Patent #  | Title  | Issue Date |
|-----------|--|------------|
| 142,195   | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (US)                                 | Apr-05     |
| 660,471   | HIGHLY-DOPED P-TYPE CONTRACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (KOREA)                             | Apr-06     |
| 726,387   | TRADEMARK APPLICATION FOR T-RAY  | Oct-08     |
| 765,715   | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (AUSTRIA)                            | Jan-04     |
| 766,174   | ENHANCED PHOTODETECTOR (KOREA)   | Oct-07     |
| 809,655   | METHOD AND APPARATUS TO MONITOR PHASE CHANGES IN MATTER WITH TERAHERTZ RADIATION (KOREA)                           | Feb-08     |
| 811,365   | PLANAR AVALANCHE PHOTODIODE (KOREA)  | Feb-08     |
| 817,638   | FOCUSING FIBER OPTIC (KOREA)   | Mar-08     |
| 934,665   | TRADEMARK APPLICATION FOR T-RAY TRADEMARK (MADRID PROTOCOL)  | Aug-07     |
| 934,665   | TRADEMARK APPLICATION FOR T-RAY TRADEMARK (AUSTRALIA)  | Aug-07     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (EUROPE)      | Oct-10     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (AUSTRIA)     | Oct-10     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (FRANCE)      | Oct-10     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (GERMANY)     | Oct-10     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (ITALY)       | Oct-10     |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (NETHERLANDS) | Oct-10     |



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|           |  |        |
|-----------|--|--------|
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (SPAIN)         | Oct-10 |
| 1,090,282 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GERNERATION AND DETECTION SYSTEM (GREAT BRITAIN) | Oct-10 |
| 1,113,520 | PLANAR AVALANCHE PHOTODIODE (HONG KONG)  | Mar-10 |
| 1,113,604 | OPTICAL DELAY (HONG KONG)  | Jan-11 |

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|           |  |        |
|-----------|--|--------|
| 1,115,504 | PICOSECOND OPTICAL DELAY (HONG KONG)   | Nov-09 |
| 1,116,280 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (EP)                           | Oct-07 |
| 1,116,280 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (FRANCE)                       | Oct-07 |
| 1,116,280 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (GREAT BRITAIN)                | Oct-07 |
| 1,116,280 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (ITALY)                        | Oct-07 |
| 1,116,280 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (GERMANY)                      | Oct-07 |
| 1,230,578 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (EP)  | Aug-06 |
| 1,230,578 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (AUSTRIA)   | Aug-06 |
| 1,230,578 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (FRANCE)  | Aug-06 |
| 1,230,578 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (ITALY)   | Aug-06 |
| 1,230,578 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (GREAT BRITAIN)   | Aug-06 |
| 1,454,173 | FOCUSING FIBER OPTIC (EP)  | May-09 |
| 1,454,173 | FOCUSING FIBER OPTIC (FRANCE)  | May-09 |
| 1,454,173 | FOCUSING FIBER OPTIC (GERMANY)   | May-09 |
| 1,454,173 | FOCUSING FIBER OPTIC (ITALY)   | May-09 |
| 1,454,173 | FOCUSING FIBER OPTIC (NETHERLANDS)   | May-09 |
| 1,454,173 | FOCUSING FIBER OPTIC (GREAT BRITAIN)   | May-09 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (EP)  | Aug-08 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (ITALY)   | Aug-08 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (FRANCE)  | Aug-08 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (GREAT BRITAIN)   | Aug-08 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (AUSTRIA)   | Aug-08 |
| 1,570,306 | PRECISION FIBER ATTACHMENT (GERMANY)   | Aug-08 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (EP)  | Sep-09 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (FRANCE)  | Sep-09 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (GERMANY)   | Sep-09 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (ITALY)   | Sep-09 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (GREAT BRITAIN)   | Sep-09 |
| 1,794,558 | PICOSECOND OPTICAL DELAY (NETHERLANDS)   | Sep-09 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (AUSTRIA)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (FRANCE)  | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (GERMANY)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (ITALY)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (NETHERLANDS)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (SPAIN)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (GREAT BRITAIN)   | Jan-11 |
| 1,820,219 | HIGH SPEED INGAAS PHOTOCONDUCTIVE DEVICE (HONG KONG)   | Jan-11 |
| 1,963,580 | PICOMETRIX TRADEMARK   | Mar-96 |
| 2,345,153 | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE (CANADA)                       | Mar-04 |
| 2,350,065 | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GENERATION AND DETECTION SYSTEM (CANADA) | Jan-11 |
| 2,396,695 | METHOD AND APPARATUS TO MONITOR PHASE CHANGES IN MATTER WITH TERAHERTZ RADIATION (CANADA)                    | Apr-10 |

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|           |   |         |
|-----------|---|---------|
| 3,561,696 | TRADEMARK – T-RAY   | Jan-09  |
| 3,561,697 | TRADEMARK – T-RAY 2000  | Jan-09  |
| 3,561,698 | TRADEMARK – T-RAY 4000  | Jan-09  |
| 4,180,824 | COMPACT FIBER PIGTAIL TERAHERTZ IMAGING SYSTEM (JAPAN)          | Sept-08 |
| 4,436,915 | PRECISION FIBER ATTACHMENT (JAPAN)                              | Jan-10  |
| 4,717,946 | THIN LINE JUNCTION PHOTODIODE (by Predecessor Co.)              | Jan-88  |
| 4,782,382 | HIGH QUANTUM EFFICIENCY PHOTODIODE DEVICES (by Predecessor Co.) | Nov-88  |

|                |   |        |
|----------------|---|--------|
| 5,021,854      | SILICON AVALANCHE PHOTODIODE ARRAY  | Jun-91 |
| 5,057,892      | LIGHT RESPONSIVE AVALANCHE DIODE  | Oct-91 |
| 5,146,296      | DEVICES FOR DETECTING AND/OR IMAGING SINGLE PHOTOELECTRON   | Sep-92 |
| 5,308,989      | TRADEMARK APPLICATION FOR T-GUAGE (JAPAN)   | Mar-10 |
| 5,311,044      | AVALANCHE PHOTOMULTIPLIER TUBE  | May-94 |
| 5,477,075      | SOLID STATE PHOTODETECTOR WITH LIGHT RESPONSIVE REAR FACE   | Dec-95 |
| 5,757,057      | LARGE AREA AVALANCHE ARRAY  | May-98 |
| 5,801,430      | SOLID STATE PHOTODETECTOR WITH LIGHT RESPONSIVE REAR FACE   | Sep-98 |
| 6,005,276      | SOLID STATE PHOTODETECTOR WITH LIGHT RESPONSIVE REAR FACE   | Dec-99 |
| 6,029,988      | COMPACT FIBER PIGTAILED TERAHERTZ IMAGING SYSTEM (GREAT BRITAIN)                                    | Aug-06 |
| 6,111,299      | ACTIVE LARGE AREA AVLANCHE PHOTODIODE ARRAY   | Aug-00 |
| 6,262,465      | HIGHLY-DOPED P-TYPE CONTACT FOR HIGH-SPEED, FRONT-SIDE ILLUMINATED PHOTODIODE                       | Jul-01 |
| 6,320,191      | A DISPERSIVE PRECOMPENSATOR FOR USE IN AN ELECTROMAGNETIC RADIATION GENERATION AND DETECTION SYSTEM | Nov-01 |
| 6,816,647      | COMPACT FIBER PIGTAILED TERAHERTZ IMAGING SYSTEM  | Nov-04 |
| 6,849,852      | SYSTEM AND METHOD FOR MONITORING CHANGES IN STATE OF MATTER WITH TERAHERTZ RADIATION                | Feb-05 |
| 6,936,821      | AMPLIFIED PHOTOCONDUCTIVE GATE  | Aug-05 |
| 7,039,275      | FOCUSING FIBER OPTIC  | May-06 |
| 7,078,741      | HIGH-SPEED ENHANCED RESPONSIVITY PHOTO DETECTOR   | Jul-06 |
| 7,263,266      | PRECISION FIBER ATTACHMENT  | Aug-07 |
| 7,348,607      | PLANAR AVALANCHE PHOTODIODE   | Mar-08 |
| 7,348,608      | PLANAR AVALANCHE PHOTODIODE   | Mar-08 |
| 7,449,695      | TERAHERTZ IMAGING SYSTEM FOR EXAMINING ARTICLES   | Nov-08 |
| 7,468,503      | PIN PHOTODETECTOR   | Dec-08 |
| 8,452,427      | TRADEMARK APPLICATION FOR T-GUAGE   | Mar-10 |
| 8,493,256      | TRADEMARK APPLICATION FOR T-RAY 4000  | Feb-10 |
| ZL02825106.7   | FOCUSING FIBER OPTIC (CHINA)  | Apr-09 |
| ZL03803039.X   | ENHANCED PHOTODETECTOR (CHINA)  | Apr-09 |
| ZL2003801087.X | PRECISION FIBER ATTACHMENT (CHINA)  | Mar-09 |
| ZL200480015226 | PIN PHOTODETECTOR (JAPAN)   | Jun-09 |
| ZL200480043236 | PLANAR AVALANCHE PHOTODIODE (CHINA)   | May-09 |
| ZL200580033244 | PICOSECOND OPTICAL DELAY (CHINA)  | Jan-10 |
| HK1085841      | ENHANCED PHOTODETECTOR (HONG KONG)  | Dec-09 |
| HK1086340      | FOCUSING FIBER OPTIC (HONG KONG)  | Feb-10 |
| HK1090282      | PIN PHOTODETECTOR (HONG KONG)   | Oct-10 |
| HK1095637      | PRECISION FIBER ATTACHMENT (HONG KONG)  | Apr-10 |
| HK1097957      | PIN PHOTODETECTOR (HONG KONG)   | Mar-10 |

There can be no assurance that any issued patents will provide the Company with significant competitive advantages, or that challenges will not be instituted against the validity or enforceability of any patent owned by the Company, or, if instituted, that such challenges will not be successful. The cost of litigation to uphold the validity and to prevent the infringement of a patent could be substantial. Furthermore, there can be no assurance that the Company's technology will not infringe on patents or rights owned by others, licenses to which might not be available to the Company. Based on limited patent searches, contacts with others knowledgeable in the field of the Company's technology, and a review of the published materials, the Company believes that its competitors hold no patents, licenses or other rights to technology which would preclude the Company from pursuing its intended operations.

In some cases, the Company may rely on trade secrets to protect its innovations. There can be no assurance that trade secrets will be established, that secrecy obligations will be honored or that others will not independently develop similar or superior technology. To the extent that consultants, key employees or other third parties apply technological information independently developed by them or by others to Company projects, disputes might arise as to the proprietary rights to such information which may not be resolved in favor of the Company.

## Employees

As of June 23, 2011, the Company had 185 full time employees (including 3 officers). Included are 47 engineering and development personnel, 10 sales and marketing personnel, 114 operations personnel, and 14 general and administrative personnel (including 3 officers). The Company may, from time to time, engage personnel to perform consulting services and to perform research and development under third party funding. In certain cases, the cost of such personnel may be included in the direct cost of the contract rather than in payroll expense. None of our employees are covered by a collective bargaining agreement. We believe our relations with our employees are good.

## Item 1A. Risk Factors

Investing in our Class A Common Stock involves a high degree of risk and uncertainty. You should carefully consider the risks and uncertainties described below before investing in our Class A Common Stock. Our business, prospects, financial condition and results of operations could be adversely affected due to any of the following risks. In that case, the value of our Class A Common Stock could decline, and you could lose all or part of your investment.

### Risks Relating to Our Business

The overall negative economic climate could adversely affect the liquidity and financial condition of our customers and our business.

We believe that many factors affect our industry, including consumer confidence in the economy, interest rates, fuel prices and credit availability. The overall economic climate and changes in Gross National Product growth has a direct impact on our customers and the demand for our products. We cannot be sure that our business will not be adversely affected as a result of an industry or the current general economic downturn.

Our customers may reduce capital expenditures and have difficulty satisfying liquidity needs because of the continued turbulence in the U.S. and global economies, resulting in reduced sales of our products and harming our financial condition and results of operations.

Recent global market and economic conditions have been unprecedented and challenging with tighter credit conditions and recession in most major economies. Continued concerns about the systemic impact of potential long-term and wide-spread recession, energy costs, geopolitical issues, the availability and cost of credit, and the global housing and mortgage markets have contributed to diminished expectations for western and emerging economies. These conditions, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have contributed to market volatility of unprecedented levels.

As a result of these market conditions, the cost and availability of credit has been and may continue to be adversely affected by illiquid credit markets and wider credit spreads. Concern about the stability of the markets generally and the strength of counterparties specifically has led many lenders and institutional investors to reduce, and in some cases, cease to provide credit to businesses and consumers. This turbulence in the U.S. and international markets and economies has caused certain of our network subsystem and system customers, as well as their network service provider customers, to delay, reduce or cancel capital expenditures. Continued turbulence in the U.S. and international markets and economies and prolonged declines in business consumer spending may adversely affect our liquidity and financial condition, and the liquidity and financial condition of our customers, including our ability to refinance maturing liabilities and access the capital markets to meet liquidity needs.

We may be unable to obtain financing to fund ongoing operations and future growth.



Our future cash flows from operations, combined with our accessibility to cash and credit, may not be sufficient to allow us to finance ongoing operations or to make required investments for future growth. Although, as described above in Item 1 under the heading “Form S-3 Filings”, we recently raised approximately \$7.0 million (approximately \$6.5 million net of expenses) in the capital markets by issuing approximately 4.3 million shares of Common Stock under our Revised Registration Statement, we may need to seek additional credit or access the capital markets for additional funds. The recent disruption in credit markets and our recent operating losses make it uncertain whether we will be able to continue to access the credit or capital markets when necessary or desirable. If we are not able to access the credit or capital markets and obtain financing on commercially reasonable terms when needed, our business could be materially harmed and our results of operations could be adversely affected.

We have previously violated certain covenants under our Loan Agreement with The PrivateBank and Trust Company may not be in compliance with future covenants under our Credit Facility.

At March 31, 2010, the Company was not in compliance with the financial covenants under its loan agreement (the “Loan Agreement”) with The PrivateBank and Trust Company (the “Lender”). This constituted an event of default under the terms of our Loan Agreement which gave the Lender the ability to provide us with notice that it is exercising its rights under the Loan Agreement to demand payment in full of the outstanding indebtedness under our Loan Agreement.

On June 25, 2010, the Company and the Lender entered into a second amendment to the Loan Agreement (the “Second Amendment”) pursuant to which the Lender waived any event of default under the Loan Agreement resulting from the covenant violations for the fiscal quarters ended December 31, 2009 and March 31, 2010 (the “covenant violations”). Among other things, the Second Amendment (1) updated the financial covenants (as defined in the Second Amendment) and (2) required the Company to amend the secured promissory notes (the “Picometrix Notes”) issued to Robin Risser, the Company’s COO and CFO and Steve Williamson, the Company’s CTO, (collectively, the “Note Holders”), in connection with the Company’s acquisition of Picometrix, Inc. on May 2, 2005 by August 25, 2010 to defer the payment of the remaining fourth and fifth installment payments owed under the Picometrix Notes (the “Amendment Undertaking”). Under the Second Amendment, failure to satisfy the Amendment Undertaking by August 25, 2010 would constitute an event of default under the Loan Agreement.

On August 27, 2010, the Company and the Lender entered into a third amendment to the Loan Agreement (the “Third Amendment”) pursuant to which the Lender waived any event of default under the Loan Agreement resulting from the Company’s failure to satisfy the Amendment Undertaking. Among other things, the Third Amendment (1) increased the amount of proceeds from equity issuances that the Company may use to make payments in respect of the Picometrix Notes and (2) extended the deadline set forth in the Second Amendment for amending the Picometrix Notes from August 25, 2010 to December 1, 2010.

On November 30, 2010, the Company and the Lender entered into a fourth amendment to the Loan Agreement (the “Fourth Amendment”) pursuant to which, among other things, the Lender terminated the Amendment Undertaking in connection with the amendment of the Picometrix Notes.

While we believe we have good relations with our Lender, we can provide no assurance that we will be able to obtain waivers or amendments if future covenant violations occur under our Loan Agreement. Failure to obtain such waivers or amendments, if necessary, could materially affect our business, financial condition and results of operations.

Any impairment of goodwill and other intangible assets, could negatively impact our results of operations.

As of March 31, 2011 and March 31, 2010, our consolidated balance sheet included \$4.6 million in goodwill. Goodwill represents the excess purchase price over amounts assigned to tangible or identifiable intangible assets



acquired and liabilities assumed from our business acquisitions. The Company's goodwill is subject to an impairment test on an annual basis and is also tested whenever events and circumstances indicate that goodwill may be impaired. Any excess goodwill value resulting from the impairment test must be written off in the period of determination. Intangible assets (other than goodwill) are generally amortized over the useful life of such assets and aggregated to \$5.7 million at March 31, 2011. In addition, from time to time, we may acquire or make an investment in a business which will require us to record goodwill based on the purchase price and the value of the acquired tangible and intangible assets. We may subsequently experience unforeseen issues with such business which adversely affect the anticipated returns of the business or value of the intangible assets and trigger an evaluation of the recoverability of the recorded goodwill and intangible assets for such business. Future determinations of significant write-offs of goodwill or intangible assets as a result of an impairment test or any accelerated amortization of other intangible assets could have a negative impact on our results of operations and financial condition.

We are dependent upon several suppliers for a significant portion of raw materials used in the manufacturing of our products and any significant interruption could have a material adverse affect on our manufacturing.

The principal raw materials we use in the manufacture of our semiconductor components and sensor assemblies are silicon and III-IV wafers, chemicals and gases used in processing wafers, gold wire, lead frames, specialized semiconductor amplifiers, and a variety of packages and substrates, including metal, printed circuit board, flex circuits, ceramic and plastic packages. All of these raw materials can be obtained from several suppliers. However, we depend on suppliers whose components have been qualified into our products and who could disrupt our business if they stop, decrease or delay shipments or if the components they ship have quality or consistency issues. During the last several years, the number of suppliers of components has decreased significantly and, more recently, demand for components has increased rapidly. Any supply deficiencies relating to the quality or quantities of components we use to manufacture our products could adversely affect our ability to fulfill customer orders and our results of operations. For example, during the quarter ended March 31, 2011, we experienced some limitations on the components available from certain of our suppliers, which reduced our revenue growth for the fourth quarter.

As part of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the Dodd-Frank Act), the SEC has proposed disclosure requirements regarding the use of certain minerals, known as conflict minerals, which are mined from the Democratic Republic of Congo and adjoining countries, as well as procedures regarding a manufacturer's efforts to prevent the sourcing of such minerals and metals produced from those minerals. The additional disclosure rules will take effect after the Company's first full fiscal year following the promulgation of the SEC's final rules. Assuming the SEC adopts final rules in late 2011, the first reporting period will be for the Company's fiscal year ending in 2013.

The implementation of these requirements could affect the sourcing and availability of metals used in the manufacture of a limited number of raw material parts contained in our products. This may reduce the number of suppliers who provide conflict free metals, and may affect our ability to obtain products in sufficient quantities or at competitive prices. Our material sourcing is broad based and multi-tiered, and we may not be able to conclusively verify the origins for all metals used in our products.

Customer acceptance of our products is dependent on our ability to meet changing requirements, and any decrease in acceptance could adversely affect our revenue.

Customer acceptance of our products is significantly dependent on our ability to offer products that meet the changing requirements of our customers, including telecommunication, military, medical and industrial corporations, as well as government agencies. Any decrease in the level of customer acceptance of our products could have a material adverse affect on the Company.

Our inability to find new customers and retain existing customers could have a material adverse affect on our business.

Customers normally purchase our products and incorporate them into products that they in turn sell in their own markets on an ongoing basis. As a result, our sales are dependent upon the success of our customers' products and our future performance is dependent upon our success in finding new customers and receiving new orders from existing customers.

In several of our markets, quality and/or reliability of our products are a major concern for our customers, not only upon the initial manufacture of the product, but for the life of the product. Many of our products are used in remote locations for higher value assembly, making servicing of our products not feasible. Any failure of the quality and/or reliability of our products could have an adverse affect on our business.



If our customers do not qualify our products or if their customers do not qualify their products, our results of operations may suffer.

Most of our customers do not purchase our products prior to qualification of our products and satisfactory completion of factory audits and vendor evaluation. Our existing products, as well as each new product, must pass through varying levels of qualification with our customers. In addition, because of the rapid technological changes in our market, a customer may cancel or modify a design project before we begin large-scale manufacture of the product and receive revenues from the customer. 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 could have a negative effect on our results of operations.

If the end user customers that purchase systems from our customers fail to qualify or delay qualifications of any products sold by our customers that contain our products, our business could be harmed. The qualification and field testing of our customers' systems by end user customers is long and unpredictable. This process is not under the control of our Company or our customers, and, as a result, timing of our sales is unpredictable. Any unanticipated delay in qualification of one of our customers' products could result in the delay or cancellation of orders from our customers for products included in their equipment, which could harm our results of operations.

Our sales to overseas markets expose us to additional, unpredictable risks which could have a material adverse affect on our business and to exposure under the Foreign Corrupt Practices Act.

A portion of our sales are being derived from overseas markets. These international sales are primarily focused in Asia, Europe and the Middle East. These operations are subject to unpredictable risks that are inherent in operating in foreign countries and which could have a material adverse affect on our business, including the following:

- foreign countries could change regulations or impose currency restrictions and other restraints;
- changes in foreign currency exchange rates and hyperinflation or deflation in the foreign countries in which we operate;
- exchange controls;
- some countries impose burdensome tariffs and quotas;
- political changes and economic crises may lead to changes in the business environment in which we operate;
- international conflict, including terrorist acts, could significantly impact our financial condition and results of operations; and
- economic downturns, political instability and war or civil disturbances may disrupt distribution logistics or limit sales in individual markets.

In addition, the Company utilizes third-party distributors to act as our representative for the geographic region that they have been assigned. Sales through distributors represent approximately 6% of total revenue. Significant terms and conditions of distributor agreements include FOB source, net 30 days payment terms, with no return or exchange rights, and no price protection. Since the product title transfers to the distributor at the time of shipment by the company, the products are not considered inventory on consignment. Our success is dependent on these distributors finding new customers and receiving new orders from existing customers.

We are subject to the Foreign Corrupt Practice Act ("FCPA") and other laws that prohibit improper payments to foreign governments and their officials for the purpose of obtaining or retaining business. Our activities in our overseas markets create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents or distributors, because these parties are not always subject to our control. While it is our policy to implement safeguards to discourage these practices, 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 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, certain governmental authorities may seek to hold us liable for successor liability FCPA violations committed by companies in which we invest or that we acquire.

Customer orders and forecasts are subject to cancellation or modification at any time which could result in higher manufacturing costs.

Our sales are made primarily pursuant to standard purchase orders for delivery of products. However, by industry practice, orders may be canceled or modified at any time. When a customer cancels an order, they are responsible for all finished goods, all costs, direct and indirect, incurred by us, as well as a reasonable allowance for anticipated profits. No assurance can be given that we will receive these amounts after cancellation.

Uncertainty in customer forecasts of their demands and other factors may lead to delays and disruptions in manufacturing, which could result in delays in product shipments to customers and could adversely affect our business.

Fluctuations and changes in our customers' demand are common in our industry. Such fluctuations, as well as quality control problems experienced in our manufacturing operations may cause us to experience delays and disruptions in our manufacturing process and overall operations and reduce our output capacity. As a result, product shipments could be delayed beyond the shipment schedules requested by our customers or could be cancelled, which would negatively affect our sales, operating income, strategic position at customers, market share and reputation. In addition, disruptions, delays or cancellations could cause inefficient production which in turn could result in higher manufacturing costs, lower yields and potential excess and obsolete inventory or manufacturing equipment. In the past, we have experienced such delays, disruptions and cancellations.

The markets for many of our products are characterized by changing technology which could cause obsolescence of our products.

The markets for many of our products are characterized by changing technology, new product introductions and product enhancements, and evolving industry standards. The introduction or enhancement of products embodying new technology or the emergence of new industry standards could render existing products obsolete or result in short product life cycles. Accordingly, our ability to compete is in part dependent on our ability to continually offer enhanced and improved products.

We depend on key in-house manufacturing capabilities and a loss of these capabilities could have an adverse affect on our existing operations and new business growth.

We depend on key in-house manufacturing equipment and assembly processes. We believe that these key manufacturing and assembly processes give us the flexibility and responsiveness to meet our customer delivery schedule and performance specification with a custom product. This value proposition is an important component of our offering to our customers. A loss of these capabilities could have an adverse affect on our existing operations and new business growth.

Changes in the spending priorities of the federal government can materially adversely affect our business.

In fiscal 2011, approximately 25% of our sales were related to products and services purchased by federal government contractors. Our business depends upon continued federal government expenditures on defense, intelligence, homeland security, aerospace and other programs that we support. In fiscal 2011, our sales to federal government contractors increased 4%. In addition, foreign military sales are affected by U.S. government regulations, regulations by the purchasing foreign government and political uncertainties in the U.S. and abroad. There can be no assurance that the federal government budget (including defense and military) will continue to grow or that sales of defense related items to foreign governments will continue at present levels. The terms of defense contracts with the U.S. government generally permit the government to terminate such contracts, with or without cause, at any time. Any

unexpected termination of a significant U.S. government contract with a military contractor that we sell our products to could have a material adverse affect on the Company.

Our industry is highly competitive and fragmented, which can result in future competitors against which we cannot compete.

API competes with a range of companies for the custom optoelectronic requirements of customers in our target markets. We believe that our principal competitors for sales of our products are small to medium size companies. Because the Company specializes in custom high performance devices requiring a high degree of engineering expertise to meet the requirements of specific applications, we generally do not compete to any significant degree with other large United States, European or Pacific Rim high volume manufacturers of standard “off the shelf” optoelectronic components. We cannot assure you that we will be able to compete successfully in our markets against these or any future competitors.

Decreases in average selling prices of our products may reduce operating profit and net income, particularly if we are not able to reduce our expenses commensurately.

The market for optical components and subsystems continues to be characterized by declining average selling prices resulting from factors such as increased price competition among optical component and subsystem manufacturers, excess capacity, the introduction of new products and increased unit volumes as manufacturers continue to deploy network and storage systems. Recently, we have observed a modest acceleration in the decline of average selling prices. We anticipate that average selling prices will continue to decrease in the future in response to product introductions by our competitors or us, or in response to other factors, including price pressures from significant customers. In order to sustain profitable operations, we must, therefore, continue to develop and introduce new products on a timely basis that incorporate features that can be sold at higher average selling prices. Failure to do so could cause our sales and operating profit to decline.

In the current environment of declining average selling prices we must continually seek ways to reduce our costs to maintain our operating profit and net income. The Company’s cost reduction efforts may not allow us to keep pace with competitive pricing pressures. To remain competitive, we must continually reduce the cost of manufacturing our products through design and engineering changes. We may not be successful in redesigning our products or delivering our products to market in a timely manner. We cannot assure you that any redesign will result in sufficient cost reductions enabling us to reduce the price of our products to remain competitive or maintain our operating profit and net income.

Shifts in our product mix may result in declines in operating income and net income.

Our gross profit margins vary among our product platforms, and are generally higher on our HSOR and Terahertz products. Our overall operating income has fluctuated from period to period as a result of shifts in product mix, the introduction of new products, decreases in average selling prices for older products and our ability to reduce product costs, and these fluctuations are expected to continue in the future.

Environmental regulations could increase operating costs and additional capital expenditures and delay or interrupt operations.

The photonics industry, as well as the semiconductor industry in general, is subject to governmental regulations for the protection of the environment, including those relating to air and water quality, solid and hazardous waste handling, and the promotion of occupational safety. Various federal, state and local laws and regulations require that we maintain certain environmental permits. We believe that we have obtained all necessary environmental permits required to conduct our manufacturing processes. Changes in the aforementioned laws and regulations or the enactment of new laws, regulations or policies could require increases in operating costs and additional capital expenditures and could possibly entail delays or interruptions of operations.

If we are unable to protect our intellectual property rights adequately, the value of our products could be diminished.



Our success and ability to compete is dependent in part on our proprietary technology. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as confidentiality agreements and internal procedures, to establish and protect our proprietary rights. We utilize proprietary design rules and processing steps in the development and fabrication of our PIN photodiodes, APD photodiodes and our THz systems and sensors. In addition, our products rely upon over 164 patents or patents pending. There can be no assurance that any issued patents will provide us with significant competitive advantages, or that challenges will not be instituted against the validity or enforceability of any patent utilized by us, or, if instituted, that such challenges will not be successful. The cost of litigation to uphold the validity and to prevent the infringement of a patent could be substantial and could have a material adverse affect on our operating results. Furthermore, there can be no assurance that our PIN photodiodes, APD photodiodes and THz technology will not infringe on patents or rights owned by others, licenses to which might not be available to us. Based on limited patent searches, contacts with others knowledgeable in the field of PIN photodiodes, APD photodiodes and our THz technology, and a review of the published materials, we believe that our competitors hold no patents, licenses or other rights to the PIN photodiodes, APD photodiodes and our THz technology which would preclude us from pursuing our intended operations.

In some cases, we may rely on trade secrets to protect our innovations. There can be no assurance that trade secrets will be established, that secrecy obligations will be honored or that others will not independently develop similar or superior technology. To the extent that consultants, key employees or other third parties apply technological information independently developed by them or by others to our projects, disputes might arise as to the proprietary rights to such information which may not be resolved in our favor.

Pursuing infringers of our intellectual property rights can be costly.

Pursuing infringers of our proprietary rights could result in significant litigation costs, and any failure to pursue infringers could result in our competitors utilizing our technology and offering similar products, potentially resulting in loss of a competitive advantage and decreased sales. Despite our efforts to protect our proprietary rights, existing patent, copyright, trademark and trade secret laws afford only limited protection. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States. Protecting our intellectual property is difficult especially after our employees or our third-party contractors end their employment or engagement. We may have employees leave us and go to work for competitors. Attempts may be made to copy or reverse-engineer aspects of our products or to obtain and use information that we regard as proprietary. Accordingly, we may not be able to prevent misappropriation of our technology or prevent others from developing similar technology. Furthermore, policing the unauthorized use of our products is difficult and expensive. Litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. The resulting costs and diversion of resources could significantly harm our business. If we fail to protect our intellectual property, we may not receive any return on the resources expended to create the intellectual property or generate any competitive advantage based on it.

Third parties may claim we are infringing their intellectual property rights and we could be prevented from selling our products, or suffer significant litigation expense, even if these claims have no merit.

Our competitive position is driven in part by our intellectual property and other proprietary rights. Third parties, however, may claim that we, or our products, operations or any products or technology we obtain from other parties are infringing their intellectual property rights, and we may be unaware of intellectual property rights of others that may cover some of our assets, technology and products.

In addition, from time to time we receive letters from third parties that allege we are infringing their intellectual property and asking us to license such intellectual property, and we review the merits of each letter. Any litigation regarding patents, trademarks, copyrights or other intellectual property rights, even those without merit, could be costly and time consuming, and divert our management and key personnel from operating our business. The complexity of the technology involved and inherent uncertainty and cost of intellectual property litigation increases our risks. If any third-party has a meritorious or successful claim that we are infringing its intellectual property rights, we may be forced to change our products or manufacturing processes or enter into licensing arrangement with third parties, which may be costly or impractical, particularly in the event we are subject to a contractual commitment to continue supplying impacted products to our customers. This also may require us to stop selling our products as currently engineered, which could harm our competitive position. We also may be subject to significant damages or injunctions that prevent the further development and sale of certain of our products or services and may result in a material decrease in sales.

We face strong competition for skilled workers which could result in our inability to attract and retain necessary personnel.



Our success depends in large part on its ability to attract and retain highly qualified scientific, technical, management, and marketing personnel. Competition for such personnel is intense and there can be no assurance that we will be able to attract and retain the personnel necessary for the development and operation of our business.

We may not be able to successfully integrate future acquisitions, which could result in our not achieving the expected benefits of the acquisition, the disruption of our business and an increase in our costs.

Our ability to continue to grow may depend upon identifying and successfully acquiring attractive companies, effectively integrating these companies, achieving cost efficiencies and managing these businesses as part of our company.

We may not be able to effectively integrate the acquired companies and successfully implement appropriate operational, financial and management systems and controls to achieve the benefits expected to result from these acquisitions. Our efforts to integrate these businesses could be affected by a number of factors beyond our control, such as regulatory developments, general economic conditions and increased competition. In addition, the process of integrating these businesses could cause the interruption of, or loss of momentum in, the activities of our existing business. The diversion of management's attention and any delays or difficulties encountered in connection with the integration of these businesses could negatively impact our business and results of operations. Further, the benefits that we anticipate from these acquisitions may not develop.

Future acquisitions could require us to issue additional indebtedness or equity.

If we were to undertake a substantial acquisition for cash, the acquisition would likely need to be financed in part through bank borrowings or the issuance of public or private debt. This acquisition financing could likely increase our ratio of debt to equity and adversely affect other leverage criteria. Under our existing Loan Agreement, we are required to obtain the Lender's consent for certain additional debt financing and to comply with other covenants including the application of specific financial ratios. We are also restricted from paying cash dividends on our capital stock. We cannot assure you that the necessary acquisition financing would be available to us on acceptable terms if and when required. If we were to undertake an acquisition for equity, the acquisition may have a dilutive effect on the interests of the holders of our Common Stock.

We may be liable for damages based on product liability claims brought against our customers in our end-use markets.

Many of our products may provide critical performance attributes to our customers' products that will be sold to end users who could potentially bring product liability suits in which we could be named as a defendant. The sale of these products involves the risk of product liability claims. If a person were to bring a product liability suit against one of our customers, this customer may attempt to seek contribution from us. A person may also bring a product liability claim directly against us. A successful product liability claim or series of claims against us in excess of our insurance coverage for payments, for which we are not otherwise indemnified, could have a material adverse effect on our financial condition or results of operations. We have acquired product liability coverage of up to \$4 million.

Our current and planned systems, procedures and controls may not be adequate to support our future operations.

The laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act of 2010 and the rules adopted or proposed by the SEC, will result in increased costs to us as we evaluate the implications of any new rules and respond to their requirements. New rules could make it more difficult or more costly for us to comply with regulatory requirements, including our reporting obligations under the Exchange Act, and obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage.

We cannot predict or estimate the amount of the additional costs we may incur or the timing of such costs to comply with any new rules and regulations, or if compliance can be achieved.

## Risks Relating to Our Class A Common Stock

Our share price has been volatile in the past and may decline in the future.

Our Class A Common Stock has experienced significant market price and volume fluctuations in the past and may experience significant market price and volume fluctuations in the future in response to factors such as the following, some of which are beyond our control:

- quarterly variations in our operating results;
- operating results that vary from the expectations of securities analysts and investors;
- changes in expectations as to our future financial performance, including financial estimates by securities analysts and investors;
- announcements of technological innovations or new products by us or our competitors;
- announcements by us or our competitors of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- changes in the status of our intellectual property rights;
- announcements by third parties of significant claims or proceedings against us;
- additions or departures of key personnel;
- future sales of our ordinary shares;
- stock market price and volume fluctuations; and
- general economic conditions.

Stock markets often experience extreme price and volume fluctuations. Market fluctuations, as well as general political and economic conditions, such as a recession or interest rate or currency rate fluctuations or political events or hostilities in or surrounding the United States, could adversely affect the market price of our Class A Common Stock.

In the past, securities class action litigation has often been brought against companies following periods of volatility in the market price of its securities. We may in the future be the target of similar litigation. Securities litigation could result in substantial costs and divert management's attention and resources both of which could have a material adverse affect on our business and results of operations.

Future sales of our Class A Common Stock in the public market could lower our stock price, and conversion of our warrants and any additional capital raised by us may dilute your ownership in the Company.

We may sell additional shares of Class A Common Stock in the future. In addition, holders of warrants or stock options may exercise their warrants or stock options to purchase shares of our Class A Common Stock. We cannot predict the size of future issuances of our Class A Common Stock or the effect, if any, that future issuances and sales of shares of our Class A Common Stock will have on the market price of our Class A Common Stock. Sales of substantial amounts of our Class A Common Stock, including shares issued in connection with the exercise of the warrants or stock options, or the perception that such sales could occur, may adversely affect prevailing market prices for our Class A Common Stock.

Shares eligible for public sale in the future could decrease the price of our Class A Common Stock and reduce our future ability to raise capital.

Future sales of substantial amounts of our Class A Common Stock in the public market could decrease the prevailing market price of our Class A Common Stock, which would have an adverse affect on our ability to raise equity capital in the future.

We do not intend to pay dividends and are precluded from doing so while our Loan Agreement is outstanding.

We have never declared or paid any cash dividends on our Class A Common Stock and we are currently precluded from doing so while our Loan Agreement is outstanding. Even in the event the Loan Agreement is terminated, we currently intend to retain future earnings, if any, to finance operations and expand our business and, therefore, do not expect to pay any dividends in the foreseeable future.

Provisions in our charter documents and Delaware law and our adoption of a stockholder rights plan may delay or prevent a third party from acquiring us, which could decrease the value of our stock.

Our Board of Directors has the authority to issue preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting and conversion rights, of those shares without any further vote or action by the stockholders. The issuance of our preferred stock could have the effect of making it more difficult for a third party to acquire us. In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which could also have the effect of delaying or preventing our acquisition by a third party. Further, certain provisions of our Certificate of Incorporation and bylaws could delay or make more difficult a merger, tender offer or proxy contest, which could adversely affect the market price of our common stock.

In September 2002, we adopted a rights agreement, which was amended and restated on February 4, 2005, pursuant to which we distributed one preferred stock purchase right as a dividend on each outstanding share of our Common Stock. Each right entitles the holder to purchase one one-hundredth of a share of our Series B Preferred Stock, par value \$0.001 per share, at a purchase price of \$5.00 per one one-hundredth of a preferred share, subject to adjustment to reflect stock splits, stock dividends or similar transactions. Because the rights may substantially dilute the stock ownership of a person or group attempting to take us over without the approval of our Board of Directors, the plan could make it more difficult for a third party to acquire us, or a significant percentage of our outstanding capital stock, without first negotiating with our Board of Directors regarding such acquisition. Our rights plan will expire in September 2012.

## Item 2. Properties

The Company leases all of its executive offices, research, marketing and manufacturing facilities under non-cancellable operating leases. At March 31, 2011, those leases consisted of approximately 90,100 square feet in two facilities. The lease for our facility located in Camarillo, California was amended in December 2008 and is now leased through February 2014. Our facility located in Ann Arbor, Michigan is comprised of the corporate office and the Picometrix LLC manufacturing plant.

In January 2010, The Company's wholly owned subsidiary, Picometrix LLC, entered into a "Fourth Addendum & Extension Agreement" for its lease of the Ann Arbor, MI facility, which extended the lease to May 31, 2021. The 50,000 sq. ft. facility houses the Company's research, development and manufacturing operations for its terahertz and high-speed optical receiver product platforms, API's corporate headquarters, and the semiconductor micro-fabrication facility for all three of Advanced Photonix's product platforms. The state-of-the-art facility was completed in 2001 and was designed to meet the unique requirements of the Company's ultrafast optoelectronic product platforms, including InP and GaAs material growth, semiconductor micro-fabrication, and precision hybrid assembly and high-speed testing. In addition, the facility includes an industry leading HSOR laboratory and three secure user laboratories for collaborative terahertz application development.

## Item 3. Legal Proceedings

None

## Item 4. Reserved





PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

The Company's Class A Common Stock is traded on the NYSE Amex (AMEX) under the symbol "API".

Stock Performance Graph

The graph below provides an indicator of our cumulative total stockholder return as compared with the AMEX Composite Index and the AMEX Technology Index. The graph assumes an initial investment of \$100. The graph covers a period of time beginning in March 26, 2006, through March 31, 2011, which represents the last trading day of the year.

At June 23, 2011, the Company had 120 holders of record for the Class A Common Stock (including shares held in street name), representing approximately 5,760 beneficial owners of the Class A Common Stock.

Quarterly Stock Market Data

The following table sets forth the high and low closing prices of the Company's Class A Common Stock by quarter for fiscal years 2011 and 2010.

## Common Stock Price

|                           | 1st Quarter |        | 2nd Quarter |        | 3rd Quarter |        | 4th Quarter |        |
|---------------------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
|                           | 2011        | 2010   | 2011        | 2010   | 2011        | 2010   | 2011        | 2010   |
| Common Stock <sup>1</sup> |             |        |             |        |             |        |             |        |
| High                      | \$ .59      | \$ .73 | \$ .99      | \$ .87 | \$ 1.77     | \$ .90 | \$ 2.63     | \$ .77 |
| Low                       | \$ .42      | \$ .59 | \$ .50      | \$ .55 | \$ .88      | \$ .57 | \$ 1.51     | \$ .54 |

<sup>1</sup> Price ranges on the NYSE AMEX.

The Company has never paid any cash dividends on its capital stock and is currently precluded from doing so while its Loan Agreement is outstanding. Even in the event the Loan Agreement is terminated, the Company intends to retain earnings, if any, for use in its business and does not anticipate that any funds will be available for the payment of cash dividends on its outstanding shares in the foreseeable future. The holders of Common Stock will not be entitled to receive dividends in any year until the holders of the Class A Redeemable Convertible Preferred Stock receive an annual non-cumulative dividend preference of \$.072 per share. To date, a total of 740,000 shares of Class A Redeemable Convertible Preferred Stock have been converted into 222,000 shares of Class A Common Stock, leaving outstanding 40,000 shares of Class A Redeemable Convertible Preferred Stock. The aggregate non-cumulative annual dividend preference of such Class A Redeemable Convertible Preferred Stock is \$2,880. There is no public market for the Company's Class A Redeemable Convertible Preferred Stock or Class B Common Stock; however, such stock is convertible into Class A Common Stock at the option of the holder and upon transfer by the holder of the Class A Redeemable Convertible Preferred Stock.

## Repurchases of Equity

The Company made no repurchases of our common stock during our fourth fiscal quarter ended March 31, 2011.

## Item 6. Selected Financial Data

Advanced Photonix, Inc. is a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and is not required to provide the information required under this item.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

## Forward-Looking Statements

Certain statements contained in this Management's Discussion and Analysis (MD&A), including, without limitation, statements containing the words "may," "will," "can," "anticipate," "believe," "plan," "estimate," "continue," and similar expressions constitute "forward-looking statements." These forward-looking statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including risks described in the Risk Factors sections and elsewhere in this filing. Except for our ongoing obligation to disclose material information as required by federal securities laws, we do not intend to update you concerning any future revisions to any forward-looking statements to reflect events or circumstances occurring after the date of this report. The following discussion should be read in conjunction with the Risk Factors as well as our financial statements and the related notes.

## Global Economic Conditions

In recent years, the credit and financial markets have experienced significant volatility characterized by the bankruptcy, failure, collapse or sale of various financial institutions, increased volatility in securities and commodities prices and currency rates, severely diminished liquidity and credit availability, concern over the economic stability of certain economies in Europe and a significant level of intervention from the United States and other governments, as applicable. Continued concerns about the systemic impact of potential long-term or widespread recession, unemployment, energy costs, geopolitical issues including government deficits, the availability and cost of credit, and reduced consumer confidence have contributed to increased market volatility and diminished expectations for most developed and emerging economies. While recent economic data reflect some stabilization of the economy and credit markets, the cost and availability of credit may continue to reflect volatility and uncertainty. Continued turbulence in the United States and international markets and global economies could restrict our ability and the ability of our customers to refinance indebtedness, increase the costs of borrowing, limit access to capital necessary to meet liquidity needs and materially harm operations or the ability to implement planned business strategies. With respect to our customers, these factors could also negatively impact the timing and amount of infrastructure spending, further negatively impacting our sales.

### Critical Accounting Policies and Estimates

The discussion and analysis of Company's financial condition and results of operations is based on its condensed consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. The preparation of these condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statement and the reported amount of revenues and expenses during the reporting period. The Company bases its estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances. Actual results may differ from such estimates under different assumptions or conditions.

Certain prior year balances have been reclassified in the consolidated financial statements to conform to the current year presentation.

### Application of Critical Accounting Policies

Application of our accounting policies requires management to make certain judgments and estimates about the amounts reflected in the financial statements. Management uses historical experience and all available information to make these estimates and judgments, although differing amounts could be reported if there are changes in the assumptions and estimates. Estimates are used for, but not limited to, the accounting for the allowance for doubtful accounts, inventory cost adjustments, impairment costs, depreciation and amortization, warranty costs, taxes and contingencies. Management has identified the following accounting policies as critical to an understanding of our financial statements and/or as areas most dependent on management's judgments and estimates.

### Revenue Recognition

Revenue is derived principally from the sales of the Company's products. The Company recognizes revenue when persuasive evidence of an arrangement exists, usually in the form of a purchase order, when shipment has occurred since its terms are FOB source, or when services have been rendered, title and risk of loss have passed to the customer, the price is fixed or determinable and collection is reasonably assured in terms of both credit worthiness of the customer and no post shipment obligations or uncertainties with respect to customer acceptance.

The Company sells certain of its products to customers with a product warranty that provides warranty repairs at no cost. The length of the warranty term is one year from date of shipment. The Company accrues the estimated exposure to warranty claims based upon historical claim costs. The Company's management reviews these estimates on a regular basis and adjusts the warranty provisions as actual experience differs from historical estimates or as other information becomes available.

The Company does not provide price protection or general right of return. The Company's return policy only permits product returns for warranty and non-warranty repair or replacement and requires pre-authorization by the Company prior to the return. Credit or discounts, which have been historically insignificant, may be given at the discretion of the Company and are recorded when and if determined.

The Company predominantly sells directly to original equipment manufacturers with a direct sales force. The Company sells in limited circumstances through distributors. Sales through distributors represent approximately 6% of total fiscal 2011 revenue. Significant terms and conditions of distributor agreements include FOB source, net 30 days payment terms, with no return or exchange rights, and no price protection. Since the product transfers title to the distributor at the time of shipment by the Company, the products are not considered inventory on consignment.

Revenue is also derived from technology research and development contracts. We recognize revenue from these contracts as services and/or materials are provided.

#### Impairment of Long-Lived Assets

As of March 31, 2011 and March 31, 2010, our consolidated balance sheet included \$4.6 million in goodwill. Goodwill represents the excess purchase price over amounts assigned to tangible or identifiable intangible assets acquired and liabilities assumed from our business acquisitions.

Goodwill and intangible assets that are not subject to amortization shall be tested for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test shall consist of a comparison of the fair value of the asset with its carrying amount, as defined. This guidance requires a two-step method for determining goodwill impairment. Step one is to compare the fair value of the reporting unit with the unit's carrying amount, including goodwill. If this test indicates that the fair value is less than the carrying value, then step two is required to compare the implied fair value of the reporting unit's goodwill with the carrying amount of the reporting unit's goodwill. If the carrying amount of the asset exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess. The Company has selected March 31 as the date for its annual impairment test.

We determine the fair value of our single reporting unit to be equal to our market capitalization plus a control premium. Market capitalization is determined by multiplying the shares outstanding on the assessment date by the average market price of our Common Stock over a 10-day period before and a 10-day period after each assessment date. We use this 20-day duration to consider inherent market fluctuations that may affect any individual closing price. We believe that our market capitalization alone does not fully capture the fair value of our business as a whole, or the substantial value that an acquirer would obtain from its ability to obtain control of our business. As such, in determining fair value, we add a control premium — which seeks to give effect to the increased consideration a potential acquirer would be required to pay in order to gain sufficient ownership to set policies, direct operations and make decisions related to our Company— to our market capitalization.

The Company's evaluation as of March 31, 2011 and March 31, 2010, indicated there were no impairments. As of March 31, 2011, our market capitalization calculated as described as above, was \$53.4 million and our carrying value, including goodwill, was \$20.2 million.

As of March 31, 2010, our market capitalization, calculated as described above, was \$14.2 million and our carrying value, including goodwill, was \$14.4 million. We applied a 25% control premium to market capitalization to determine a fair value of \$17.8 million. We believe that including a control premium at this level is supported by recent transaction data in our industry. Absent the inclusion of a control premium, our carrying value would have exceeded fair value, requiring a step two analysis which may have resulted in an impairment of goodwill.

As evidenced above, our stock price and control premium are significant factors in assessing our fair value for purposes of the goodwill impairment assessment. Our stock price can be affected by, among other things, changes in industry or market conditions, changes in our results of operations, and changes in our forecasts or market expectations relating to future results. Our stock price has fluctuated from a high of \$2.63 to a low of \$1.51 during the fourth quarter of fiscal 2011. On all trading days during the fourth quarter of fiscal 2011, our stock price was high enough that our market capitalization exceeded our carrying value without giving effect to a control premium. The current macroeconomic environment, however, continues to be challenging and we cannot be certain of the duration of these conditions and their potential impact on our stock price performance. If our market capitalization falls below our carrying value for a sustained period, it is reasonably likely that a goodwill impairment assessment prior to the next annual review in the fourth quarter of fiscal 2012 would be necessary and an impairment of goodwill may be recorded. A non-cash goodwill impairment charge would have the affect of decreasing our earnings or increasing our

losses in such period. If we are required to take a substantial impairment charge, our operating results would be materially adversely affected in such period.

The carrying value of long-lived assets, including amortizable intangibles and property and equipment, are evaluated whenever events or changes in circumstances indicate that a potential impairment has occurred relative to a given asset or assets. Impairment is deemed to have occurred if projected undiscounted cash flows associated with an asset are less than the carrying value of the asset. The estimated cash flows include management's assumptions of cash inflows and outflows directly resulting from the use of that asset in operations. The amount of the impairment loss recognized is equal to the excess of the carrying value of the asset over its then estimated fair value. As a result of the current year operating loss, the Company performed an impairment evaluation. The Company's evaluation for the fiscal year ended March 31, 2011 indicated there were no impairments.

### Accounting for Income Taxes

Income tax provisions and benefits are made for taxes currently payable or refundable, and for deferred income taxes arising from future tax consequences of events that were recognized in the Company's financial statements or tax returns. The effects of income taxes are measured based on enacted tax laws and rates applicable to periods in which the differences are expected to reverse. If necessary, a valuation allowance is established to reduce deferred income tax assets to an amount that will more likely than not be realized in accordance with FASB guidance pertaining to accounting for income taxes.

As part our assessment of the need for a valuation allowance, we consider all available evidence, both positive and negative, including our recent operating results and our forecasting process. The Company forecasts taxable income through its budgeting and planning process each year. The process takes into account existing contracts, firm sales backlog, and projected sales based upon customer supplied forecasts of product purchases its design wins, Company resources needed to fulfill these customers' requirements, and extraordinary expenses that may be part of long-term initiatives to increase shareholder value through revenue growth and efficiency improvements leading to profit improvement. The Company has substantial history, more than 10 years in most cases, with its customers and its market on which its forecasts are based.

At March 31, 2011, the Company had net operating loss carry forwards (NOL's) of approximately \$20.7 million for Federal income tax purposes and \$5.8 million for state income tax purposes that expire at various dates through fiscal year 2031. The tax laws related to the utilization of loss carry forwards are complex and the amount of the Company's loss carry forward that will ultimately be available to offset future taxable income may be subject to annual limitations under Internal Revenue Code (IRC) Section 382 resulting from changes in the ownership of the Company's Common Stock.

The Company performed an analysis to determine whether an ownership change under IRC Section 382 had occurred. The effect of an ownership change would be the imposition of an annual limitation on the use of the net operating loss carry forwards attributable to periods before the change. As of March 31, 2011, the Company believes there are no limitations on the use of these Federal NOLs.

At March 31, 2011, the Company's net deferred tax asset before consideration of a valuation allowance was approximately \$8.5 million, mainly consisting of net operating loss carry-forwards. In assessing the realizability of deferred tax assets, the Company has determined that at this time it is "more likely than not" that deferred tax assets will not be realized, primarily due to uncertainties related to its ability to utilize the net operating loss carry-forwards before they expire based on the negative evidence of its recent years history of losses, including tax losses in two of the last three years and cumulative taxable losses over the past three years, outweighing the positive evidence of taxable income projections in future years. The ultimate realization of these deferred tax assets is dependent upon the generation of future taxable income during those periods in which those temporary differences become deductible or within the periods before NOL carry forwards expire. As of both March 31, 2011 and 2010, the Company recorded a full valuation allowance on its net deferred tax.

The calculation of federal income taxes involves dealing with uncertainties in the application of complex tax regulations. The Company recognizes liabilities for uncertain tax positions based on a two-step process. The first step involves evaluating the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step involves estimating and measuring the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as we have to determine the probability of various possible outcomes. Our evaluation of uncertain tax positions is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit, and new audit activity. Such a change in recognition or measurement would



result in the recognition of a tax benefit or an additional charge to the tax provision. The Company has taken no tax positions which would require disclosure. Although the IRS is not currently examining any of our income tax returns, tax years 2007 to 2010 remain open and are subject to examination.

## Inventories

Inventories, which include material, labor and manufacturing overhead, are stated at the lower of cost (on a first in–first out basis) or market. Slow moving and obsolete inventories are reviewed throughout the year to assess whether a cost adjustment is required. Our review of slow moving and obsolete inventory begins with a listing of all inventory items which have not moved regularly within the past 12 months. In addition, any residual inventory, which is customer specific and remaining on hand at the time of contract completion, is included in the list. The complete list of slow moving and obsolete inventory is then reviewed by the production, engineering and/or purchasing departments to identify items that can be utilized in the near future. These items are then excluded from the analysis and the remaining amount of slow-moving and obsolete inventory is then further assessed and a write down is recorded when warranted. Additionally, non-cancelable open purchase orders for parts we are obligated to purchase where demand has been reduced may also be written down. Impairments for open purchase orders where the market price is lower than the purchase order price are also recorded. The impairments established for excess, slow moving, and obsolete inventory create a new cost basis for those items. The cost basis of these parts is not subsequently increased if the circumstances which led to the impairment change in the future. If a product that had previously been impaired is subsequently sold, the amount of reduced cost basis is reflected as cost of goods sold.

## Results of Operations

### Fiscal Year Ended March 31, 2011 Compared to Fiscal Year Ended March 31, 2010

#### Revenues

The Company predominantly operates in one industry segment, light and radiation detection devices that it sells to multiple markets including telecommunications, industrial sensing/NDT, military/aerospace, medical, and homeland security. Revenues by market consisted of the following:

|                        | Year ended     |       |                |       |
|------------------------|----------------|-------|----------------|-------|
|                        | March 31, 2011 |       | March 31, 2010 |       |
| Telecommunications     | \$ 11,000,000  | 38 %  | \$ 5,763,000   | 27 %  |
| Industrial Sensing/NDT | 11,618,000     | 40 %  | 8,457,000      | 40 %  |
| Military/Aerospace     | 4,836,000      | 17 %  | 6,283,000      | 30 %  |
| Medical                | 828,000        | 3 %   | 411,000        | 2 %   |
| Homeland Security      | 556,000        | 2 %   | 161,000        | 1 %   |
| Total Revenues         | \$ 28,838,000  | 100 % | \$ 21,075,000  | 100 % |

The Company's revenues for fiscal 2011 were \$28.8 million, an increase of \$7.7 million, or 37%, from revenues of \$21.1 million for fiscal 2010. The Company experienced increases in four of our five markets during fiscal 2011.

Telecommunications sales were \$11.0 million, an increase of \$5.2 million or 91% from fiscal 2010. The increase in the Company's telecommunications revenues for fiscal 2011 was the result of our product development investment over the past few years and rapid growth in the 40G and emerging 100G markets. The Company's Telecommunications revenue in the fourth quarter increased approximately 182% (\$2.5 million) over the prior year fourth quarter and increased approximately 17% from the third quarter of the current year, an indication of the rapid growth in the 40G and emerging 100G products. The Company expects telecommunication revenue to continue to grow in fiscal year 2012.

Industrial Sensing/NDT market revenues were \$11.6 million in fiscal 2011, an increase of 37% (or \$3.1 million) from fiscal 2010 revenues of \$8.5 million. This growth reflects a continued strengthening in our industrial markets as the economy continues to strengthen and increased revenue from our Terahertz NDT application development contracts, including our contract to inspect the F-35 Joint Strike Fighter. The Company's Industrial Sensing/NDT revenue in the

fourth quarter of the current year decreased 4% (\$97,000) from the comparable prior year quarter, and increased approximately 6%, or \$149,000, from the third quarter of the current year. Growth in our consecutive quarters reflects a gradual strengthening in our industrial markets as the economy continues to recover from the economic recession. The Company expects moderate growth in the industrial/NDT market in fiscal year 2012.

Military/Aerospace market revenues were \$4.8 million, a decrease of 23% (or \$1.5 million) from the comparable prior year revenues of \$6.3 million. The Company's military/aerospace market revenue in the fourth quarter of the current year decreased 41% (\$618,000) from the third quarter of the current year and decreased 16% (\$164,000) from the prior year fourth quarter. This decrease was attributable primarily to the timing of customer order releases and a slight reduction in customer requirements. The Company's expects military revenues to remain stable during the coming fiscal year.

Medical market revenues increased \$417,000 or 102% from the prior year of \$411,000. Although the Company's medical market revenue in the fourth quarter of the current year decreased 66% (\$294,000) from the third quarter of the current year, it increased 116% (\$82,000) from the prior year fourth quarter. The increase year over year was primarily a result of new orders from existing customers in fiscal year 2011. The Company expects Medical market revenues to increase moderately in fiscal year 2012.

Homeland security revenues increased 245% (\$395,000) to \$556,000. The Company's Homeland Security market revenue in the fourth quarter of the current year increased \$369,000 over the third quarter of the current year and increased \$456,000 over the prior year fourth quarter. This increase was the result of the In-Q-Tel development contract revenues relating to the development of anomaly detector prototypes for personnel screening. The Company expects Homeland Security revenues for fiscal year 2012 to grow substantially as a result of this development contract.

#### Gross Profit

Gross Profit was \$12.4 million (or 43% of revenue), compared to the prior year of \$9.0 million (43% of revenue). The higher gross profit in dollars was due primarily to increased volume and product mix, offset partially by higher scrap and rework expenses associated with the manufacturing ramp up of 40G and 100G line side products.

#### Operating Expenses

Research and Development expenses (R&D) -- The Company's R&D expenses increased approximately 19%, or \$893,000, over the prior year. R&D expenses of \$5.6 million for fiscal 2011 compared to \$4.7 million in fiscal 2010 were 20% and 22% of sales, respectively. The Company increased investment in the next generation 40G/100G HSOR products and THz application and market development in fiscal 2011 in order to gain HSOR market share and move THz from the laboratory to the manufacturing floor and into homeland security applications.

Sales and Marketing expenses (S&M) -- The Company's S&M expenses increased \$225,000 (or 14%) to \$1.9 million (7% of sales) in fiscal 2011 compared to \$1.7 million (8% of sales) in fiscal 2010. The increase was primarily attributable to additional sales and marketing activities to support the Company's growth.

General and Administrative expenses (G&A) -- G&A expenses decreased \$128,000 to approximately \$4.0 million (14% of sales) for fiscal 2011, as compared to \$4.2 million (20% of sales) for fiscal 2010. Although the decrease was minimal, it was primarily attributable to lower stock option, legal and business tax expenses, offset by higher labor expenses and listing fees associated with the sale of the Company's Class A Common Stock.

Amortization expense decreased \$438,000 to \$1.6 million compared to the prior year of approximately \$2.1 million. The Company utilizes the cash flow amortization method on the majority of its intangible assets.

The Company's evaluations of Intangible assets and Goodwill for the years ended March 31, 2011 and 2010 resulted in no impairment adjustments.

Financing and Other Income (Expense), net

Interest income for fiscal 2011 decreased \$3,000 to approximately \$5,000, compared to \$8,000 in fiscal 2010, due primarily to lower cash balances available for short-term investment and lower interest rates in fiscal 2011.

Interest expense for fiscal 2011 was \$237,000 as compared to \$304,000 in fiscal 2010, a decrease of \$67,000, primarily attributable to lower interest rates and reduced debt obligations.

For the year ended March 31, 2011, the Company incurred other expense of \$491,000 on the change in fair value of the warrant liability, compared to other income of \$182,000 for the year ended March 31, 2010.

FASB guidance on determining whether instruments granted in share-based payment transactions are participating securities requires our outstanding warrants to be recorded as a liability at fair value with subsequent changes in fair value recorded in earnings. The fair value of the warrant is determined using a Black-Scholes option pricing model, and is affected by changes in inputs to that model including our stock price, expected stock price volatility and contractual term. The Company compared the fair values determined using the Black-Scholes model with that using a lattice model, which is generally a preferred model when instruments contain non-standard features such as the reset features contained in our warrants, noting no significant differences in warrant values. To the extent that the fair value of the warrant liability increases or decreases, the Company records an expense or income in its statements of operations. The expense of \$491,000 related to the change in fair value of the warrant liability for fiscal 2011 is due to the increase in the stock price, expected volatility, interest rates and contractual life of the warrants which are the primary assumptions applied to the Black-Scholes model used to calculate the fair value of the warrants.

During fiscal year 2011, the Company recorded a Loss on debt extinguishment of \$318,000, as a result of amending The Picometrix Notes as described in Note 6 to the Consolidated Financial Statements.

Net loss for fiscal 2011 was \$1.9 million (\$0.07 per share), as compared to net loss of \$3.7 million (\$0.15 per share) in fiscal 2010, a decrease in loss of \$1.8 million. The decrease in losses for the year were primarily attributable to higher revenue offset partially by an increase in cost associated with new product revenue and increased R&D expenses in the growth product platforms. The non-cash impact of recording the change in fair value of warrant liability and the loss on debt extinguishment accounted for \$809,000 (or 43%) of the loss for fiscal 2011, which represents \$0.03 per share.

#### Liquidity and Capital Resources

At March 31, 2011, the Company had cash and cash equivalents of \$4.7 million, an increase of \$3.0 million from \$1.7 million as of March 31, 2010. Cash generated from financing activities in fiscal 2011 accounted for \$5.1 million, offset by a reduction in cash from investing activities of \$1.6 million and a reduction in cash from operating activities of \$473,000.

#### Operating Activities

Net cash used in operating activities of \$473,000 for the year ended March 31, 2011 was primarily the result of net cash provided by operations of \$1.7 million offset by net cash used by changes in operating assets and liabilities of \$2.2 million. The net cash provided by operations included a net loss of \$1.9 million, offset by non-cash expenses of \$3.6 million, including \$2.8 million from depreciation, amortization and stock based compensation expense; approximately \$491,000 for the change in the fair value of warrants; and \$318,000 from loss on debt extinguishment. The net use of cash by changes in operating assets and liabilities of \$2.2 million was primarily a result of higher revenues which increased accounts receivable by \$1.9 million and inventories by \$1.1 million, offset by increases in accounts payable of \$1.1 million. Prepaid and other assets increased \$323,000, offset by increased accrued expenses of \$50,000.

Net cash provided by operating activities of \$152,000 for the year ended March 31, 2010 was primarily the result of net cash provided by changes in operating assets and liabilities of \$406,000, offset by net cash used in operations of \$254,000. The net cash used in operations included a net loss of \$3.7 million, offset by net cash expenses of \$3.6 million from depreciation, amortization and stock based compensation expense, and non-cash income of approximately \$182,000 to record a change in the fair value of warrants. Changes in operating assets and liabilities were primarily a result of lower revenues which reduced accounts receivable by \$605,000 and lowered accounts payable by \$350,000. Prepaid and other assets were lower by \$63,000 and accrued expenses increased by \$75,000.

Investing Activities

Net cash used in investing activities was approximately \$1.6 million for the year ended March 31, 2011. The amount consisted of capital expenditures of approximately \$1.4 million and patent expenditures of \$251,000.

Net cash used in investing activities was approximately \$44,000 for the year ended March 31, 2010. The amount consisted of capital expenditures of approximately \$130,000 (which includes \$40,000 to complete the conversion of the California clean room to hybrid assembly manufacturing space), and patent expenditures of \$192,000, offset by the elimination of the certificate of deposit of \$278,000 required by the amended operating lease of the Ann Arbor facility.

### Financing Activities

Net cash provided by financing activities was \$5.1 million for the year ended March 31, 2011. The amount consisted of net proceeds from the sale of Class A Common Stock of \$6.6 million, proceeds from the exercise of stock options of \$105,000 and proceeds from the exercise of warrants of \$243,000. These were partially offset by a net reduction in bank debt of \$1.3 million, reduction in related party debt of \$226,000 and the reduction in MEDC/MSF debt of \$253,000.

The Company used \$418,000 in net cash from financing activities in fiscal 2010, primarily to reduce \$434,000 in bank debt, offset by proceeds from stock options exercised of \$16,000.

### Debt

Related Parties Debt - As a result of the 2005 acquisition of Picometrix, LLC (f/k/a Picometrix, Inc.), the Company issued four-year promissory notes in the aggregate principal amount of \$2.9 million (the Picometrix Notes) to Robin Risser, the Company's COO and CFO, and Steve Williamson, the Company's CTO (collectively, the Note Holders). API has the option of prepaying the Picometrix Notes without penalty.

On November 30, 2009, the Company and the Note Holders entered into the fourth amendments to the Picometrix Notes to extend the due date for the remaining principal balance of the Related Party Notes (in the aggregate amount of \$1,400,500) to March 1, 2011 payable in two installments as follows:

| Payment Date     | Principal Payment |
|------------------|-------------------|
| December 1, 2010 | \$ 450,000        |
| March 1, 2011    | \$ 950,500        |

As described in the Bank Debt section of Note 6 to the Consolidated Financial Statements, the Company's credit facility agreement (the Loan Agreement) with The PrivateBank and Trust Company (the Lender) required that the Company amend the Picometrix Notes to defer the December 1, 2010 and March 1, 2011 installment payments (the Amendment Undertaking). In compliance with the Amendment Undertaking, on November 29, 2010, the Company and the Note Holders entered into the fifth amendments to the Picometrix Notes (the Fifth Amendment). The Fifth amendment required the Company to pay the Note Holders a restructuring fee of \$156,312 (11%) and extended the due dates for the remaining principal balance payments on the Picometrix Notes (in the aggregate amount of \$1,400,500) to September 1, 2012 per the payment schedule below:

| Payment Date      | Principal Payment |
|-------------------|-------------------|
| December 1, 2010  | \$ 150,000        |
| March 1, 2011     | \$ 75,000         |
| June 1, 2011      | \$ 75,000         |
| September 1, 2011 | \$ 150,000        |
| December 1, 2011  | \$ 225,000        |
| March 1, 2012     | \$ 225,000        |
| June 1, 2012      | \$ 225,000        |
| September 1, 2012 | \$ 275,500        |

The interest rate on the Picometrix Notes was increased from prime plus 1% to prime plus 2% (5.25% at March 31, 2011), and interest is to be paid quarterly through the maturity date. The balance outstanding under the Picometrix Notes was \$1,175,000 at March 31, 2011. The Picometrix Notes are secured by all of the intellectual property of Picometrix.



Interest payments made to Note Holders during the years ended March 31, 2011 and March 31, 2010 were \$61,000 and \$60,000, respectively.

In conjunction with the Fifth Amendment to the Picometrix Notes, on November 15, 2010, the Company and the Note Holders entered into a securities purchase agreement (the SPA), which was subsequently amended and restated on November 29, 2010, in its entirety to reflect certain structural changes in the transaction as originally agreed upon by the parties to the SPA. As amended and restated, the SPA provided for the Company to issue and sell to the Note Holders in exchange for an aggregate payment of \$78,156.25 (the Purchase Price) the number of units of the Company's securities (Units) determined by dividing the Purchase Price by the per share closing price of the Company's Common Stock on NYSE Amex on the day preceding the closing (the Formula Price). Each Unit was to consist of one share of the Company's Class A Common Stock and a five-year warrant to purchase four shares of the Company's Class A Common Stock at an exercise price equal to 120% of the Formula Price (the 2010 Warrants). The closing of the purchase and sale transactions contemplated by the SPA was subject to the receipt of NYSE Amex approval of an additional listing application covering the Units (the Note Holder Additional Listing Application) and other closing conditions customary for transactions of this nature. On November 30, 2010, NYSE Amex approved the Note Holder Additional Listing Application and the parties to the SPA satisfied the other closing conditions. The Formula Price was determined to be \$1.17 and accordingly, the Company issued the Note Holders 66,799 Units comprised of (i) 66,799 shares of Common Stock and (ii) 2010 Warrants to purchase an aggregate of 267,196 shares of Common Stock at an exercise price of \$1.404 per share pursuant to separately executed warrant agreements (collectively, the Warrant Agreements) upon the closing of the SPA on November 30, 2010. While the exercise price of the 2010 Warrants is subject to adjustment as defined in the Warrant Agreements, such adjustment cannot reduce the exercise price below \$1.17 per share.

The Company performed an assessment of the Fifth Amendment made to the Picometrix Notes and determined that the Fifth Amendment constituted a "substantial modification" in accordance with FASB guidance as the present value of future cash flows under the terms of the Fifth Amendment, combined with the fair value of the consideration given as part of the SPA, was more than 10% different than the present value of cash flows under the prior amendment to the Picometrix Notes. As a result, the Company recorded a loss on debt extinguishment of \$317,725, which is equal to the \$156,312 restructuring fee and the fair value of the warrants issued in conjunction with the SPA which was \$161,413 at November 30, 2010. See Note 10 to the Consolidated Financial Statements for additional information on the Warrants.

**Bank Debt** –On September 25, 2008, the Company executed the Loan Agreement with the Lender. As part of this Loan Agreement, the Company has a term loan and a \$3.0 million line of credit. The term loan is to be repaid in monthly principal payments of \$36,167, plus interest at prime plus 2%, until maturity on September 25, 2012, provided that if the existing loans to the Company by the Michigan Economic Development Corporation (MEDC) or Michigan Strategic Fund (MSF) have not converted to equity on or before August 31, 2011, the outstanding principal shall be due on August 31, 2011. As there are no assurances that these loans will be converted to equity by August 31, 2011, the entire outstanding balance of the bank term note is reflected as a current obligation as of March 31, 2011. The interest rate on the term loan on March 31, 2011 was 5.25%. The line of credit bears interest at prime plus 2% (5.25% at March 31, 2011) and any outstanding borrowings are due on September 25, 2011, provided that if the existing loans to the Company by the MEDC or MSF have not been converted to equity on or before August 31, 2011, the outstanding principal will be due on August 31, 2011. The availability under the line of credit is determined by a calculation of a borrowing base that includes a percentage of accounts receivable and inventory.

The line of credit is guaranteed by each of API's wholly-owned subsidiaries and the term loan is secured by a Security Agreement among API, its subsidiaries and the Lender, pursuant to which API and its subsidiaries granted to the Lender a first-priority security interest in certain described assets.

The Loan Agreement contains financial covenants (the Financial Covenants) including minimum Debt Service Coverage ratio, Adjusted EBITDA level, and Net Worth requirements (each as defined in the Loan Agreement). On May 29, 2009, the Company amended the Loan Agreement effective March 31, 2009 (the First Amendment).

Pursuant to the First Amendment, (1) the Adjusted EBITDA level was measured on a year to date basis for the June 26, 2009, September 25, 2009, December 25, 2009 and March 31, 2010 test dates and thereafter was to be measured on a trailing four quarter basis, (2) the minimum Debt Service Coverage ratio was set at 1.0 to 1.0 for the first quarter of fiscal year 2010, 1.25 to 1.0 for the second quarter of fiscal year 2010 and 1.5 to 1.0 thereafter, and (3) the minimum Net Worth covenant was initially set at \$15.5 million and would automatically increase by 10% of Net Income (as defined in the Loan Agreement) for each fiscal year that the Company reported net income.

At December 25, 2009 and March 31, 2010, the Company was not in compliance with the Financial Covenants. This constituted an event of default under the terms of the Loan Agreement which gave the Lender the ability to provide us with notice that they are exercising their rights under the Loan Agreement by demanding payment in full of the outstanding indebtedness under the Loan Agreement.

On June 25, 2010, the Company and the Lender entered into a second amendment to the Loan Agreement (the Second Amendment). The Second Amendment increased the interest rate from prime plus 1% to prime plus 2% and amended the Financial Covenants. Pursuant to the Second Amendment, (1) the minimum Debt Service Coverage ratio was set at 1.0 to 1.0 for the first three quarters of fiscal 2011 and 1.2 to 1.0 thereafter (2) the minimum Adjusted EBITDA level is measured on a trailing three month basis and was \$190,000 for the July 2, 2010 test date, \$190,000 for the October 1, 2010 test date, \$260,000 for the December 31, 2010 test date, and \$400,000 for the March 31, 2011 test date, and thereafter on a trailing twelve month basis will be \$1,160,000 and (3) the minimum Net Worth requirement was set at \$13.0 million for the first quarter of fiscal year 2011, \$12.5 million for the second quarter of fiscal year 2011, \$12.1 million for the third quarter of fiscal year 2011 and \$11.8 million for the fourth quarter of fiscal year 2011. The Company was in compliance with its financial covenants as of March 31, 2011.

In addition to amending the Financial Covenants and as described above under the heading "Related Parties Debt", the Second Amendment required the Company to amend the Picometrix Notes by August 25, 2010 to defer the December 1, 2010 and March 1, 2011 installment payments owed under the Picometrix Notes (the Amendment Undertaking). Failure to amend the Picometrix Notes by August 25, 2010 would constitute an event of default under the Loan Agreement.

On August 27, 2010, the Company executed a third amendment to the Loan Agreement with the Lender (the Third Amendment). The Third Amendment (1) increased the amount of proceeds from equity issuances that the Company may use to make payments in respect of the Company's existing indebtedness under the Picometrix Notes and (2) extended the deadline set forth in the Second Amendment for satisfying the Amendment Undertaking.

On November 30, 2010, the Company executed a Fourth Amendment to the Loan Agreement with the Lender, effective as of November 30, 2010 (the Fourth Amendment). Among other things, the Fourth Amendment (1) deleted the Amendment Undertaking, (2) approved the amendments to the Picometrix Notes described above under the heading "Related Parties Debt" and the payment of a restructuring fee in connection therewith, (3) amended the definition of "Adjusted EBITDA" to add back a portion of the restructuring fee to the calculation of the "Adjusted EBITDA" and (4) amended the definition of "Debt Service Coverage Ratio" to exclude the proceeds raised pursuant to the SPA from the calculation of the "Debt Service Coverage Ratio".

Interest payments made to the Lender during the years ended March 31, 2011 and March 31, 2010 were approximately \$112,000 and \$118,000, respectively.

MEDC/MSF Loans – The MEDC entered into two loan agreements with Picometrix LLC, one in fiscal 2005 (MEDC-loan 1) and one in fiscal 2006 (MEDC-loan 2). Both loans are unsecured.

The MEDC-loan 1 was issued in the original principal amount of \$1,025,000. Under the original terms of the MEDC-loan 1, the interest rate was 7% and interest accrued but unpaid through October 2008 would be added to then outstanding principal balance of the promissory note issued pursuant to the MEDC-loan 1 and the restated principal would be amortized over the remaining four years (September 15, 2012). Effective September 23, 2008, the MEDC-loan 1 was amended and restated to change the start date of repayment of principal and interest from October 2008 to October 2009.



During the fourth quarter of fiscal 2010, the Company began negotiations with the MEDC to further amend the MEDC-loan 1 promissory note. The Company and the MEDC agreed that the payment of restated principal and accrued interest was to be suspended until the negotiations were completed. In May 2010, the Company entered into a debt conversion agreement with the MEDC whereby the MEDC would convert the accrued and unpaid interest as of November 30, 2009 totaling \$324,669 into 601,239 unregistered shares of the Class A Common Stock of the Company at a price per share of \$0.54 (market value of stock on the day of conversion). In addition, the Company granted the MEDC a put option to sell back to the Company the shares received pursuant to the debt conversion agreement in the event of a trigger event as defined in the debt conversion agreement. In conjunction with the debt conversion agreement, the Company amended the MEDC-loan 1 promissory note to retroactively change the interest rate from 7% to 4% beginning in December 2009, and to change the repayment terms of the outstanding principal and interest such that beginning in October 2010, the Company is to repay the remaining principal and accrued interest on a monthly basis through maturity in November 2014.

MEDC-loan 2, which was assigned to MSF in June 2010, was issued in the original amount of \$1.2 million. Under the original terms of the MEDC-loan 2, the interest rate was 7% and interest accrued, but unpaid in the first two years of this agreement was added to the then outstanding principal of the promissory note issued pursuant to the MEDC-loan 2. During the third year of this agreement, the Company was to pay interest on the restated principal of the promissory note until October 2008, at which time the Company was to repay the restated principal over the remaining three years (September 15, 2011). Effective January 26, 2009, the MEDC-loan 2 was amended and restated to change the start date of repayment of principal and interest from October 2008 to November 2009 and to extend the repayment period to October 2012.

During the fourth quarter of fiscal 2010, the Company began negotiations with the MEDC to further amend the MEDC-loan 2 promissory note. The Company and the MEDC agreed that the payment of restated principal and accrued interest was to be suspended until the negotiations were completed. In May 2010, the Company entered into a debt conversion agreement with the MEDC whereby the MEDC would transfer the MEDC-loan 2 promissory note to the MSF which would convert the accrued and unpaid interest as of October 31, 2009 totaling \$237,667 into 440,124 unregistered shares of the Class A Common Stock of the Company at a price per share of \$0.54 (market value of the stock on the day of conversion). In addition, the Company granted the MSF a put option to sell back to the Company the shares received pursuant to the debt conversion agreement in the event of a trigger event as defined in the debt conversion agreement. In conjunction with the debt conversion agreement, the Company amended the MEDC-loan 2 promissory note to retroactively change the interest rate from 7% to 4% beginning in November 2009, and to change the repayment terms of the outstanding principal and interest such that beginning in July 2010, the Company is to repay the remaining principal and accrued interest on a monthly basis through maturity in September 2014.

The Company performed an assessment of the amendments made to the MEDC and MSF loans during the second quarter of fiscal 2011 to determine whether or not the amendments constituted a “troubled debt restructuring” or a “substantial modification” in accordance with FASB guidance and concluded that the amendments did not constitute either a troubled debt restructuring or a substantial modification. Furthermore, the Company performed an assessment of the balance sheet classification of the common shares issued as part of the debt conversion agreements in light of the put options granted and determined that equity classification of the shares is appropriate since the trigger event related to the put option is considered to be in the control of the Company.

The Company believes that current cash levels combined with cash generated from operations, our revolving line of credit and/or additional debt or equity financing will be sufficient for our 2012 fiscal year.

#### Summary of Contractual Obligations and Commitments

The following table sets forth the contractual obligations of the Company at March 31, 2011.



| Contractual Obligations                               | Payments due by period |                    |                    |                    |                    |
|---|------------------------|--------------------|--------------------|--------------------|--------------------|
|   | Total                  | Within 1 year      | 1 – 3 years        | 3 – 5 years        | More than 5 years  |
| Bank line of credit                                   | \$494,000              | \$494,000          | \$-                | \$-                | \$-                |
| Bank term loan  | 687,000                | 687,000            | -                  | -                  | -                  |
| Long-term MEDC loans                                  | 1,971,000              | 511,000            | 1,460,000          | -                  | -                  |
| Debt to related parties                               | 1,175,000              | 675,000            | 500,000            | -                  | -                  |
| Subtotal–Balance Sheet                                | \$4,327,000            | \$2,367,000        | \$1,960,000        | \$-                | \$-                |
| Expected interest expense on current debt obligations | 241,000                | 153,000            | 88,000             | -                  | -                  |
| Operating lease obligations                           | 7,343,000              | 967,000            | 2,493,000          | 1,829,000          | 2,054,000          |
| Purchase obligations                                  | 3,381,000              | 3,381,000          | -                  | -                  | -                  |
| <b>Total</b>  | <b>\$15,292,000</b>    | <b>\$6,868,000</b> | <b>\$4,541,000</b> | <b>\$1,829,000</b> | <b>\$2,054,000</b> |

Purchase obligations represent an estimate of all open purchase orders and contractual obligations in the ordinary course of business for which we have not yet received the goods or services. We enter into agreements with suppliers that allow them to procure inventory based upon agreements defining our material and services requirements. Although open purchase orders are considered enforceable and legally binding, the terms generally allow us the option to cancel, reschedule and adjust our requirements based on our business needs prior to the delivery of goods or the performance of services.

#### Off-Balance-Sheet Arrangements

At March 31, 2011 and March 31, 2010, we did not have any off-balance sheet arrangements or relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which are typically established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

#### Recent Accounting Pronouncements

In April 2010, the FASB issued new guidance concerning revenue recognition related to research and development projects. It clarifies that revenue can be recognized when a milestone is achieved if the milestone meet all criteria to be considered substantive. This guidance is effective for fiscal years beginning on or after June 15, 2010. The guidance will be reviewed to determine if this change will have a material impact on the Company's future financial statements.

In November 2010, the FASB issued authoritative guidance on disclosure of supplementary pro forma information for business combinations. The new guidance requires that pro forma financial information should be prepared as if the business combination occurred as of the beginning of the prior annual period. The amendments also expand the required supplemental pro forma disclosures to include a description of the nature and amount of material, nonrecurring pro forma adjustments directly attributable to the business combination included in the reported pro forma revenue and earnings. The guidance is effective for the Company for business combinations with acquisition dates occurring in and after the first quarter of fiscal 2012.

#### Item 7A. Quantitative and Qualitative Disclosures About Market Risk

At March 31, 2011, most of the Company's interest rate exposure is linked to the prime rate, subject to certain limitations, offset by cash investment tied to prime rate. As such, we are at risk to the extent of changes in the prime



rate and do not believe that moderate changes in the prime rate will materially affect our operating results or financial condition.

All Company sales and purchases are denominated in U.S. dollars. At March 31, 2011, we were not at risk to foreign currency exchange fluctuations.

Item 8. Financial Statements and Supplementary Data

The following consolidated financial statements of Advanced Photonix, Inc., prepared in accordance with Regulation S-X and the Report of the Independent Registered Public Accounting Firm are included in Item 8:

|   | Page |
|---|------|
| Report of Independent Registered Public Accounting Firm   | 36   |
| Financial Statements:   |      |
| Consolidated Balance Sheets as of March 31, 2011 and March 31, 2010                                   | 37   |
| Consolidated Statements of Operations for the years ended March 31, 2011 and March 31, 2010           | 38   |
| Consolidated Statements of Shareholders' Equity for the years ended March 31, 2011 and March 31, 2010 | 39   |
| Consolidated Statements of Cash Flows for the years ended March 31, 2011 and March 31, 2010           | 40   |
| Notes to Consolidated Financial Statements  | 41   |

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders  
of Advanced Photonix, Inc.  
Ann Arbor, Michigan

We have audited the accompanying consolidated balance sheets of Advanced Photonix, Inc. as of March 31, 2011 and March 31, 2010 and the related consolidated statements of operations, shareholders' equity and cash flows for the years then ended. In connection with our audits of the financial statements, we have also audited the financial statement schedule included at Item 15. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements and schedule. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Advanced Photonix, Inc. at March 31, 2011 and March 31, 2010, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Also, in our opinion, the financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ BDO USA, LLP  
Troy, Michigan  
June 29, 2011

ADVANCED PHOTONIX, INC.  
CONSOLIDATED BALANCE SHEETS

|  | March 31,<br>2011 | March 31,<br>2010 |
|--|-------------------|-------------------|
| <b>ASSETS</b>  |                   |                   |
| Current assets:  |                   |                   |
| Cash and cash equivalents  | \$4,744,000       | \$1,762,000       |
| Restricted cash  | 500,000           | --                |
| Accounts receivable, net of allowance for doubtful accounts of \$47,000 and \$51,000, respectively   | 4,587,000         | 2,679,000         |
| Inventories  | 4,775,000         | 3,656,000         |
| Prepaid expenses and other current assets  | 349,000           | 200,000           |
| Total current assets   | 14,955,000        | 8,297,000         |
| Equipment and leasehold improvements, net  | 3,730,000         | 3,284,000         |
| Goodwill   | 4,579,000         | 4,579,000         |
| Intangibles, net   | 5,713,000         | 7,096,000         |
| Restricted cash  | --                | 500,000           |
| Security deposits and other assets   | 275,000           | 99,000            |
| Total Assets   | \$29,252,000      | \$23,855,000      |
| <b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>  |                   |                   |
| Current liabilities:   |                   |                   |
| Accounts payable   | \$2,098,000       | \$1,006,000       |
| Accrued compensation   | 953,000           | 530,000           |
| Accrued interest   | 28,000            | 640,000           |
| Warrant liability  | 389,000           | --                |
| Other accrued expenses   | 905,000           | 1,070,000         |
| Current portion of long-term debt, related parties   | 675,000           | 1,401,000         |
| Current portion of long-term debt, MEDC/MSF  | 511,000           | 254,000           |
| Current portion of long-term debt, bank line of credit   | 494,000           | --                |
| Current portion of long-term debt, bank term loan  | 687,000           | 434,000           |
| Total current liabilities  | 6,740,000         | 5,335,000         |
| Long-term debt, less current portion – related parties   | 500,000           | --                |
| Long-term debt, less current portion – MEDC/MSF  | 1,460,000         | 1,970,000         |
| Long-term debt – bank line of credit   | --                | 1,394,000         |
| Long-term debt, less current portion – bank term loan  | --                | 687,000           |
| Warrant liability  | 343,000           | 112,000           |
| Total liabilities  | 9,043,000         | 9,498,000         |
| Commitments and contingencies  |                   |                   |
| Shareholders' equity:  |                   |                   |
| Class A redeemable convertible preferred stock, \$.001 par value; 780,000 shares authorized,<br>2011 and 2010 - 40,000 shares issued and outstanding               | --                | --                |
| Class A Common Stock, \$.001 par value, 100,000,000 authorized; 2011– 30,679,046 shares issued<br>and outstanding; 2010 – 24,463,978 shares issued and outstanding | 31,000            | 24,000            |

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Class B Common Stock, \$.001 par value; 4,420,113 shares authorized, -0- and 31,691 shares, respectively, issued and outstanding

|  |               |               |
|--|---------------|---------------|
|  | --            | --            |
| Additional paid-in capital                 | 57,891,000    | 50,164,000    |
| Accumulated deficit                        | (37,713,000 ) | (35,831,000 ) |
| Total shareholders' equity                 | 20,209,000    | 14,357,000    |
| Total Liabilities and Shareholders' Equity | \$29,252,000  | \$23,855,000  |

See Notes to Consolidated Financial Statements.

ADVANCED PHOTONIX, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS  
For the Fiscal Years Ended March 31, 2011 and 2010

|  | 2011           | 2010           |
|--|----------------|----------------|
| Sales, net                                 | \$28,838,000   | \$21,075,000   |
| Cost of products sold                      | 16,479,000     | 12,059,000     |
| Gross profit                               | 12,359,000     | 9,016,000      |
| Operating expenses:                        |                |                |
| Research and development expenses          | 5,631,000      | 4,738,000      |
| Sales and marketing expenses               | 1,888,000      | 1,663,000      |
| General and administrative expenses        | 4,032,000      | 4,160,000      |
| Amortization expense – intangible assets   | 1,633,000      | 2,071,000      |
| Wafer fabrication consolidation expenses   | --             | 40,000         |
| Total operating expenses                   | 13,184,000     | 12,672,000     |
| Loss from operations                       | (825,000 )     | (3,656,000 )   |
| Other income (expense):                    |                |                |
| Interest income                            | 5,000          | 8,000          |
| Interest expense on bank & MEDC/MSF loans  | (176,000 )     | (244,000 )     |
| Interest expense, related parties          | (61,000 )      | (60,000 )      |
| Change in fair value of warrant liability  | (491,000 )     | 182,000        |
| Loss on debt extinguishment                | (318,000 )     | --             |
| Other income (expense)                     | (16,000 )      | 7,000          |
| Total other expenses                       | (1,057,000 )   | (107,000 )     |
| Loss before benefit for income taxes       | (1,882,000 )   | (3,763,000 )   |
| Benefit for income taxes                   | --             | (85,000 )      |
| Net loss                                   | \$(1,882,000 ) | \$(3,678,000 ) |
| Basic and diluted loss per share           | \$(0.07 )      | \$(0.15 )      |
| Weighted average common shares outstanding | 26,366,000     | 24,368,000     |

See Notes to Consolidated Financial Statements.

ADVANCED PHOTONIX, INC.  
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY  
For the Fiscal Years Ended March 31, 2011 and 2010  
(In thousands, except share data)

|   | Class<br>Class A<br>Preferred<br>Shares | Class<br>A<br>Preferred<br>Amount | Class<br>A<br>Common<br>Shares | Class<br>A<br>Common<br>Amount | Class<br>B<br>Common<br>Shares | Class<br>B<br>Common<br>Amount | Additional<br>Paid-in<br>Capital | Accumulated<br>Deficit | Total     |
|---|---|-----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|------------------------|-----------|
| BALANCE,<br>MARCH 31, 2009  | 40,000                                  | \$ --                             | 24,089,726                     | \$ 24                          | 31,691                         | \$ --                          | \$ 52,400                        | \$ (34,478 )           | \$ 17,946 |
| ASC 815-40<br>cumulative<br>adjustment  | --                                      | --                                | --                             | --                             | --                             | --                             | (2,619 )                         | 2,325                  | (294 )    |
| BALANCE,<br>APRIL 1, 2009   | 40,000                                  | --                                | 24,089,726                     | 24                             | 31,691                         | --                             | 49,781                           | (32,153 )              | 17,652    |
| Exercise of stock<br>options  | --                                      | --                                | 30,000                         | --                             | --                             | --                             | 16                               | --                     | 16        |
| Issuance of<br>restricted shares  | --                                      | --                                | 344,252                        | --                             | --                             | --                             | --                               | --                     | --        |
| Stock based<br>compensation   | --                                      | --                                | --                             | --                             | --                             | --                             | 367                              | --                     | 367       |
| Net loss and<br>comprehensive<br>loss   | --                                      | --                                | --                             | --                             | --                             | --                             | --                               | (3,678 )               | (3,678 )  |
| BALANCE,<br>MARCH 31,<br>2010   | 40,000                                  | --                                | 24,463,978                     | 24                             | 31,691                         | --                             | 50,164                           | (35,831 )              | 14,357    |
| Exercise of stock<br>options  | --                                      | --                                | 194,141                        | --                             | --                             | --                             | 105                              | --                     | 105       |
| Reclassification of<br>warrant fair<br>value - PIPE                             | --                                      | --                                | --                             | --                             | --                             | --                             | 32                               | --                     | 32        |
| Reclassification of<br>Class B<br>Common Stock to<br>Class A<br>Common Stock    | --                                      | --                                | 31,691                         | --                             | (31,691 )                      | --                             | --                               | --                     | --        |
| Conversion of<br>accrued<br>interest on<br>MEDC/MSF<br>loans to<br>common stock | --                                      | --                                | 1,041,363                      | 1                              | --                             | --                             | 560                              | --                     | 561       |
| Issuance of<br>common stock   | --                                      | --                                | 4,308,108                      | 4                              | --                             | --                             | 6,285                            | --                     | 6,289     |
| Issuance of<br>restricted shares  | --                                      | --                                | 238,844                        | 1                              | --                             | --                             | --                               | --                     | 1         |

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|                                 |        |       |            |       |    |       |           |              |           |
|---------------------------------|--------|-------|------------|-------|----|-------|-----------|--------------|-----------|
| Stock based compensation        | --     | --    | --         | --    | -- | --    | 225       | --           | 225       |
| In-Q-Tel stock sale             | --     | --    | 198,524    | 1     | -- | --    | 199       | --           | 200       |
| Exercise of warrants            | --     | --    | 135,598    | --    | -- | --    | 243       | --           | 243       |
| Related party stock sale        | --     | --    | 66,799     | --    | -- | --    | 78        | --           | 78        |
| Net loss and comprehensive loss | --     | --    | --         | --    | -- | --    | --        | (1,882 )     | (1,882 )  |
| BALANCE,<br>MARCH 31, 2011      | 40,000 | \$ -- | 30,679,046 | \$ 31 | -- | \$ -- | \$ 57,891 | \$ (37,713 ) | \$ 20,209 |

See Notes to Consolidated Financial Statements.



ADVANCED PHOTONIX, INC.  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
For the fiscal years ended March 31, 2011 and 2010

|  | 2011           | 2010           |
|--|----------------|----------------|
| Cash flows from operating activities:  |                |                |
| Net loss   | \$(1,882,000 ) | \$(3,678,000 ) |
| Adjustments to reconcile net loss to net cash (used in) provided by operating activities |                |                |
| Depreciation   | 950,000        | 1,168,000      |
| Amortization   | 1,633,000      | 2,071,000      |
| Stock based compensation expense   | 225,000        | 367,000        |
| Loss on debt extinguishment  | 318,000        | --             |
| Change in fair value of warrant liability  | 491,000        | (182,000 )     |
| Changes in operating assets and liabilities:   |                |                |
| Accounts receivable  | (1,908,000 )   | 605,000        |
| Inventories  | (1,119,000 )   | 13,000         |
| Prepaid expenses and other assets  | (323,000 )     | 63,000         |
| Accounts payable   | 1,092,000      | (350,000 )     |
| Accrued expenses   | 50,000         | 75,000         |
| Net cash (used in) provided by operating activities                                      | (473,000 )     | 152,000        |
| Cash flows from investing activities:  |                |                |
| Capital expenditures   | (1,396,000 )   | (130,000 )     |
| Change in certificate of deposit   | --             | 278,000        |
| Patent expenditures  | (251,000 )     | (192,000 )     |
| Net cash used in investing activities  | (1,647,000 )   | (44,000 )      |
| Cash flows from financing activities:  |                |                |
| Payment on bank term loan  | (434,000 )     | (434,000 )     |
| Net payments on revolving line of credit   | (900,000 )     | --             |
| Payments on MEDC/MSF term loan   | (253,000 )     | --             |
| Payments on related party debt   | (226,000 )     | --             |
| Net proceeds from sale of class A common stock   | 6,567,000      | --             |
| Proceeds from exercise of warrants   | 243,000        | --             |
| Proceeds from exercise of stock options  | 105,000        | 16,000         |
| Net cash provided by (used in) financing activities                                      | 5,102,000      | (418,000 )     |
| Net increase (decrease) in cash and cash equivalents                                     | 2,982,000      | (310,000 )     |
| Cash and cash equivalents, beginning of year   | 1,762,000      | 2,072,000      |
| Cash and cash equivalents, end of year   | \$4,744,000    | \$1,762,000    |
| Supplemental cash flow information:  |                |                |
| Cash paid for interest   | \$256,000      | \$178,000      |
| Cash paid for income taxes   | \$--           | \$--           |

See Notes to Consolidated Financial Statements.



ADVANCED PHOTONIX, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
March 31, 2011 and 2010

1. The Company

Advanced Photonix, Inc. ® (the Company, we or API) was incorporated under the laws of the State of Delaware in June 1988. The Company is engaged in the development and manufacture of optoelectronic devices and value-added sub-systems and systems. The Company serves a variety of global Original Equipment Manufacturers (OEMs) in a variety of industries. The Company supports its customers from the initial concept and design phase of the product, through testing to full-scale production. The Company has two manufacturing facilities located in Camarillo, California and Ann Arbor, Michigan.

2. Basis of Presentation and Summary of Significant Accounting Policies

**Principles of Consolidation** - The consolidated financial statements include the financial statements of the Company and its wholly-owned subsidiaries (Silicon Sensors Inc. & Picometrix LLC). All significant inter-company balances and transactions have been eliminated in consolidation.

**Reclassifications** - Certain prior year balances have been reclassified in the consolidated financial statements to conform to the current year presentation.

**Operating Segment Information** - Financial Accounting Standards Board ("FASB") guidance establishes annual and interim reporting standards for operating segments and requires certain disclosures about the products and services an entity provides, the material countries in which it holds assets and reports revenue, and its major customers. Operating segments are defined as components of an enterprise that engage in business activities for which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. API's chief operating decision makers are its chief executive officer and chief financial officer, who review financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance. API has one business activity, and there are no segment managers who are held accountable for operations, operating results and plans for levels or components below the consolidated unit level, nor does API track gross margins by product, product line or market served. Accordingly, API considers its business to be in a single reportable segment. The Company's products are light and radiation detection devices. The nature of the production process is similar for all product lines, and manufacturing for the different product lines occurs in common facilities. Generally, the same engineers with the same qualifications design and manufacture products for all product lines. The types and class of customers are similar across all product lines, and products are distributed through common channels and distributor networks.

**Pervasiveness of Estimates** - The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America 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 amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Fair Value of Financial Instruments** - The carrying value of all financial instruments potentially subject to valuation risk (principally consisting of cash equivalents, accounts receivable, accounts payable, and debt) approximates fair value based upon the short term nature of these instruments, and in the case of debt, the prevailing interest rates available to the Company.

Cash and Cash Equivalents – The Company considers all highly liquid investments, with an original maturity of three months or less when purchased, to be cash equivalents.

**Compensating Cash Balance** The Company’s credit facility with The PrivateBank and Trust Company contains a minimum compensating balance requirement of \$500,000. This amount has been separately disclosed on the accompanying balance sheets as restricted cash and has been classified as a current asset to match the classification of the related credit facility.

**Accounts Receivable** – Receivables are stated at amounts estimated by management to be the net realizable value. The allowance for doubtful accounts is based on specific identification. Accounts receivable are charged off when it becomes apparent, based upon age or customer circumstances, that such amounts will not be collected.

Accounts receivable are unsecured and the Company is at risk to the extent such amounts become uncollectible. The Company performs periodic credit evaluations of its customers’ financial condition and generally does not require collateral. Any unanticipated change in the customers’ credit worthiness or other matters affecting the collectability of amounts due from such customers could have a material effect on the results of operations in the period in which such changes or events occur. As of March 31, 2011, two customers individually comprised 10% or more of accounts receivable (combining for 42.1% of total accounts receivable). As of March 31, 2010, one customer individually comprised 10% or more of accounts receivable (10.6% of total accounts receivable). The allowance for doubtful accounts on March 31, 2011 and March 31, 2010 was \$47,000 and \$51,000, respectively.

**Concentration of Credit Risk** – Cash and cash equivalents are maintained at financial institutions and, at times, balances may exceed federally insured limits. We have never experienced any losses related to these balances. All of the Company’s non-interest bearing cash balances were fully insured at March 31, 2011 due to a temporary federal program in effect from December 31, 2010 through December 31, 2012. Under the program, there is no limit to the amount of insurance for eligible accounts. Beginning 2013, insurance coverage will revert to \$250,000 per depositor at each financial institution, and our non-interest bearing cash balances may again exceed federally insured limits.

**Inventories** – Inventories, which include material, labor and manufacturing overhead, are stated at the lower of cost (on a first in–first out basis) or market. Slow moving and obsolete inventories are reviewed throughout the year to assess whether a cost adjustment is required. Our review of slow moving and obsolete inventory begins with a listing of all inventory items which have not moved regularly within the past 12 months. In addition, any residual inventory, which is customer specific and remaining on hand at the time of contract completion, is included in the list. The complete list of slow moving and obsolete inventory is then reviewed by the production, engineering and/or purchasing departments to identify items that can be utilized in the near future. These items are then excluded from the analysis and the remaining amount of slow-moving and obsolete inventory is then further assessed and a write down is recorded when warranted. Additionally, non-cancelable open purchase orders for parts we are obligated to purchase where demand has been reduced may also be written down. Impairments for open purchase orders where the market price is lower than the purchase order price are also recorded. The impairments established for excess, slow moving, and obsolete inventory create a new cost basis for those items. The cost basis of these parts is not subsequently increased if the circumstances which led to the impairment change in the future. If a product that had previously been impaired is subsequently sold, the amount of reduced cost basis is reflected as cost of goods sold.

**Equipment and Leasehold Improvements** – Equipment and leasehold improvements are stated at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets, as follows:

| Leasehold improvements  | Term of lease or useful life,<br>whichever is less |
|-------------------------|--|
| Machinery and equipment | 5 – 7 years  |
| Furniture and fixtures  | 3 – 7 years  |
| Computer hardware       | 3 – 7 years  |
| Computer software       | 3 – 5 years  |

Patents - Patents represent costs incurred in connection with patent applications. Such costs are amortized using the straight-line method over the useful life of the patent once issued, or expensed immediately if any specific application is unsuccessful.

Impairment of Long-Lived Assets and Goodwill – As of March 31, 2011 and March 31, 2010, our consolidated balance sheet included \$4.6 million in goodwill. Goodwill represents the excess purchase price over amounts assigned to tangible or identifiable intangible assets acquired and liabilities assumed from our business acquisitions.

Goodwill and intangible assets that are not subject to amortization shall be tested for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test shall consist of a comparison of the fair value of the asset with its carrying amount, as defined. This guidance requires a two-step method for determining goodwill impairment. Step one is to compare the fair value of the reporting unit with the unit's carrying amount, including goodwill. If this test indicates that the fair value is less than the carrying value, then step two is required to compare the implied fair value of the reporting unit's goodwill with the carrying amount of the reporting unit's goodwill. If the carrying amount of the asset exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess. The Company has selected March 31 as the date for its annual impairment test.

We determine the fair value of our single reporting unit to be equal to our market capitalization plus a control premium. Market capitalization is determined by multiplying the shares outstanding on the assessment date by the average market price of our common stock over a 10-day period before and a 10-day period after each assessment date. We use this 20-day duration to consider inherent market fluctuations that may affect any individual closing price. We believe that our market capitalization alone does not fully capture the fair value of our business as a whole, or the substantial value that an acquirer would obtain from its ability to obtain control of our business. As such, in determining fair value, we add a control premium — which seeks to give effect to the increased consideration a potential acquirer would be required to pay in order to gain sufficient ownership to set policies, direct operations and make decisions related to our Company— to our market capitalization.

The Company's evaluation as of March 31, 2011 and March 31, 2010, indicated there were no impairments. As of March 31, 2011, our market capitalization calculated as described as above, was \$53.4 million and our carrying value, including goodwill, was \$20.2 million.

As of March 31, 2010, our market capitalization, calculated as described above, was \$14.2 million and our carrying value, including goodwill, was \$14.4 million. We applied a 25% control premium to market capitalization to determine a fair value of \$17.8 million. We believe that including a control premium at this level was supported by recent transaction data in our industry. Absent the inclusion of a control premium, our carrying value would have exceeded fair value, requiring a step two analysis which may have resulted in an impairment of goodwill.

As evidenced above, our stock price and control premium are significant factors in assessing our fair value for purposes of the goodwill impairment assessment. Our stock price can be affected by, among other things, changes in industry or market conditions, changes in our results of operations, and changes in our forecasts or market expectations relating to future results. Our stock price has fluctuated from a high of \$2.63 to a low of \$1.51 during the fourth quarter of fiscal 2011. On all trading days during the fourth quarter of fiscal 2011, our stock price was high enough that our market capitalization exceeded our carrying value without giving effect to a control premium. The current macroeconomic environment, however, continues to be challenging and we cannot be certain of the duration of these conditions and their potential impact on our stock price performance. If our market capitalization falls below our carrying value for a sustained period, it is reasonably likely that a goodwill impairment assessment prior to the next annual review in the fourth quarter of fiscal 2012 would be necessary and an impairment of goodwill may be recorded. A non-cash goodwill impairment charge would have the affect of decreasing our earnings or increasing our losses in such period. If we are required to take a substantial impairment charge, our operating results would be materially adversely affected in such period.

The carrying value of long-lived assets, including amortizable intangibles and property and equipment, are evaluated whenever events or changes in circumstances indicate that a potential impairment has occurred relative to a given asset or assets. Impairment is deemed to have occurred if projected undiscounted cash flows associated with an asset are less than the carrying value of the asset. The estimated cash flows include management's assumptions of cash inflows and outflows directly resulting from the use of that asset in operations. The amount of the impairment loss recognized is equal to the excess of the carrying value of the asset over its then estimated fair value. As a result of the current year operating loss, the Company performed an impairment evaluation. The Company's evaluation for the fiscal year ended March 31, 2011 indicated there were no impairments.



Revenue Recognition – Revenue is derived principally from the sales of the Company’s products. The Company recognizes revenue when persuasive evidence of an arrangement exists, usually in the form of a purchase order, when shipment has occurred since its terms are FOB source, or when services have been rendered, title and risk of loss have passed to the customer, the price is fixed or determinable and collection is reasonably assured in terms of both credit worthiness of the customer and no post shipment obligations or uncertainties with respect to customer acceptance.

The Company sells certain of its products to customers with a product warranty that provides warranty repairs at no cost. The length of the warranty term is one year from date of shipment. The Company accrues the estimated exposure to warranty claims based upon historical claim costs. The Company’s management reviews these estimates on a regular basis and adjusts the warranty provisions as actual experience differs from historical estimates or as other information becomes available.

The Company does not provide price protection or general right of return. The Company’s return policy only permits product returns for warranty and non-warranty repair or replacement and requires pre-authorization by the Company prior to the return. Credit or discounts, which have been historically insignificant, may be given at the discretion of the Company and are recorded when and if determined.

The Company predominantly sells directly to original equipment manufacturers with a direct sales force. The Company sells in limited circumstances through distributors. Sales through distributors represent approximately 6% of total fiscal 2011 revenue. Significant terms and conditions of distributor agreements include FOB source, net 30 days payment terms, with no return or exchange rights, and no price protection. Since the product transfers title to the distributor at the time of shipment by the Company, the products are not considered inventory on consignment.

Revenue is also derived from technology research and development contracts. We recognize revenue from these contracts as the services and/or materials are provided.

Significant Customers – During fiscal years ended March 31, 2011 and March 31, 2010, no single customer accounted for more than 10% of the Company’s net sales.

Product Warranty – The Company generally sells products with a limited warranty of product quality. The Company accrues for known warranty issues if a loss is probable and can be reasonably estimated, and accrues for estimated incurred but unidentified issues based on historical activity.

The following table presents the movement in the product warranty liability for the years ended March 31, 2011 and March 31, 2010.

|                           | Years ended March 31, |            |
|---------------------------|-----------------------|------------|
|                           | 2011                  | 2010       |
| Beginning balance         | \$ 86,000             | \$ 138,000 |
| Current period accruals   | (8,000 )              | 50,000     |
| Used for purpose intended | (27,000 )             | (102,000 ) |
| Ending balance            | \$ 51,000             | \$ 86,000  |

Shipping and Handling Costs - The Company’s policy is to classify shipping and handling costs as a component of Costs of products sold in the Statements of Operations.

Research and Development Costs – The Company charges all research and development costs, including costs associated with development contract revenues, to expense when incurred. Manufacturing costs associated with the development of a new fabrication process or a new product are expensed until such times as these processes or

products are proven through final testing and initial acceptance by the customer. Costs related to revenues on non-recurring engineering services billed to customers are generally classified as cost of product sold. The Company generally retains intellectual property rights related to paid research and development contracts.

Advertising Costs – Advertising costs are expensed as incurred. Advertising expense was approximately \$76,000 and \$56,000 in fiscal 2011 and fiscal 2010, respectively.

Accounting for Stock Based Compensation – The Company estimates the fair value of stock option awards utilizing the Black-Scholes pricing model. The fair value of the awards is amortized as compensation expense on a straight-line basis over the requisite service period of the award, which is generally the vesting period.

Accounting for Income Taxes - Income tax provisions and benefits are made for taxes currently payable or refundable, and for deferred income taxes arising from future tax consequences of events that were recognized in the Company's financial statements or tax returns. The effects of income taxes are measured based on enacted tax laws and rates applicable to periods in which the differences are expected to reverse. If necessary, a valuation allowance is established to reduce deferred income tax assets to an amount that will more likely than not be realized.

The calculation of federal income taxes involves dealing with uncertainties in the application of complex tax regulations. The Company recognizes liabilities for uncertain tax positions based on a two-step process. The first step involves evaluating the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step involves estimating and measuring the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as we have to determine the probability of various possible outcomes. Our evaluation of uncertain tax positions is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit, and new audit activity. Such a change in recognition or measurement would result in the recognition of a tax benefit or an additional charge to the tax provision. The Company has taken no tax positions which would require disclosure. Although the IRS is not currently examining any of our income tax returns, tax years 2007 to 2010 remain open and are subject to examination.

Earnings per Share - The Company presents both basic and diluted earnings (loss) per share (EPS) amounts. Basic EPS is calculated by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted EPS amounts are based upon the weighted average number of common and common equivalent shares outstanding during the period. The Company uses the treasury stock method to calculate the impact of outstanding stock options and warrants. Common equivalent shares are excluded from the computation in periods in which they have an anti-dilutive effect. All common stock equivalents have been excluded from the calculation of Diluted EPS due to the net loss in both periods. The total shares excluded from the computation of diluted earnings per share for the year ended March 31, 2011 totaled 3,771,000 shares, representing outstanding stock options and warrants exercisable into shares of common stock. The total shares excluded from the computation of diluted earnings per share for the year ended March 31, 2010 totaled 4,734,000 shares, representing outstanding stock options and warrants exercisable into shares of common stock.

#### Recent Pronouncements and Accounting Changes

In April 2010, the FASB issued new guidance concerning revenue recognition related to research and development projects. It clarifies that revenue can be recognized when a milestone is achieved if the milestone meet all criteria to be considered substantive. This guidance is effective for fiscal years beginning on or after June 15, 2010. The guidance will be reviewed to determine if this change will have a material impact on the Company's future financial statements.

In November 2010, the FASB issued authoritative guidance on disclosure of supplementary pro forma information for business combinations. The new guidance requires that pro forma financial information should be prepared as if the business combination occurred as of the beginning of the prior annual period. The amendments also expand the

required supplemental pro forma disclosures to include a description of the nature and amount of material, nonrecurring pro forma adjustments directly attributable to the business combination included in the reported pro forma revenue and earnings. The guidance is effective for the Company for business combinations with acquisition dates occurring in and after the first quarter of fiscal 2012.

## 3. Inventories

Inventories consisted of the following at March 31:

|                   | 2011         | 2010         |
|-------------------|--------------|--------------|
| Raw material      | \$ 3,204,000 | \$ 2,375,000 |
| Work-in-process   | 1,214,000    | 867,000      |
| Finished products | 357,000      | 414,000      |
| Inventories       | \$ 4,775,000 | \$ 3,656,000 |

## 4. Equipment and Leasehold Improvements

Equipment and leasehold improvements consisted of the following at March 31:

|  | 2011         | 2010         |
|--|--------------|--------------|
| Machinery and equipment                  | \$ 8,563,000 | \$ 7,984,000 |
| Furniture and fixtures                   | 719,000      | 725,000      |
| Leasehold improvements                   | 1,066,000    | 1,009,000    |
| Computer hardware                        | 633,000      | 628,000      |
| Capitalized software                     | 882,000      | 813,000      |
| Total assets                             | 11,863,000   | 11,159,000   |
| Accumulated depreciation                 | (8,775,000 ) | (7,916,000 ) |
|  | 3,088,000    | 3,243,000    |
| Construction-in-process                  | 642,000      | 41,000       |
| Net equipment and leasehold improvements | \$ 3,730,000 | \$ 3,284,000 |

The estimated cost to complete the construction-in-process is approximately \$619,000 (unaudited).

Depreciation expense for the fiscal years ended March 31, 2011 and 2010 was approximately \$950,000 and \$1.2 million, respectively.

## 5. Intangible Assets and Goodwill

## Intangibles

Intangible assets that have definite lives consist of the following (in thousands):

|                   | Weighted<br>Average<br>Lives<br>in Years | Amortization<br>Method | Carrying<br>Value | March 31, 2011<br>Accumulated<br>Amortization | Intangibles<br>Net |
|-------------------|--|------------------------|-------------------|---|--------------------|
| Customer list     | 15                                       | Straight Line          | \$ 475            | \$ 360  | \$ 115             |
| Trademarks        | 15                                       | Cash Flow              | 2,270             | 798   | 1,472              |
| Technology        | 10                                       | Cash Flow              | 10,950            | 7,886   | 3,064              |
| Patents pending   |  |                        | 619               | --  | 619                |
| Patents           | 10                                       | Straight Line          | 620               | 177   | 443                |
| Total Intangibles |  |                        | \$ 14,934         | \$ 9,221                                      | \$ 5,713           |

|                   | Weighted<br>Average<br>Lives<br>in Years | Amortization<br>Method | Carrying<br>Value | March 31, 2010<br>Accumulated<br>Amortization | Intangibles<br>Net |
|-------------------|--|------------------------|-------------------|---|--------------------|
| Customer list     | 15                                       | Straight Line          | \$ 475            | \$ 347  | \$ 128             |
| Trademarks        | 15                                       | Cash Flow              | 2,270             | 653   | 1,617              |
| Technology        | 10                                       | Cash Flow              | 10,950            | 6,460   | 4,490              |
| Patents pending   |  |                        | 535               | --  | 535                |
| Patents           | 10                                       | Straight Line          | 454               | 128   | 326                |
| Total Intangibles |  |                        | \$ 14,684         | \$ 7,588                                      | \$ 7,096           |

Amortization expense was approximately \$1.6 million and \$2.1 million for the years ended March 31, 2011 and 2010, respectively. The current patents held by the Company have remaining useful lives ranging from 2 years to 20 years.

The cash flow method of amortization is based upon management's estimate of how the intangible asset contributes to our cash flows and best represents the pattern of how the economic benefits of the intangible asset will be consumed or used up. Such amortization is initially derived from the estimated undiscounted cash flows that were used in determining the original fair value of the intangible asset at the acquisition date and is monitored for significant changes in subsequent periods.

Assuming no impairment to the intangible value, future amortization expense for intangible assets and patents are as follows:

| Intangible Assets and Patents (000's)(a) |          |
|--|----------|
| 2012                                     | \$ 1,361 |
| 2013                                     | 1,144    |
| 2014                                     | 956      |
| 2015                                     | 613      |
| 2016                                     | 392      |

|              |    |       |
|--------------|----|-------|
| 2017 & after |    | 628   |
| Total        | \$ | 5,094 |

(a) Patent pending costs of \$619,000 are not included in the chart above. These costs will be amortized beginning the month the patents are granted.

#### Goodwill

Goodwill reflected on the balance sheets of March 31, 2011 and March 31, 2010 is net of previously recorded impairment charges of \$954,000. There were no charges to the goodwill balance during the years ended March 31, 2011 and 2010.

## 6. Debt

Bank Debt – On September 25, 2008, the Company established a credit facility with the Lender (the Loan Agreement). As part of this Loan Agreement, the Company has a term loan and a \$3.0 million line of credit. The term loan is to be repaid in monthly principal payments of \$36,167, plus interest at prime plus 2%, until maturity on September 25, 2012, provided that if the existing loans to the Company by the Michigan Economic Development Corporation (MEDC) or Michigan Strategic Fund (MSF) have not converted to equity on or before August 31, 2011, the outstanding principal shall be due on August 31, 2011. As there are no assurances that these loans will be converted to equity by August 31, 2011, the entire outstanding balance of the bank term note is reflected as a current obligation as of March 31, 2011. The interest rate on the term loan on March 31, 2011 was 5.25%. The line of credit bears interest at prime plus 2% (5.25% at March 31, 2011) and any outstanding borrowings are due on September 25, 2011, provided that if the existing loans to the Company by the MEDC or MSF have not been converted to equity on or before August 31, 2011, the outstanding principal will be due on August 31, 2011. The availability under the line of credit is determined by a calculation of a borrowing base that includes a percentage of accounts receivable and inventory.

The line of credit is guaranteed by each of API's wholly-owned subsidiaries and the term loan is secured by a Security Agreement among API, its subsidiaries and the Lender, pursuant to which API and its subsidiaries granted to the Lender a first-priority security interest in certain described assets.

The Loan Agreement contains financial covenants (the Financial Covenants) including minimum Debt Service Coverage ratio, Adjusted EBITDA level, and Net Worth requirements (each as defined in the Loan Agreement). On May 29, 2009, the Company amended the Loan Agreement effective March 31, 2009 (the First Amendment). Pursuant to the First Amendment, (1) the Adjusted EBITDA level was measured on a year to date basis for the June 26, 2009, September 25, 2009, December 25, 2009 and March 31, 2010 test dates and thereafter was to be measured on a trailing four quarter basis, (2) the minimum Debt Service Coverage ratio was set at 1.0 to 1.0 for the first quarter of fiscal year 2010, 1.25 to 1.0 for the second quarter of fiscal year 2010 and 1.5 to 1.0 thereafter, and (3) the minimum Net Worth covenant was initially set at \$15.5 million and would automatically increase by 10% of Net Income (as defined in the Loan Agreement) for each fiscal year that the Company reported net income.

At December 25, 2009 and March 31, 2010, the Company was not in compliance with the Financial Covenants. This constituted an event of default under the terms of the Loan Agreement which gave the Lender the ability to provide us with notice that they are exercising their rights under the Loan Agreement by demanding payment in full of the outstanding indebtedness under the Loan Agreement.

On June 25, 2010, the Company and the Lender entered into a second amendment to the Loan Agreement (the Second Amendment). The Second Amendment increased the interest rate from prime plus 1% to prime plus 2% and amended the Financial Covenants. Pursuant to the Second Amendment, (1) the minimum Debt Service Coverage ratio was set at 1.0 to 1.0 for the first three quarters of fiscal 2011 and 1.2 to 1.0 thereafter, (2) the minimum Adjusted EBITDA level is measured on a trailing three month basis and was \$190,000 for the July 2, 2010 test date, \$190,000 for the October 1, 2010 test date, \$260,000 for the December 31, 2010 test date, and \$400,000 for the March 31, 2011 test date and thereafter on a trailing twelve month basis will be \$1,160,000 and (3) the minimum Net Worth requirement was set at \$13.0 million for the first quarter of fiscal year 2011, \$12.5 million for the second quarter of fiscal year 2011, \$12.1 million for the third quarter of fiscal year 2011 and \$11.8 million for the fourth quarter of fiscal year 2011. The Company was in compliance with its financial covenants as of March 31, 2011.

In addition to amending the Financial Covenants and as described in the Debt to Related Parties section of this footnote, the Second Amendment required the Company to amend the four-year promissory notes issued to Robin Risser, the Company's COO and CFO, and Steve Williamson, the Company's CTO (collectively, the Note Holders) in



connection with the 2005 acquisition of Picometrix, LLC (f/k/a Picometrix, Inc.) (the Picometrix Notes) by August 25, 2010 to defer the December 1, 2010 and March 1, 2011 installment payments owed under the Picometrix Notes (the Amendment Undertaking). Failure to amend the Picometrix Notes by August 25, 2010 would constitute an event of default under the Loan Agreement.

On August 27, 2010, the Company executed a third amendment to the Loan Agreement with the Lender (the Third Amendment). The Third Amendment (1) increased the amount of proceeds from equity issuances that the Company may use to make payments in respect of the Company's existing indebtedness under the Picometrix Notes and (2) extended the deadline set forth in the Second Amendment for satisfying the Amendment Undertaking.

On November 30, 2010, the Company executed a Fourth Amendment to the Loan Agreement with the Lender, effective as of November 30, 2010 (the Fourth Amendment). Among other things, the Fourth Amendment (1) deleted the Amendment Undertaking, (2) approved the amendments to the Picometrix Notes described in the Related Parties Debt section of this footnote and the payment of a restructuring fee in connection therewith, (3) amended the definition of "Adjusted EBITDA" to add back a portion of the restructuring fee to the calculation of the "Adjusted EBITDA" and (4) amended the definition of "Debt Service Coverage Ratio" to exclude the proceeds raised pursuant to a securities purchase agreement by and among the Company and the Note Holders (the SPA) from the calculation of the "Debt Service Coverage Ratio".

MEDC/MSF Loans -The MEDC entered into two loan agreements with Picometrix LLC, one in fiscal 2005 (MEDC-loan 1) and one in fiscal 2006 (MEDC-loan 2). Both loans are unsecured.

The MEDC-loan 1 was issued in the original principal amount of \$1,025,000. Under the original terms of the MEDC-loan 1, the interest rate was 7% and interest accrued but unpaid through October 2008 would be added to then outstanding principal balance of the promissory note issued pursuant to the MEDC-loan 1 and the restated principal would be amortized over the remaining four years (September 15, 2012). Effective September 23, 2008, the MEDC-loan 1 was amended and restated to change the start date of repayment of principal and interest from October 2008 to October 2009.

During the fourth quarter of fiscal 2010, the Company began negotiations with the MEDC to further amend the MEDC-loan 1 promissory note. The Company and the MEDC agreed that the payment of restated principal and accrued interest was to be suspended until the negotiations were completed. In May 2010, the Company entered into a debt conversion agreement with the MEDC whereby the MEDC would convert the accrued and unpaid interest as of November 30, 2009 totaling \$324,669 into 601,239 unregistered shares of the Class A Common Stock of the Company at a price per share of \$0.54 (market value of stock on the day of conversion). In addition, the Company granted the MEDC a put option to sell back to the Company the shares received pursuant to the debt conversion agreement in the event of a trigger event as defined in the debt conversion agreement. In conjunction with the debt conversion agreement, the Company amended the MEDC-loan 1 promissory note to retroactively change the interest rate from 7% to 4% beginning in December 2009, and to change the repayment terms of the outstanding principal and interest such that beginning in October 2010, the Company is to repay the remaining principal and accrued interest on a monthly basis through maturity in November 2014.

MEDC-loan 2, which was assigned to the MSF in June 2010, was issued in the original amount of \$1.2 million. Under the original terms of the MEDC-loan 2, the interest rate was 7% and interest accrued, but unpaid in the first two years of this agreement was added to the then outstanding principal of the promissory note issued pursuant to the MEDC-loan 2. During the third year of this agreement, the Company was to pay interest on the restated principal of the promissory note until October 2008, at which time the Company was to repay the restated principal over the remaining three years (September 15, 2011). Effective January 26, 2009, the MEDC-loan 2 was amended and restated to change the start date of repayment of principal and interest from October 2008 to November 2009 and to extend the repayment period to October 2012.

During the fourth quarter of fiscal 2010, the Company began negotiations with the MEDC to further amend the MEDC-loan 2 promissory note. The Company and the MEDC agreed that the payment of restated principal and accrued interest was to be suspended until the negotiations were completed. In May 2010, the Company entered into a

debt conversion agreement with the MEDC whereby the MEDC would transfer the MEDC-loan 2 promissory note to the MSF which would convert the accrued and unpaid interest as of October 31, 2009 totaling \$237,667 into 440,124 unregistered shares of the Class A Common Stock of the Company at a price per share of \$0.54 (market value of the stock on the day of conversion). In addition, the Company granted the MSF a put option to sell back to the Company the shares received pursuant to the debt conversion agreement in the event of a trigger event as defined in the debt conversion agreement. In conjunction with the debt conversion agreement, the Company amended the MEDC-loan 2 promissory note to retroactively change the interest rate from 7% to 4% beginning in November 2009, and to change the repayment terms of the outstanding principal and interest such that beginning in July 2010, the Company is to repay the remaining principal and accrued interest on a monthly basis through maturity in September 2014.

The Company performed an assessment of the amendments made to the MEDC and MSF loans during the second quarter of fiscal 2011 to determine whether or not the amendments constituted a “troubled debt restructuring” or a “substantial modification” in accordance with FASB guidance and concluded that the amendments did not constitute either a troubled debt restructuring or a substantial modification. Furthermore, the Company performed an assessment of the balance sheet classification of the common shares issued as part of the debt conversion agreements in light of the put options granted and determined that equity classification of the shares is appropriate since the trigger event related to the put option is considered to be in the control of the Company.

Debt to Related Parties - As a result of the 2005 acquisition of Picotronic LLC, the Company issued the Picometrix Notes to the Note Holders. API has the option of prepaying the Picometrix Notes without penalty, On November 30, 2009, the Company and the Note Holders entered into the fourth amendments to the Notes to the Picometrix Notes to extend the due date for the remaining principal balance of the Picometrix Notes (in the aggregate amount of \$1,400,500) to March 1, 2011 payable in two installments as follows:

| Payment Date     | Principal Payment |
|------------------|-------------------|
| December 1, 2010 | \$ 450,000        |
| March 1, 2011    | \$ 950,500        |

As described in the Bank Debt section, the Company’s credit agreement with the Lender required that the Company amend the Picometrix Notes to defer the December 1, 2010 and March 1, 2011 installment payments (the Amendment Undertaking). In compliance with the Amendment Undertaking, on November 29, 2010, the Company and the Note Holders entered into the fifth amendments to the Picometrix Notes (the Fifth Amendment). The Fifth Amendment required the Company to pay the related parties a restructuring fee of \$156,312 (11%) and extended the due dates for the remaining principal balance payments on the Picometrix Notes (in the aggregate amount of \$1,400,500) to September 1, 2012 per the payment schedule below:

| Payment Date      | Principal Payment |
|-------------------|-------------------|
| December 1, 2010  | \$ 150,000        |
| March 1, 2011     | \$ 75,000         |
| June 1, 2011      | \$ 75,000         |
| September 1, 2011 | \$ 150,000        |
| December 1, 2011  | \$ 225,000        |
| March 1, 2012     | \$ 225,000        |
| June 1, 2012      | \$ 225,000        |
| September 1, 2012 | \$ 275,500        |

The interest rate on the Picometrix Notes was increased from prime plus 1% to prime plus 2% (5.25% at March 31, 2011), and interest is to be paid quarterly through the maturity date. The balance outstanding under the Picometrix Notes was \$1,175,500 at March 31, 2011. The Picometrix Notes are secured by all of the intellectual property of Picometrix.

Interest payments made to the Note Holders during the years ended March 31, 2011 and March 31, 2010 were \$61,000 and \$60,000, respectively.

In conjunction with the Fifth Amendment to the Picometrix Notes, on November 15, 2010, the Company and the Note Holders entered into a security purchase agreement (the SPA), which was subsequently amended and restated on November 29, 2010, in its entirety to reflect certain structural changes in the transaction as originally agreed upon by the parties to the SPA. As amended and restated, the SPA provided for the Company to issue and sell to the Note Holders in exchange for an aggregate payment of \$78,156.25 (the Purchase Price) the number of units of the

Company's securities (Units) determined by dividing the Purchase Price by the per share closing price of the Company's Common Stock on NYSE Amex on the day preceding the closing (the Formula Price). Each Unit was to consist of one share of Common Stock and a five-year warrant to purchase four shares of Common Stock at an exercise price equal to 120% of the Formula Price (the 2010 Warrants). The closing of the purchase and sale transactions contemplated by the SPA was subject to the receipt of NYSE Amex approval of an additional listing application covering the Units (the Note Holder Additional Listing Application) and other closing conditions customary for transactions of this nature. On November 30, 2010, NYSE Amex approved the Note Holder Additional Listing Application and the parties to the SPA satisfied the other closing conditions. The Formula Price was determined to be \$1.17 and accordingly, the Company issued the Note Holders 66,799 Units comprised of (i) 66,799 shares of Common Stock and (ii) 2010 Warrants to purchase an aggregate of 267,196 shares of Class A Common Stock at an exercise price of \$1.404 per share pursuant to separately executed warrant agreement (collectively, the Warrant Agreements) upon the closing of the SPA on November 30, 2010. While the exercise price of the 2010 Warrants is subject to adjustment as defined in the Warrant Agreement, such adjustment cannot reduce the exercise price below \$1.17 per share.

The Company performed an assessment of the Fifth Amendment made to the Picometrix Notes and determined that the Fifth Amendment constituted a “substantial modification” in accordance with FASB guidance as the present value of future cash flows under the terms of the Fifth Amendment, combined with the fair value of the consideration given as part of the SPA, was more than 10% different than the present value of cash flows under the prior amendment to the Picometrix Notes. As a result, the Company recorded a loss on debt extinguishment of \$317,725, which is equal to the \$156,312 restructuring fee and the fair value of the warrants issued in conjunction with the SPA which was \$161,413 at November 30, 2010. See Note 10 to the Consolidated Financial Statements for additional information on the Warrants.

## Debt Maturity Table (in 000’s)

|                                   | Balance<br>3/31/10 | Balance<br>3/31/11 | FY2012         | FY2013         | FY2014       | FY2015       | FY2016      | FY2017<br>&<br>Beyond |
|-----------------------------------|--------------------|--------------------|----------------|----------------|--------------|--------------|-------------|-----------------------|
| Credit Line - The<br>Private Bank | \$1,394            | \$494              | \$494          | \$--           | \$--         | \$--         | \$--        | \$--                  |
| Term Loan – The<br>Private Bank   | 1,121              | 687                | 687            | --             | --           | --           | --          | --                    |
| Debt to Related Parties           | 1,401              | 1,175              | 675            | 500            | --           | --           | --          | --                    |
| MEDC loans                        | 2,224              | 1,971              | 511            | 531            | 552          | 377          | --          | --                    |
| <b>TOTAL</b>                      | <b>\$6,140</b>     | <b>\$4,327</b>     | <b>\$2,367</b> | <b>\$1,031</b> | <b>\$552</b> | <b>\$377</b> | <b>\$--</b> | <b>\$--</b>           |

## 7. Capitalization

The Company’s Certificate of Incorporation provides for two classes of common stock, a Class A for which 100,000,000 shares are authorized for issuance and a Class B for which 4,420,113 shares are authorized for issuance. The par value of each class is \$.001. Subject to certain limited exceptions, shares of Class B Common Stock are automatically converted into an equivalent number of Class A shares upon the sale or transfer of the Class B Common Stock by the original holder. The holder of each share of Class A and Class B Common Stock is entitled to one vote per share.

The Company’s Certificate of Incorporation also authorizes the issuance of 10,000,000 shares of Preferred Stock, of which 780,000 shares have been designated Class A Redeemable Convertible Preferred Stock with a par value of \$.001 per share. At March 31, 2011 and March 31, 2010, 40,000 shares of Class A Redeemable Convertible Preferred Stock (Class A Preferred) were issued and outstanding. The Class A convertible preferred stock is redeemable solely at the option of the Company and can also be mandatorily converted by the Company into Class A Common Stock at a rate of 3.33 shares of Class A Preferred Stock to one share of Class A Common Stock. The Class A Preferred Stock contains a liquidation preference of \$0.80 per share, or a total of \$32,000 with respect to all such shares outstanding. The Class A Preferred stockholders do not have voting rights except as required by applicable law.

## 8. Stock Based Compensation

The Company has four stock equity plans: The 1991 Directors' Stock Option Plan (the Directors' Plan), the 1997 Employee Stock Option Plan, the 2000 Stock Option Plan and the 2007 Equity Incentive Plan. Under the Company's remaining plans, there were 7,200,000 Class A common shares authorized for issuance, with 1,353,766 shares remaining available for future grant as of March 31, 2011.

Non-director options typically vest at the rate of 25% per year over four years and are exercisable up to ten years from the date of issuance. Options granted under the Directors' Plan typically vests at the rate of 50% per year over two years. Under these plans, the option exercise price equals the stock's market price on the date of grant. Options and restricted stock awards may be granted to employees, officers, directors and consultants. Under the 2007 Equity Incentive Plan, restricted stock awards typically vest within one year.

Stock option transactions for fiscal years 2011 and 2010 are summarized as follows:

|   | Shares<br>(000) | Weighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Term<br>(in years) | Aggregate<br>Intrinsic<br>Value |
|---|-----------------|--|---|---------------------------------|
| Outstanding, March 31, 2009               | 2,746           | \$ 1.92                                  |   |                                 |
| Exercisable, March 31, 2009               | 2,374           | \$ 1.93                                  |   |                                 |
| Vested & expected to Vest, March 31, 2009 | 2,676           | \$ 1.92                                  | 5.97                                      | \$ 17,000                       |
| Outstanding, March 31, 2009               | 2,746           | \$ 1.92                                  |   |                                 |
| Granted                                   | 78              | \$ 0.63                                  |   |                                 |
| Exercised                                 | (30 )           | \$ 0.52                                  |   |                                 |
| Expired                                   | (190 )          | \$ 2.44                                  |   |                                 |
| Outstanding, March 31, 2010               | 2,604           | \$ 1.85                                  | 5.58                                      | \$ 6,000                        |
| Exercisable, March 31, 2010               | 2,402           | \$ 1.89                                  | 4.98                                      | \$ 6,000                        |
| Vested & expected to Vest, March 31, 2010 | 2,537           | \$ 1.92                                  | 5.58                                      | \$ 6,000                        |
| Outstanding, March 31, 2010               | 2,604           | \$ 1.85                                  |   |                                 |
| Granted                                   | 189             | \$ 0.60                                  |   |                                 |
| Exercised                                 | (226 )          | \$ 0.80                                  |   |                                 |
| Expired                                   | (406 )          | \$ 2.94                                  |   |                                 |
| Outstanding, March 31, 2011               | 2,161           | \$ 1.65                                  | 5.90                                      | \$ 1,114,000                    |
| Exercisable, March 31, 2011               | 1,933           | \$ 1.74                                  | 4.89                                      | \$ 854,000                      |
| Vested & expected to Vest, March 31, 2011 | 2,101           | \$ 1.67                                  | 5.90                                      | \$ 1,083,000                    |

Information regarding stock options outstanding as of March 31, 2011 is as follows:

| Price Range     | (in 000s)<br>Shares | Options Outstanding<br>Weighted Average<br>Exercise Price | Weighted Average<br>Remaining Life |
|-----------------|---------------------|---|------------------------------------|
| \$0.50 - \$1.25 | 684                 | \$0.67  | 8.31                               |
| \$1.50 - \$2.50 | 1,164               | \$1.91  | 4.57                               |
| \$2.87 - \$5.34 | 313                 | \$2.83  | 4.51                               |

| Price Range     | (in 000s)<br>Shares | Options Exercisable                |                                    |
|-----------------|---------------------|------------------------------------|------------------------------------|
|                 |                     | Weighted Average<br>Exercise Price | Weighted Average<br>Remaining Life |
| \$0.50 - \$1.25 | 527                 | \$0.71                             | 6.57                               |
| \$1.50 - \$2.50 | 1,093               | \$1.91                             | 4.58                               |
| \$2.87 - \$5.34 | 313                 | \$2.76                             | 4.51                               |



The intrinsic value of options exercised in fiscal years 2011 and 2010 was approximately \$357,000 and \$7,000, respectively.

During fiscal 2010 and fiscal 2011, restricted shares were issued to certain individuals. The restricted share transactions are summarized below.

|                          | Shares (000) | Weighted Average<br>Grant Date Fair<br>Value |
|--------------------------|--------------|--|
| Unvested, March 31, 2009 | 29           | \$ 1.50                                      |
| Granted                  | 344          | \$ 0.66                                      |
| Vested                   | (348 )       | \$ 0.73                                      |
| Expired                  | --           | --   |
| Unvested, March 31, 2010 | 25           | \$ 0.63                                      |
| Granted                  | 239          | \$ 0.60                                      |
| Vested                   | (194 )       | \$ 0.67                                      |
| Expired                  | --           | --   |
| Unvested, March 31, 2011 | 70           | \$ 0.44                                      |

The grant date fair value of restricted shares is equal to the Company's stock price on the date of grant. The total fair value of restricted shares vesting during fiscal years 2011 and 2010 was approximately \$128,000 and \$242,000, respectively.

The Company estimates the fair value of stock options utilizing the Black-Scholes pricing model. The fair value of the awards is amortized as compensation expense on a straight-line basis over the requisite service period of the award, which is generally the vesting period. The fair value calculations involve significant judgments, assumptions, estimates and complexities that impact the amount of compensation expense to be recorded in current and future periods. The factors include:

The time period that stock-based awards are expected to remain outstanding has been determined based on the average of the original award period and the remaining vesting period in accordance with the SEC's short-cut approach pursuant to SAB No. 107, "Disclosure about Fair Value of Financial Statements". As additional evidence develops from the Company's stock trading history, the expected term assumption will be refined to capture the relevant trends.

The future volatility of the Company's stock has been estimated based on the weekly stock price from the acquisition date of Picometrix LLC (May 2, 2005) to the date of the latest stock grant.

A dividend yield of zero has been assumed for awards issued for the years ended March 31, 2011 and March 31, 2010, based on the Company's actual past experience and the fact that Company does not anticipate paying a dividend on its shares in the near future.

The Company has based its risk-free interest rate assumption for awards issued during the years ended March 31, 2011 and March 31, 2010 on the implied yield available on U.S. Treasury issues with an equivalent expected term.

The forfeiture rate for awards issued during the year ended March 31, 2011 was approximately 26.2% and March 31, 2010 was approximately 20.5%, and was based on the Company's actual historical forfeiture trend.

| Option Plan Shares:                    | Year Ended     |                |
|--|----------------|----------------|
|  | March 31, 2011 | March 31, 2010 |
| Expected term (in years)               | 6.3            | 6.3            |
| Volatility                             | 67.1%          | 69.0%          |
| Expected dividend                      | 0%             | 0%             |
| Risk-free interest rate                | 1.14%          | 2.2%           |
| Weighted-average grant date fair value | \$0.60         | \$0.70         |

The table below lists the classification of the stock based compensation expense for the years ended March 31, 2011 and March 31, 2010.

|                                    | 2011 |         | 2010 |         |
|------------------------------------|------|---------|------|---------|
| Cost of products sold              | \$   | 17,000  | \$   | 15,000  |
| Research and development expense   |      | 38,000  |      | 71,000  |
| General and administrative expense |      | 158,000 |      | 264,000 |
| Sales and marketing expense        |      | 12,000  |      | 17,000  |
| Total Stock Based Compensation     | \$   | 225,000 | \$   | 367,000 |

At March 31, 2011, the total stock-based compensation expense related to unvested stock awards and restricted shares granted to employees and directors under the Company's stock plans but not yet recognized was approximately \$65,000. This expense will be amortized on a straight-line basis over a weighted-average period of approximately 1.7 years and will be adjusted for subsequent changes in estimated forfeitures.

#### 9. Wafer Fabrication consolidation

During fiscal 2010, the Company finalized the consolidation and modernization of its wafer fabrication facilities. The Company recorded \$0 and \$40,000 of expenses related to this project in the years ended March 31, 2011 and 2010, respectively.

#### 10. Equity

##### Warrants

The schedule below shows the outstanding warrants at March 31, 2011 and March 31, 2010:

|                                  | Warrants Outstanding & Exercisable |         |               |               |   |
|----------------------------------|------------------------------------|---------|---------------|---------------|---|
|                                  | Shares                             | Shares  | Exercise      | Exercise      | Remainin<br>Life (in yrs)<br>at 3/31/11 |
|                                  | 2011                               | 2010    | Price<br>2011 | Price<br>2010 |   |
| Convertible Note – 1st Tranche * | --                                 | 694,541 | --            | \$1.744       | --                                      |
| Convertible Note – 2nd Tranche   | 712,682                            | 694,541 | \$1.700       | \$1.744       | 0.5                                     |
| 2007 Warrants                    | 629,829                            | 741,332 | \$1.790       | \$1.850       | 1.7                                     |
| 2010 Warrants                    | 267,196                            | --      | \$1.404       | --            | 4.7                                     |

|       |           |           |
|-------|-----------|-----------|
| Total | 1,609,707 | 2,130,414 |
|-------|-----------|-----------|

\*Expired on April 18, 2010

In fiscal years 2005 and 2006, warrants (the Convertible Note Warrants) were issued in connection the issuance of convertible debt. The convertible debt has all been subsequently converted into Class A Common Stock. The Convertible Note Warrants were issued in two tranches with 712,682 shares still outstanding at March 31, 2011 and 1,389,082 shares outstanding at March 31, 2010. The exercise price for the Convertible Note Warrants was originally \$1.744, subject to adjustment based on a formula contained in the convertible note agreement if common stock issued below the \$1.744 exercise price. Such adjustments cannot reduce the exercise price below \$1.70 without obtaining shareholder approval. The price was reduced to \$1.70 and the number of warrants was correspondingly increased to 712,682 shares in June 2010 as a result of the issuance of Class A Common Stock to the MEDC and MSF at a price of \$0.54 per share.

On September 14, 2007, the Company completed a private placement (the 2007 Offering). Each unit sold by the Company in the 2007 Offering consisted of four (4) shares of the Company's Class A Common Stock, par value \$0.001 per share (the 2007 Offering Shares) and one (1) five year warrant exercisable for one share of Class A Common Stock at an exercise price of \$1.85 (each a 2007 Warrant). The Company sold a total of 741,332 units consisting of 2,965,332 (2007) Offering Shares and 741,332 (2007) Warrants, of which 33,000 units consisting of 132,000 (2007) Offering Shares and 33,000 (2007) Warrants were to related parties at the prevailing closing stock price of \$1.83 per share, for an aggregate purchase price of \$4.5 million. The offer and sale of the 2007 Offering Shares and 2007 Warrants were made pursuant to Rule 506 promulgated pursuant to the Securities Act and each of the investors is an accredited investor as defined by Rule 501 promulgated pursuant to the Securities Act. The exercise price for the 2007 Warrants is subject to adjustment based on a formula contained in the Private Placement agreement, if common stock is issued in the future below the \$1.85 exercise price. The exercise price was reduced to \$1.79 in June 2010 as a result of the issuance of Class A Common Stock to the MEDC and MSF at a price of \$0.54 per share. In addition, the number of warrants increased by 24,095 as a result of the change in exercise price. Future adjustments cannot reduce the exercise price below \$1.79.

As described in Note 6, on November 29, 2010, the Company issued 276,196 warrants to Robin Risser and Steve Williamson (Related Parties Warrants). Each warrant is exercisable over a five year period for one share of the Company's Class A Common Stock at an exercise price of \$1.404 subject to adjustment, based on a formula in the warrants agreement, if Common Stock is issued in the future below \$1.404. Future adjustments cannot reduce the exercise price below \$1.17. As a result of the exercise price reset feature, the fair value of the warrants are recorded as a liability.

As a result of adopting the FASB's guidance, effective April 1, 2009, on how an entity should evaluate whether an instrument is indexed to its own stock, the Company's outstanding warrants, which previously were treated as equity, were no longer afforded equity treatment because of their exercise price reset features. At the effective date the Company was required to adjust its balance sheet to reflect the incremental impact of treating the Convertible Note and 2007 Warrants as liabilities since their original issuance date. On April 1, 2009, the Company reclassified \$2,619,000 of previously recorded debt discount from additional paid-in-capital, as a cumulative effect adjustment, and recorded the initial recognition of a \$294,000 warrant liability, to reflect the fair value of the warrants on that date. These adjustments resulted in a \$2,325,000 decrease to the accumulated deficit. The fair value liability of the Convertible Note and 2007 Warrants decreased to approximately \$112,000 as of March 31, 2010. As a result, the Company recorded other income of \$182,000, from the change in the fair value of these warrants for the year ended March 31, 2010.

As discussed above, the exercise price of the 2007 Warrants is no longer variable. Consequently, the fair value of the Private Placement warrants as of May 2010 (approximately \$32,000) was reclassified to equity and recorded as Additional Paid in Capital. The fair value of the Convertible Note and Related Party Warrants was approximately \$732,000 at March 31, 2011. During the year ended March 31, 2011, the Company recorded other expense of \$491,000 for the change in fair value of the warrant liability, which excludes the \$32,000 of Private Placement

warrants reclassified to Additional Paid in Capital and the initial fair value of the Related Party Warrants of \$161,000 which was included in the loss on debt extinguishment as described in Note 6.

The fair value of the warrants was estimated using the Black-Scholes option pricing model using the following assumptions:

|                           | March 31, 2011 | March 31, 2010 |
|---------------------------|----------------|----------------|
| Contractual term in years | .5 – 4.7       | .1 – 2.5       |
| Volatility                | 68.2% -73.8%   | 69.8% -85.46%  |
| Expected dividend         | --             | --             |
| Risk-free interest rate   | 0.58% - 2.0%   | 0.58% - 1.16%  |

Expected volatility is based primarily on historical volatility using the weekly stock price for the most recent period equivalent to the term of the warrants. A dividend yield of zero has been assumed based on the Company's actual past experience and the fact that the Company does not anticipate paying a dividend on its shares in the future. The Company has based its risk-free interest on the implied yield available on U.S. Treasury issues with equivalent contractual term.

The Company compared the fair values determined using the Black-Scholes model with that using a lattice model, which is generally a preferred model when instruments contain non-standard features such as the reset features contained in our warrants, noting no significant differences in warrant values.

The inputs used to determine the fair value of the warrants are classified as Level 3 inputs in the FASB's fair value hierarchy, primarily regarding the computation of historical volatility. Management classified these as Level 3 measurements as they are based on unobservable inputs and involve management judgment.

The following chart represents the activity in the Company's Level 3 warrants during the years ended March 31, 2011 and 2010.

|   | Year Ended March 31, |            |
|---|----------------------|------------|
|   | 2011                 | 2010       |
| Level 3 Warrants, beginning of period                 | \$ 112,000           | \$ -       |
| Initial recognition of Warrant liability              | -                    | 294,000    |
| Addition – Related Party Warrants, initial fair value | 161,000              | -          |
| Transfer to Additional Paid in Capital                | (32,000 )            | -          |
| Change in fair value of warrant liability             | 491,000              | (182,000 ) |
| Level 3 Warrants, end of period                       | \$ 732,000           | \$ 112,000 |

**IQT Securities Purchase Agreement** - The Company entered into a Securities Purchase Agreement (the IQT SPA) with In-Q-Tel, Inc. (IQT) on November 4, 2010, pursuant to which in exchange for a payment of \$200,000 (the IQT Purchase Price) API agreed to issue and IQT agreed to purchase the number of shares of the Company's Class A Common Stock, par value \$0.001 per share (Common Stock), determined by dividing the IQT Purchase Price by the volume-weight average price per share of the Company's Common Stock on the NYSE Amex Stock exchange for the five (5) trading days (the 5-Day VWAP) ending on the business day immediately preceding the signing of the IQT SPA. The closing of the purchase and sale transactions contemplated by the IQT SPA was subject to the receipt of NYSE Amex approval of an additional listing application covering the shares issued pursuant to the IQT SPA (the IQT Additional Listing Application) and other closing conditions customary for transactions of this nature. On November 10, 2010, NYSE Amex approved the IQT Additional Listing Application and the parties satisfied the other closing conditions to the transaction on November 12, 2010, the following business day. The 5-Day VWAP calculated in the aforementioned manner was determined to be \$1.0074 and accordingly, the Company issued IQT 198,524 shares of Common Stock upon the closing of the IQT SPA on November 12, 2010. In November 2010, the Company entered into a \$1.8 million development contract and licensing agreement with IQT to develop an anomaly detector targeted at the homeland security market.

**Universal Shelf Registration Statement on Form S-3** - On January 6, 2011, the Company entered into an underwriting agreement (the January Underwriting Agreement) with B. Riley & Co., LLC, (the Underwriter) as sole underwriter for the offer and sale in a firm commitment underwritten public offering of 2,702,703 shares of the Company's Class A Common Stock, par value \$0.001 per share at a price to the public of \$1.48 per share (\$1.391 per share, net of underwriting discounts) (the January Offering). Pursuant to the January Underwriting Agreement, the Company also (i) granted to the Underwriter a 30-day option to purchase up to an additional 405,405 shares of Common Stock to

cover over-allotments, if any, at the same price and (ii) agreed to reimburse the Underwriter for certain of its out-of-pocket expenses. The January Underwriting Agreement also contained customary (i) representations, warranties, and agreements by the Company, (ii) conditions to closing, and (iii) indemnification provisions of the Company and the Underwriter, including for liabilities under the Securities Act of 1933, as amended (the Security Act).

The January Offering was made pursuant to a prospectus supplement dated January 6, 2011, an additional prospectus supplement dated January 11, 2011 and an accompanying prospectus dated December 23, 2010 Revised Registration Statement.

On January 10, 2011, the Underwriter gave notice to the Company that it was exercising its over-allotment option to purchase an additional 405,405 shares of the Company's Common Stock.

The net proceeds to the Company from the January Offering, completed in the fourth quarter of fiscal 2011, after underwriting discounts and transaction expenses, were approximately \$4,154,000. The Company intends to use the net proceeds of the January Offering for general corporate purposes including, but not limited to, reducing its outstanding indebtedness, increasing its working capital and expanding its products.

On February 25, 2011, the Company entered into an underwriting agreement (the February Underwriting Agreement) with the "Underwriter" as sole underwriter for the offer and sale in a firm commitment underwritten public offering of 1,200,000 shares of the Company's Class A Common Stock at a price to the public of \$1.97 per share (\$1.8518 per share, net of underwriting discounts) (the February Offering). Pursuant to the February Underwriting Agreement, the Company also agreed to reimburse the Underwriter for certain of its out-of-pocket expenses. The February Underwriting Agreement also contained customary (i) representations, warranties, and agreements by the Company, (ii) conditions to closing, and (iii) indemnification provisions of the Company and the Underwriter, including for liabilities under the Securities Act of 1933, as amended. The February Offering was made pursuant to the Revised Registration Statement.

The February Offering was expected to close on or about March 8, 2011, or such earlier date as the Underwriter and the Company agreed to, subject to the satisfaction of customary closing conditions including, but not limited to, NYSE Amex approval of the Company's additional listing application to list the Common Stock issued accordance with the February Underwriting Agreement on NYSE Amex (the February Additional Listing Application). On March 1, 2011, NYSE Amex approved the February Additional Listing Application and the February Offering closed on March 2, 2011, when the Company and Underwriter satisfied the remaining closing conditions.

The net proceeds to the Company from the February Offering, completed in the fourth quarter of fiscal 2011, after underwriting discounts and transaction expenses, were approximately \$2,135,000. The Company intends to use the net proceeds of the Offering for general corporate purposes including, but not limited to, (i) working capital needed to support the rapid growth of the Company's HSOR products in foreign markets, (ii) accelerated development and marketing of Terahertz applications, (iii) capital expenditures needed to further automate the Company's manufacturing processes, and increase the Company's productivity.

Deregistration of Revised Registration Statement – On March 22, 2011, the Company filed a post-effective amendment on Form S-3 (the Post-Effective Amendment) to deregister the remaining securities under our Revised Registration Statement. On March 28, 2011, the Post-Effective Amendment was declared effective by the SEC.

## 11. Foreign Sales

In fiscal 2011 and fiscal 2010, the Company had export sales of approximately \$6.5 million and \$3.5 million, respectively, made primarily to customers in North America, Asia and Europe. All foreign sales are denominated in U.S. dollars. Sales to specific countries, stated as a percentage of total sales, consist of the following:

|        | 2011 |   | 2010 |   |
|--------|------|---|------|---|
| Canada | 2    | % | 3    | % |
| China  | 5    | % | 3    | % |



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|                     |    |   |    |   |
|---------------------|----|---|----|---|
| Germany             | 2  | % | 2  | % |
| Italy               | 9  | % | 2  | % |
| Japan               | 1  | % | 3  | % |
| United Kingdom      | -- |   | 2  | % |
| All other countries | 4  | % | 1  | % |
| Total export sales  | 23 | % | 16 | % |

## 12. Employees' Retirement Plan

The Company maintains a 401(k) Plan which is qualified under the Internal Revenue Code. All full-time employees are eligible to participate in the plan after six months of full time employment. Employees may make voluntary contributions to the plan, which is matched by the Company at the rate of \$1.00 for every \$1.00 of employee contribution up to 3% of wages, and \$.50 for every \$1.00 of employee contributions on the next 2% of wages, subject to certain limitations. Employer contributions are fully vested when earned.

Effective April 1, 2009, the Company match portion of the 401K program was suspended through December 31, 2010 due to the unstable economic environment the country experienced during this period. On January 1, 2011, the Company matching program was reinstated. The Company contributions and administration costs recognized as expense were approximately \$61,000 and \$0 for fiscal 2011 and fiscal 2010, respectively.

## 13. Income Taxes

At March 31, 2011, the Company had net operating loss carry forwards (NOL's) of approximately \$20.7 million for Federal income tax purposes and \$5.8 million for state income tax purposes that expire at various dates through fiscal year 2031. The tax laws related to the utilization of loss carry forwards are complex and the amount of the Company's loss carry forward that will ultimately be available to offset future taxable income may be subject to annual limitations under IRC Section 382 resulting from changes in the ownership of the Company's common stock.

The Company performed an analysis to determine whether an ownership change under Section 382 of the Internal Revenue Code had occurred. The effect of an ownership change would be the imposition of an annual limitation on the use of the net operating loss carry forwards attributable to periods before the change. As of March 31, 2011, the Company believes there are no limitations on the use of these Federal NOLs.

At March 31, 2011, our net deferred tax asset before consideration of a valuation allowance was approximately \$8.5 million, mainly consisting of net operating loss carry-forwards. In assessing the realizability of deferred tax assets, the Company has determined that at this time it is "more likely than not" that deferred tax assets will not be realized, primarily due to uncertainties related to its ability to utilize the net operating loss carry-forwards before they expire based on the negative evidence of its recent years history of losses, including tax losses in two of the last three years and cumulative taxable losses over the past three years, outweighing the positive evidence of taxable income projections in future years. The ultimate realization of these deferred tax assets is dependent upon the generation of future taxable income during those periods in which those temporary differences become deductible or within the periods before NOL carry forwards expire. As of both March 31, 2011 and 2010, the Company recorded a full valuation allowance on its net deferred tax.

Below are reconciliations between the provisions for income taxes compared with the amounts at the United States federal statutory rate:

| Years Ended                                   | March 31, 2011 | March 31, 2010  |
|---|----------------|-----------------|
| Federal income tax benefit at statutory rates | \$ (640,000 )  | \$ (1,295,000 ) |
| State income taxes, net of federal expense    | (169,000 )     | (198,000 )      |
| Expiration of NOL carryforwards               | --             | 662,000         |
| Change in valuation allowance                 | 843,000        | 369,000         |
| Change in R&D credit carryforwards            | (200,000 )     | (190,000 )      |
| Refundable R&D credits                        | --             | (85,000 )       |
| Permanent items                               | 252,000        | 187,000         |
| Return to provision adjustment & other        | (86,000 )      | 465,000         |

|                              |       |              |
|------------------------------|-------|--------------|
| Effective federal income tax | \$ -- | \$ (85,000 ) |
|------------------------------|-------|--------------|

The Company's net deferred tax assets (liabilities) consisted of the following components as of March 31, 2011 and 2010:

|                                 | 2011         | 2010         |
|---------------------------------|--------------|--------------|
| Sec. 263A adjustment            | \$ 48,000    | \$ 45,000    |
| Inventory reserve               | 556,000      | 400,000      |
| Utility accruals                | 2,000        | 3,000        |
| Warranty reserve                | 20,000       | 34,000       |
| Accounts receivable allowance   | 17,000       | 18,000       |
| Non-deductible accruals         | 170,000      | 160,000      |
| Charitable contributions        | 17,000       | 15,000       |
| NOL carry forwards              | 7,352,000    | 7,425,000    |
| Basis difference of intangibles | (1,655,000 ) | (2,132,000 ) |
| Basis difference of equipment   | (686,000 )   | (513,000 )   |
| R&D credit carry forwards       | 2,412,000    | 2,036,000    |
| Goodwill amortization           | 107,000      | 124,000      |
| California Mfg. credit          | 39,000       | 39,000       |
| AMT credit carry forwards       | 20,000       | 20,000       |
| Loss on debt extinguishment     | 98,000       | --           |
| Total                           | 8,517,000    | 7,674,000    |
| Valuation allowance             | (8,517,000 ) | (7,674,000 ) |
| Net deferred tax asset          | \$ --        | \$ --        |

At March 31, 2011, the Company's Federal R&D tax credit carry forwards totaled approximately \$2.4 million. These will expire annually at March 31 over the next twenty (20) years

#### 14. Commitments & Contingencies

Leases - The Company leases all of its executive offices, research, marketing and manufacturing facilities under non-cancellable operating leases.

The lease for our facility located in Camarillo, California was amended in December 2008 and is now leased through February 2014. The lease payment adjusts annually based on the change in the Consumer Price Index (CPI).

In 2001, the Company entered into a 10-year lease for its Ann Arbor, MI facility with two 5-year options to renew at a lease rate tied to the CPI, with a minimum increase for each 5-year option. The original lease included the right of first refusal to purchase the facility and was scheduled to expire in May 31, 2011. In January 2010, the Company amended the lease terms and extended the lease to May 31, 2021. The new lease represents a 19% reduction in lease payments over the new lease term, or approximately \$1.6 million in savings. The Company retained the right of first refusal to purchase the property during the new lease term. In addition, the Company negotiated an option to purchase the facility on May 31, 2016 for no less than \$7.1 million. Rent decreased from \$58,689 per month to \$50,754 per month commencing January, 2010 through May, 2011, then will decrease to \$48,238 per month from June, 2011 through May, 2016 and will increase to \$52,432 in June, 2016 through the remainder of the lease term.

Minimum future lease payments under all non-cancellable operating leases are as follows:

|            |             |
|------------|-------------|
| 2012       | \$967,000   |
| 2013       | 969,000     |
| 2014       | 945,000     |
| 2015       | 579,000     |
| 2016       | 579,000     |
| Thereafter | 3,304,000   |
| Total      | \$7,343,000 |

Rent expense was approximately \$982,000 and \$1.1million in fiscal 2011 and fiscal 2010, respectively.

Legal - The Company is, from time to time, subject to legal and other matters in the normal course of its business. While the results of such matters cannot be predicted with certainty, management does not believe that the final outcome of any pending matters will have a material effect on the financial position and results of operations of the Company.

#### 15. Quarterly Financial Data

The table below lists financial information (unaudited) by quarter for each of the two fiscal years ended March 31, 2011 and 2010.

| 2011                                       | First       | Second        | Third         | Fourth      | Total Year    |
|--|-------------|---------------|---------------|-------------|---------------|
| Net Sales                                  | \$6,253,000 | \$6,999,000   | \$7,720,000   | \$7,866,000 | \$28,838,000  |
| Cost of Products Sold                      | 3,335,000   | 4,097,000     | 4,636,000     | 4,411,000   | 16,479,000    |
| Gross Profit                               | 2,918,000   | 2,902,000     | 3,084,000     | 3,455,000   | 12,359,000    |
| Research & Development Expenses            | 1,288,000   | 1,303,000     | 1,362,000     | 1,678,000   | 5,631,000     |
| Selling, General & Administrative Expenses | 1,891,000   | 1,784,000     | 1,892,000     | 1,986,000   | 7,553,000     |
| Net (Loss)                                 | \$(273,000) | \$(398,000)   | \$(649,000)   | \$(562,000) | \$(1,882,000) |
| Basic and diluted Loss per Common Share    | \$(0.01)    | \$(0.02)      | \$(0.03)      | \$(0.02)    | \$(0.07)      |
| Weighted Average Common Shares Outstanding | 24,675,000  | 25,659,000    | 25,908,000    | 29,285,000  | 26,366,000    |
| 2010                                       | First       | Second        | Third         | Fourth      | Total Year    |
| Net Sales                                  | \$5,934,000 | \$5,424,000   | \$4,588,000   | \$5,129,000 | \$21,075,000  |
| Cost of Products Sold                      | 2,937,000   | 3,360,000     | 3,009,000     | 2,753,000   | 12,059,000    |
| Gross Profit                               | 2,997,000   | 2,064,000     | 1,579,000     | 2,376,000   | 9,016,000     |
| Research & Development Expenses            | 1,063,000   | 1,167,000     | 1,183,000     | 1,325,000   | 4,738,000     |
| Selling, General & Administrative Expenses | 2,179,000   | 1,917,000     | 1,896,000     | 1,942,000   | 7,934,000     |
| Net (Loss)                                 | \$(296,000) | \$(1,192,000) | \$(1,344,000) | \$(846,000) | \$(3,678,000) |
| Basic and diluted Loss per Common Share    | \$(0.01)    | \$(0.05)      | \$(0.05)      | \$(0.03)    | \$(0.15)      |
| Weighted Average Common Shares Outstanding | 24,135,000  | 24,343,000    | 24,483,000    | 24,496,000  | 24,368,000    |



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

None

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls

Our Chief Executive Officer and Chief Financial Officer (the Certifying Officers) are responsible for establishing and maintaining disclosure controls and procedures for the Company. The Certifying Officers have designed such disclosure controls and procedures to ensure that material information is made known to them, particularly during the period in which this report was prepared. The Certifying Officers have evaluated the effectiveness of the Company's disclosure controls and procedures (as such terms are defined in Exchange Act Rules 13a-15(e) and 15d-15(e) (the Rules) under the Securities Exchange Act of 1934 (or Exchange Act)) as of the end of the period covered by this Annual Report and believe that the Company's disclosure controls and procedures are effective based on the required evaluation.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Under the supervision and with the participation of our management, including the Certifying Officers, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of March 31, 2011 based on the criteria set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the criteria set forth in Internal Control – Integrated Framework, our management concluded that our internal control over financial reporting was effective as of March 31, 2011.

This Annual Report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. We were not required to have, nor have we engaged our independent registered public accounting firm to perform, an audit on our internal control over financial reporting pursuant to the rules of the Securities and Exchange Commission that permit us to provide only managements' report in this Annual Report.

Changes in Internal Controls

During our most recent fiscal quarter, there has not occurred any change in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

On April 5, 2011, the Company announced that it has promoted Robin Risser, currently the Chief Financial Officer to Chief Operating Officer and remains a member of the Board of Directors.





## PART III

In accordance with General Instruction G (3), and except for certain of the information called for by Items 10 and 12 which is set forth below, the information called for by Items 10 through 14 of Part III is incorporated by reference from the Company's definitive proxy statement (Proxy Statement) to be filed pursuant to Regulation 14A promulgated under the Securities Exchange Act of 1934 in connection with the Company's 2011 Annual Meeting of Stockholders.

## Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Code of Ethics -- The Company has adopted a Code of Ethical Conduct for Senior Financial Officers, pursuant to the Sarbanes-Oxley Act of 2002. The Code of Ethics is published on the Company's web site, [www.advancedphotonix.com](http://www.advancedphotonix.com) on the Investor Relations page. The Company will also provide a copy of the Code of Ethics to any person without charge upon his or her request. Any such request should be directed to our Secretary at 2925 Boardwalk, Ann Arbor, Michigan 48104. The Company intends to make all required disclosures concerning any amendments to or waivers from the Code of Ethics on its website.

The response to the remainder of this item is incorporated by reference from the Company's Proxy Statement.

## Item 11. EXECUTIVE COMPENSATION

The response to this item is incorporated by reference from the Company's Proxy Statement.

## Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth, as of March 31, 2011, the aggregated information pertaining to all securities authorized for issuance under the Company's equity compensation plans:

| Plan Category  | Number of Securities to be issued upon exercise of outstanding options, warrants and rights | Weighted-average exercise price of outstanding options, warrants and rights | Number of securities remaining available for future issuance |
|--|---|---|--|
| Equity compensation plans approved by shareholders     | 2,160,900   | \$1.65  | 1,353,800(1)   |
| Equity compensation plans not approved by shareholders | -   | -   | -  |
| Total  | 2,160,900   | \$1.65  | 1,353,800(1)   |

(1) Represents shares issuable upon the grant of restricted stock and stock options.

The response to the remainder of this item is incorporated by reference from the Company's Proxy Statement.



Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The response to this item is incorporated by reference from the Company's Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The response to this item is incorporated by reference from the Company's Proxy Statement.

## PART IV

## Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following is a list of the financial statements, schedules and exhibits filed herewith.

(1) Financial Statements: No financial statements have been filed with this Form 10-K other than those listed in Item 8.

(2) Financial Statement Schedules: The following additional financial statement schedule is furnished herewith pursuant to the requirements of Form 10-K.

SCHEDULE II  
ADVANCED PHOTONIX, INC.

Valuation and Qualifying Accounts

|                                  | March 31, 2010 | Additions<br>Charged to<br>Expense | Charged to<br>Other Accounts | Deductions | March 31, 2011 |
|----------------------------------|----------------|------------------------------------|------------------------------|------------|----------------|
| Allowance for doubtful accounts  | \$ 51,000      | \$ --                              | \$ --                        | \$ 4,000   | \$ 47,000      |
| Warranty reserves                | \$ 86,000      | \$ (8,000 )                        | \$ --                        | \$ 27,000  | \$ 51,000      |
| Deferred tax valuation allowance | \$ 7,674,000   | \$ --                              | \$ 843,000                   | \$ --      | \$ 8,517,000   |

|                                  | March 31, 2009 | Additions<br>Charged to<br>Expense | Charged to<br>Other Accounts | Deductions | March 31, 2010 |
|----------------------------------|----------------|------------------------------------|------------------------------|------------|----------------|
| Allowance for doubtful accounts  | \$ 62,000      | \$ 12,000                          | \$ --                        | \$ 23,000  | \$ 51,000      |
| Warranty reserves                | \$ 138,000     | \$ 50,000                          | \$ --                        | \$ 102,000 | \$ 86,000      |
| Deferred tax valuation allowance | \$ 7,305,000   | \$ --                              | \$ 369,000                   | \$ --      | \$ 7,674,000   |

All other schedules for which provisions are made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions, or are disclosed in the accompanying consolidated financial statements, or are inapplicable and, therefore, have been omitted.

(3) Exhibits: The following is a list of the exhibits filed as part of this Form 10-K.

| Exhibit Number | Description  |
|----------------|--|
| 3.1            | Certificate of Incorporation of the Registrant, as amended - incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1, filed on November 23, 1990 |

3.1.1

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Amendment to Certificate of Incorporation of the Registrant, dated October 29, 1992 – incorporated by reference to the Registrant's March 31, 1996 Annual Report on Form 10-K

3.1.2 Amendment to Certificate of Incorporation of the Registrant, dated September 9, 1992 – incorporated by reference to the Registrant's March 31, 1996 Annual Report on Form 10-K

64

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- 3.1.3 Amendment to Certificate of Incorporation of the Registrant, dated August 22, 2008 – incorporated by reference to Exhibit 3.1.3 to the Registrant’s August 16, 2010 Quarterly Report on Form 10-Q
- 3.2 By-laws of the Registrant, as amended – incorporated by reference to Exhibit 3.(ii) to the Registrant’s Form 8-K as filed with the Securities and Exchange Commission on June 14, 2007
- 4.1 Rights Agreement, by and between the Company and Continental Stock Transfer and Trust Company, as amended – incorporated by reference to Exhibit 4.1 to the Registrant’s Form 8-K, filed on February 9, 2005
- 10.1 Advanced Photonix, Inc. 1991 Special Directors Stock Option Plan – incorporated by reference to Exhibit 10.9 to the Registrant's March 31, 1991 Annual Report on Form 10-K
- 10.2 Advanced Photonix, Inc. 1997 Employee Stock Option Plan – incorporated by reference to Exhibit 10.13 to the Registrant’s March 30, 1997 Annual Report on Form 10-K
- 10.3 Amendment No. 1 to 1997 Employee Stock Option Plan of Advanced Photonix, Inc. – incorporated by reference to Exhibit 10.14 to the Registrant’s December 28, 1997 Quarterly Report on Form 10-Q
- 10.4 Advanced Photonix, Inc. 2000 Stock Option Plan, as amended – incorporated by reference to Exhibit 99.1 to the Registrant's Form 8-K, filed on November 9, 2004
- 10.5 Advanced Photonix, Inc. 2007 Equity Incentive Plan – incorporated by reference to the Registrant’s Exhibit A to the Proxy Statement relating to its 2007 Annual Meeting of Stockholders, as filed July 16, 2007 on Form 14A
- 10.6 Form of Director Restricted Stock Agreement under the 2007 Equity Incentive Plan – incorporated by reference to Exhibit 4.4 to the Registrant's Form S-8 on Registration Statement No. 333-147012, filed on October 30, 2007
- 10.7 Form of Employee Restricted Stock Agreement under the 2007 Equity Incentive Plan – incorporated by reference to Exhibit 4.5 to the Registrant's Form S-8 on Registration Statement No. 333-147012, filed on October 30, 2007
- 10.8 Form of Employee Stock Option Agreement under the 2007 Equity Incentive Plan – incorporated by reference to Exhibit 4.6 to the Registrant's Form S-8 on Registration Statement No. 333-147012, filed on October 30, 2007
- 10.9 Lease Agreement dated February 23, 1998 between Advanced Photonix, Inc. and High Tech No. 1, Ltd. – incorporated by reference to Exhibit 10.9 to the Registrant's March 29, 1998 Annual Report on Form 10-K
- 10.10 Form of Indemnification Agreement provided to Directors and Principal Officers of Advanced Photonix, Inc. – incorporated by reference to Exhibit 10.15 to the Registrant’s December 28, 1997 Quarterly Report on Form 10-Q
- 10.11 Securities Purchase Agreement, Registration Rights Agreement, Senior Subordinated Convertible Note, Warrant to Purchase Class A Common Stock, and Additional Investment Right dated October 12, 2004 between Advanced Photonix, Inc. and private investors – incorporated by reference to Exhibits 10.13



- 10.12 Letters of Agreement amending the Securities Purchase Agreement and Warrant to Purchase Class A Common Stock, dated March 9, 2005, between Advanced Photonix, Inc. and private investors – incorporated by reference to Exhibits 10.2 through 10.5 to the Registrant’s Form 8-K, filed on March 14, 2005
- 10.13 Promissory Note between Picotronix, Inc. and Advanced Photonix, Inc., dated March 10, 2005 – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on March 14, 2005
- 10.14 Secured Promissory Note between Advanced Photonix, Inc. and Robin Risser, dated May 2, 2005 – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on May 6, 2005
- 10.15 Amendment dated May 1, 2008 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Robin Risser – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on May 2, 2008
- 10.16 Second Amendment dated November 26, 2008 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Robin Risser – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on December 1, 2008
- 10.17 Secured Promissory Note between Advanced Photonix, Inc. and Steven Williamson, dated May 2, 2005 – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on May 6, 2005
- 10.18 Amendment dated May 1, 2008 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Steven Williamson – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on May 2, 2008
- 10.19 Second Amendment dated November 26, 2008 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Steven Williamson – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on December 1, 2008
- 10.20 Convertible Loan Agreement dated September 15, 2004 between Picometrix, LLC and the Michigan Economic Development Corporation – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on October 30, 2008
- 10.21 First Amendment to Convertible Loan Agreement dated December 2, 2004 between Picometrix, LLC and the Michigan Economic Development Corporation – incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K, filed on October 30, 2008
- 10.22 Amended and Restated Promissory Note (Line of Credit) dated March 17, 2005 by Picometrix, Inc. in favor of the Michigan Economic Development Corporation – incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed on October 30, 2008
- 10.23 Second Amendment to Convertible Loan Agreement dated March 17, 2005 between Picometrix, LLC and the Michigan Economic Development Corporation – incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed on October 30, 2008



- 10.24 Second Amended and Restated Promissory Note dated September 23, 2008 by Picometrix, LLC – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on October 30, 2008
- 10.25 Loan Agreement, dated September 15, 2005, between Picometrix, LLC and the Michigan Economic Development Corporation – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on September 16, 2005
- 10.26 Amended and Restated Promissory Note dated January 26, 2009 by Picometrix, LLC – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on January 30, 2009
- 10.27 Loan Agreement dated September 25, 2008 between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.28 Promissory Note (Term Loan – Prime) dated September 25, 2008 by Advanced Photonix, Inc. in favor of The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.29 Promissory Note (Line of Credit – Prime) dated September 25, 2008 by Advanced Photonix, Inc. in favor of The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.30 Continuing Security Agreement dated September 25, 2008 between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.31 Continuing Guaranty dated September 25, 2008 by Picometrix, LLC and Silicon Sensors, Inc. for the benefit of The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.5 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.32 Form of Patent, Trademark and Copyright Security Agreement between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.6 to the Registrant’s Form 8-K, filed on September 29, 2008
- 10.33 Form of Third Party Subscription Agreement, dated August 31, 2007 – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on September 7, 2007
- 10.34 Form of Insiders Subscription Agreement, dated August 31, 2007 – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on September 7, 2007
- 10.35 Form of 2007 Series Warrant to Purchase Class A Common Stock, dated August 31, 2007 – incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K, filed on September 7, 2007
- 10.36 Form of Registration Rights Agreement, dated August 31, 2007 – incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed on September 7, 2007
- 10.37 Insider Side Letter regarding the Warrant Exercise Price, dated August 31, 2007 – incorporated by reference to Exhibit 10.5 to the Registrant’s Form 8-K, filed on September 7, 2007



- 10.38 Insider Side Letter regarding the Registration Rights Agreement, dated August 31, 2007 – incorporated by reference to Exhibit 10.6 to the Registrant’s Form 8-K, filed on September 7, 2007
- 10.39 Form of Third Party Subscription Agreement, dated September 14, 2007 – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on September 19, 2007
- 10.40 Advanced Photonix, Inc. Executive Incentive Compensation Plan (amended and restated as of March 6, 2009) – incorporated by reference to Exhibit 10.47 to the Registrant’s Form 10-K, filed on June 29, 2009
- 10.41 Third Amendment dated April 1, 2009 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Robin Risser – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on April 24, 2009
- 10.47 Third Amendment dated April 1, 2009 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Steven Williamson – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on April 24, 2009
- 10.48 First Amendment to Loan Agreement dated May 29, 2009 between Advanced Photonix, Inc. and The PrivateBank and Trust Company. – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on June 3, 2009
- 10.49 Employment Agreement dated November 30, 2009, between Advanced Photonix, Inc. and Richard Kurtz – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on December 3, 2009
- 10.50 Employment Agreement dated November 30, 2009, between Advanced Photonix, Inc. and Robin Risser – incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed on December 3, 2009
- 10.51 Employment Agreement dated November 30, 2009, between Advanced Photonix, Inc. and Steve Williamson – incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K, filed on December 3, 2009
- 10.52 Fourth Amendment dated November 30, 2009 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Robin Risser – incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed on December 3, 2009
- 10.53 Fourth Amendment dated November 30, 2009 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Steve Williamson – incorporated by reference to Exhibit 10.5 to the Registrant’s Form 8-K, filed on December 3, 2009
- 10.54 Fourth Addendum & Extension Agreement, dated January 8, 2010, between Picometrix, LLC and Jagar, L.L.C. – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on January 13, 2010
- 10.55 Debt Conversion Agreement entered into as of May 19, 2010, by and among Picometrix, LLC, Advanced Photonix, Inc. and Michigan Economic Development Corporation incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed on May 25, 2010
- 10.56 Debt Conversion Agreement entered into as of May 19, 2010, by and among Picometrix, LLC, Advanced Photonix, Inc., Michigan Economic Development Corporation and Michigan Strategic Fund



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- 10.57 Second Amendment dated June 25, 2010 to the Loan Agreement between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.59 to the Registrant’s March 31, 2010 Annual Report on Form 10-K
- 10.58 Second Amendment dated June 25, 2010 to the Promissory Note (Term Loan – Prime) by Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.60 to the Registrant’s March 31, 2010 Annual Report on Form 10-K
- 10.59 Second Amendment dated June 25, 2010 to the Promissory Note (Line of Credit – Prime) by Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.61 to the Registrant’s March 31, 2010 Annual Report on Form 10-K
- 10.60 Securities Purchase Agreement dated November 4, 2010, by and between Advanced Photonix, Inc. and In-Q-Tel, Inc. - incorporated by reference to Exhibit 10.1 to the Registrants Form 10-Q, filed on February 14, 2011
- 10.61 Letter Agreement dated November 4, 2010, executed by Advanced Photonix, Inc. in favor of In-Q-Tel, Inc. - incorporated by reference to Exhibit 10.2 to the Registrants Form 10-Q, filed on February 14, 2011
- 10.62 Development Agreement dated November 12, 2010, by and among Advanced Photonix, Inc., Picometrix, LLC and In-Q-Tel, Inc. - incorporated by reference to Exhibit 10.3 to the Registrants Form 10-Q, filed on February 14, 2011
- 10.63 Royalty Agreement dated November 12, 2010, by and among Advanced Photonix, Inc., Picometrix, LLC and In-Q-Tel, Inc. - incorporated by reference to Exhibit 10.4 to the Registrants Form 10-Q, filed on February 14, 2011
- 10.64 Amended and Restated Securities Purchase Agreement dated November 29, 2010, by and among Advanced Photonix, Inc., Robin F. Risser and Steven Williamson - incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed December 2, 2010
- 10.65 Class A Common Stock Purchase Warrant dated November 30, 2010, between Advanced Photonix, Inc. and Robin F. Risser - incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K, filed December 2, 2010
- 10.66 Class A Common Stock Purchase Warrant dated November 30, 2010, between Advanced Photonix, Inc. and Steven Williamson - incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K, filed December 2, 2010
- 10.67 Fifth Amendment dated November 29, 2010 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Robin F. Risser - incorporated by reference to Exhibit 10.4 to the Registrant’s Form 8-K, filed December 2, 2010
- 10.68 Fifth Amendment dated November 29, 2010 to Secured Promissory Note dated May 2, 2005 by and between Advanced Photonix, Inc. and Steven Williamson - incorporated by reference to Exhibit 10.5 to the Registrant’s Form 8-K, filed December 2, 2010



- 10.69 Third Amendment dated August 27, 2010 to the Loan Agreement between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K, filed August 27, 2010
- 10.70 Fourth Amendment dated November 30, 2010 to the Loan Agreement between Advanced Photonix, Inc. and The PrivateBank and Trust Company – incorporated by reference to Exhibit 10.6 to the Registrant’s Form 8-K, filed December 2, 2010
- 10.71 Underwriting Agreement dated January 6, 2011 between Advanced Photonix, Inc. and B. Riley & Co., LLC – incorporated by reference to Exhibit 1.1 to the Registrant’s Form 8-K, filed January 1, 2011
- 10.72 Underwriting Agreement dated February 25, 2011 between Advanced Photonix, Inc. and B. Riley & Co., LLC – incorporated by reference to Exhibit 1.1 to the Registrant’s Form 8-K, filed March 2, 2011
- 21.1 List of Subsidiaries of Registrant
- 23.1. Consent of BDO USA, LLP
- 31.1 Certification of the Registrant’s Chairman, Chief Executive Officer and Director pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2 Certification of the Registrant’s Chairman, Chief Financial Officer and Director pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32.1 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ADVANCED PHOTONIX, INC.

By: /s/ Richard Kurtz  
 Chief Executive Officer and  
 President

Date: June 29, 2011

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

| Signature  | Title  | Date          |
|--|--|---------------|
| /s/ Richard D. Kurtz<br>Richard D. Kurtz         | Chairman of the Board, President, and<br>Chief Executive Officer (principal executive Officer)                   | June 29, 2011 |
| s/ Robin Risser<br>Robin Risser                  | Chief Operating Officer, Chief Financial<br>Officer and Director (principal financial and<br>accounting Officer) | June 29, 2011 |
| /s/ M. Scott Farese<br>M. Scott Farese           | Director   | June 29, 2011 |
| /s/ Lance Brewer<br>Lance Brewer                 | Director   | June 29, 2011 |
| /s/ Donald Pastor<br>Donald Pastor               | Director   | June 29, 2011 |
| /s/ Stephen P. Soltwedel<br>Stephen P. Soltwedel | Director   | June 29, 2011 |