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ADVANCED PHOTONIX INC
Form S-3
April 04, 2006

As filed with the Securities and Exchange Commission on April 4, 2006.
Registration No. 333-_____

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

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

DELAWARE
(State or other
jurisdiction of
incorporation)

33-0325826
(I.R.S. employer
identification number)

ADVANCED PHOTONIX, INC.
2925 Boardwalk
Ann Arbor, MI 48104
(734) 864-5647
(Address, including zip code, and telephone number, including area code, of
Registrant's principal executive offices)

RICHARD D. KURTZ, CHIEF EXECUTIVE OFFICER
ADVANCED PHOTONIX, INC.
2925 Boardwalk
Ann Arbor, MI 48104
(734) 864-5647
(Name, address, including zip code, and telephone number, including area code,
of agent for service)

Copies to:

LANDEY STRONGIN, ESQ.
DORNBUSH SCHAEFFER STRONGIN & VENAGLIA, LLP
747 THIRD AVENUE
NEW YORK, NEW YORK 10017
(212) 759-3300

Approximate date of commencement of proposed sale to the public: From time
to time after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered
pursuant to dividend or interest reinvestment plans, please check the following
box. []

If any of the securities being registered on this form are to be offered on

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a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. [X]

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. []

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. []

CALCULATION OF REGISTRATION FEE

| TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED | AMOUNT TO BE REGISTERED | PROPOSED MAXIMUM OFFERING PRICE PER SHARE | PROPOSED MAXIMUM AGGREGATE OFFERING PRICE | AMOUNT OF REGISTRATION FEE |
|---|----------------------------|--|---|----------------------------------|
| Class A Common Stock, par value \$.001 per share (1) | 1,890,717 shares (1) | \$2.68 (1) | \$5,067,121 | \$542 |
| Class A Common Stock, par value \$.001 per share, issuable upon exercise of warrants (1) | 680,658 shares (1) | \$1.78 (3) | \$1,211,571 (3) | \$130 |
| Class A Common Stock, par value \$.001 per share (1) (2) | 771,412 (2) | \$2.68 (2) | \$2,067,384 (2) | \$221 |

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) of the Securities Act of 1933, as amended, based on the average of the high and low sale prices of our Class A common stock on April 3, 2006 as reported on the American Stock Exchange. The number of shares of Class A common stock registered hereunder is based upon the maximum number of shares of Class A common stock of the Registrant issuable upon conversion of the notes and the exercise of the warrants acquired in connection with the exercise of the additional investment rights.

(2) Pursuant to Rule 416 of the Securities Act of 1933, as amended, such shares shall include (i) an indeterminate number of shares of Class A common stock

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that may become issuable as a result of stock splits, stock dividends, recapitalizations and similar events, and (ii) an additional number of shares of Class A common stock representing the Registrant's good faith estimate of the maximum number of additional shares that may become issuable pursuant to contractual agreement with the selling stockholders.

- (3) Calculated pursuant to Rule 457(g) of the Securities Act of 1933, as amended, based on the warrant exercise price of \$1.78 per share.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

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PROSPECTUS

ADVANCED PHOTONIX, INC.

3,342,787 SHARES OF CLASS A COMMON STOCK

This prospectus relates to the sale of up to 3,342,787 shares of our Class A common stock by the selling stockholders identified in this prospectus or their transferees from time to time. Of the Class A common stock offered hereby, (i) 1,890,717 shares of Class A common stock are issuable upon conversion of \$4.0 million aggregate principal amount of additional convertible notes that were issued upon the exercise of all of the outstanding additional investment rights, and (ii) 680,658 shares of Class A common stock are issuable upon exercise of warrants which were purchased upon exercise of all of the outstanding additional investment rights. We are not offering or selling any of our Class A common stock pursuant to this prospectus. We will not receive any of the proceeds from the sale of the shares by the selling stockholders. We will not be paying any underwriting discounts or commissions in this offering.

The selling stockholders identified in this prospectus, or their pledgees, donees, permitted transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

We do not know when or in what amount a selling stockholder may offer shares for sale, including whether a selling stockholder will sell any or all of the shares offered by this prospectus.

Our Class A common stock is traded on the American Stock Exchange under the symbol "API." On March 24, 2006, the last sale price of a share of our Class A common stock as reported on the American Stock Exchange was \$2.68.

These securities involve a high degree of risk. See "Risk Factors" beginning on page 5.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is April 4, 2006

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process or continuous offering process. Under this shelf registration process, the selling stockholders may, from time to time, sell the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities that may be offered by the selling stockholders. Each time a selling stockholder sells securities, the selling stockholder is required to provide you with this prospectus and, in certain cases, a prospectus supplement containing specific information about the selling stockholder and the terms of the securities being offered. That prospectus supplement may include additional risk factors or other special considerations applicable to those securities. Any prospectus supplement may also add, update, or change information in this prospectus. If there is any inconsistency between the information in this prospectus and any prospectus supplement, you should rely on the information in that prospectus supplement. You should read both this prospectus and any prospectus supplement together with additional information described under "Where You Can Find More Information."

As used in this prospectus, the terms "we," "our," and "us" may, depending on the context, refer to Advanced Photonix, Inc., including its consolidated subsidiaries.

CAUTIONARY STATEMENTS REGARDING FORWARD LOOKING STATEMENTS

We believe it is important to communicate our expectations to investors. However, there may be events in the future that we are not able to predict accurately or that we do not fully control that could cause actual results to differ materially from those expressed or implied. This prospectus and the documents incorporated by reference in this prospectus may contain forward looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such statements are subject to certain factors, risks and uncertainties that may cause actual results, events and performances to differ materially from those referred to in such statements.

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These statements address operating performance, events or developments that we expect or anticipate will occur in the future, such as projections about our future results of operations or our financial condition, research, development and commercialization of our product candidates, anticipated trends in our business, manufacture of sufficient and acceptable quantities of our proposed products and our strategies to grow the company. The forward looking statements are based on information available to us on the date hereof, and we assume no obligation to update any such forward looking statements.

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THE COMPANY

This summary contains basic information about us and the sale by the selling stockholders of our Class A common stock. Because it is only a summary, it does not contain all of the information that you should consider before purchasing our Class A common stock. You should read this entire prospectus, including the information set forth under "Risk Factors" and the information incorporated by reference in this prospectus.

OUR BUSINESS

We are a leading supplier of custom opto-electronic solutions and Terahertz sensors and instrumentation, serving a variety of global Original Equipment Manufacturer (OEM) markets. Our optoelectronic solutions are based on our patented high speed optical receivers in III-V materials in Avalanche Photodiode technology (APD) and PIN (positive-intrinsic-negative) configurations and silicon Large Area Avalanche Photodiode (LAAPD), PIN photodiode and FILTRODE(R) detectors. Our newly emerging Terahertz sensor product line is targeted to the Non-Destructive Testing (including baggage/cargo scanning) and Quality Control 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 have three manufacturing facilities, one in Camarillo, CA, one in Dodgeville, WI and one in Ann Arbor, MI.

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 Defense/Homeland Security, Medical, Telecom, Test & Measurement, Industrial/Commercial and the Automotive Industries.

TECHNOLOGY & MANUFACTURING CAPABILITIES

Our basic technologies and manufacturing capabilities include the following:

- Semiconductor Design
- MBE Growth, and Micro-fabrication of high-speed GaAs and InP based semiconductor devices,
- Optoelectronic Micro-packaging of semiconductor devices combining high-speed electronics and fiber optics,
- Vapor Deposition and Ion Implantation for Silicon based PIN photo-detectors,

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- Hybrid Assembly and Electronic Manufacturing Services,
- Terahertz Sensors and Generators, and
- Femto Second Lasers

CORE PRODUCTS

The core product technologies used in the majority of our products are optoelectronic photodiodes. Photodiodes sense light of varying wavelengths and intensity and convert that light

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into electrical signals. We manufacture photodiodes of varying complexity, from basic PIN photodiodes to the more sophisticated avalanche photodiode. The APD is a specialized photodiode capable of detecting very low light levels due to an internal gain phenomenon known as avalanching. All devices are designed by our experienced engineering staff, and fabricated in state-of-the-art clean rooms. Our products include the following:

- High Speed Optical Receivers
- Terahertz Sensors
- Large Area Avalanche Photodiodes (LAAPD)
- FILTRODE(R) - patented technology integrating optical filters directly on photodiode chips
- Avalanche Photodiodes (APD) - discrete, with and without thermoelectric coolers, and with integrated modules in Silicon and III-V materials
- Positively Intrinsic Negative (PIN) photodiodes in Silicon and III-V materials

TERAHERTZ TECHNOLOGY

The newest technology that we have been pursuing is Terahertz (T-Ray(TM)). We believe that Terahertz is the last unexplored frontier of the EM Spectrum. Recent advances in femtosecond lasers and semiconductor devices have enabled the development of practical T-Ray instrumentation. Terahertz properties can be used to "look" through materials and create high spatial resolution and yields precise depth resolution. Market applications include quality control through non-destructive testing and spectroscopy, medical imaging and other scientific applications, and security screening applications for inspection of letters, packages, baggage and people.

We have had significant Terahertz technology and product development since 1997, resulting in over 100 patents or patents pending to date. In 2001, we sold the first commercial Terahertz 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.

MARKETS

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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:

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Military:

- Space
- Defense

Industrial/Non-Destructive Testing:

- Manufacturing
- Instrumentation
- Display

Medical:

- Diagnostic & Monitoring
- Ophthalmic Equipment
- Medical Imaging

Telecommunications:

- Test and Measurement
- Telecom Equipment
- Wireless Communications

Homeland Security:

- Baggage/Cargo Scanning
- Passenger Screening

We were incorporated under the laws of the State of Delaware in June 1988. Effective March 31, 2006, our principal executive offices is now located at 2925 Boardwalk, Ann Arbor, Michigan 48104 and our telephone number is now (734) 864-5647. Our principal executive offices were previously located at 1240 Avenida Acaso, Camarillo, California 93012, and our telephone number was (805) 987-0146.

THE PRIVATE PLACEMENT

On October 12, 2004, we completed a private placement and issued an aggregate of \$5.0 million principal amount of our convertible notes, and warrants to purchase up to an aggregate of 850,822 additional shares of our Class A common stock at \$2.1156 per share exercisable during the five year period commencing March 12, 2005. The convertible notes will mature on September 30, 2007, bear interest at a rate of the prime rate plus 1.0% and are convertible into shares of our Class A common stock at the investors' option at

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an initial conversion price of \$1.9393 per share, subject to adjustment. The convertible notes are secured by a lien on all of our assets. The lien is subordinated to the lien securing our existing bank line of credit. The convertible notes are guaranteed by all of our subsidiaries.

We also granted the purchasers of the convertible notes additional investment rights to

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purchase (i) up to an aggregate of \$5.0 million principal amount of additional convertible notes with an initial conversion price of \$2.1156 per share and (ii) warrants to purchase 850,822 shares of Class A common stock at an exercise price of \$2.1156. These additional investment rights expire on April 5, 2006. We agreed with the purchasers of these securities to register these securities for public resale. This prospectus has been prepared, and the registration statement of which this prospectus is a part has been filed with the SEC, in order to satisfy our obligations to the purchasers of these securities.

On March 9, 2005, we entered into a letter agreement (referred to in this prospectus as the "amendment") amending certain of the definitive agreements we entered into in connection with the private placement. The amendment, among other things, amended the warrants issued, and the additional warrants to be issued, in the private placement to the investors to reduce the exercise price from \$2.1156 per share of our Class A common stock to \$1.78 per share. In addition, the notes issued in connection with the private placement were amended to provide that the interest rate shall not be less than 6.5% at any time.

On September 8, 2005, the holders of \$1,000,000 of the \$5,000,000 of additional investment rights granted in October 2004 exercised these rights. In connection with the exercise, we issued an additional \$1,000,000 aggregate principal amount of additional convertible notes. All terms of these notes other than the exercise price were identical to the initial convertible notes. In connection with this exercise of the additional investment right, we issued year warrants to purchase an aggregate of 170,164 shares of our common stock at an exercise price of \$1.78 per share exercisable during the five year period commencing September 8, 2005.

On March 20, 2006, the holders of all of the outstanding additional investment rights granted in October 2004 exercised these rights. In connection with the exercise, we issued an additional \$4,000,000 aggregate principal amount of additional convertible notes. All terms of these notes other than the exercise price were identical to the initial convertible notes. In connection with this exercise of the additional investment right, we issued year warrants to purchase an aggregate of 680,658 shares of our common stock at an exercise price of \$1.78 per share expiring September 20, 2011.

Accordingly, this prospectus covers the resale by the selling stockholders of shares of our Class A common stock issued upon conversion of the selling stockholders' additional convertible notes and the exercise of the additional warrants issued to them upon the exercise of the portion of the additional investment rights on March 20, 2006.

Investing in our securities involves risks. You should carefully consider the information under "Risk Factors" beginning on page 5 of this prospectus and the other information included or incorporated by reference in this prospectus before investing in our securities. Our Class A common stock is listed on the American Stock Exchange and trades under the symbol "API." On March 24, 2006, the last reported sale price of our Class A common stock on the American Stock

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Exchange was \$2.68 per share.

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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

WE ARE DEPENDENT UPON SEVERAL SUPPLIERS FOR A SIGNIFICANT PORTION OF RAW MATERIALS USED IN THE MANUFACTURING OF OUR PRODUCTS.

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, 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. From time to time, particularly during periods of increased industry-wide demand, silicon wafers and other materials have been in short supply. Any significant interruption in the supply of these raw materials could have a material adverse effect on us.

CUSTOMER ACCEPTANCE OF OUR PRODUCTS IS DEPENDENT ON OUR ABILITY TO MEET CHANGING REQUIREMENTS.

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

WE ARE SUBJECT TO MARKET RISK THROUGH OUR SALES TO OVERSEAS MARKETS.

A growing amount of our sales are being derived from overseas markets. These international sales are primarily focused in Europe and the Middle-East. These operations are subject to risks that are inherent in operating in foreign countries, 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;

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- in some countries, there is a risk that the government may expropriate assets;

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- 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, we utilize third-party "Distributors" to act as our representative for the geographic region that they have been assigned. These "Distributors" are responsible for maintaining customer account management and in some cases maintaining an inventory of products for those customers within their geographic region. Our success is dependent on these "Distributors" finding new customers and receiving new orders from existing customers.

OUR FUTURE PERFORMANCE IS DEPENDENT UPON FINDING NEW CUSTOMERS AND RETAINING OUR EXISTING CUSTOMERS.

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 market segments, quality and/or reliability of our products is 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, or 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 us and our ability to maintain or attract customers.

CUSTOMER ORDERS ARE SUBJECT TO CANCELLATION OR MODIFICATION AT ANY TIME.

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. The current backlog contains only those orders for which we have received a confirmed purchase order and also includes contracts which have scheduled shipping dates beyond the upcoming fiscal year. As such, the current backlog represents only a portion of expected annual revenues for fiscal year 2006. At March 27, 2005, we had approximately \$8.2 million in backlog.

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THE MARKETS FOR MANY OF OUR PRODUCTS ARE CHARACTERIZED BY CHANGING TECHNOLOGY.

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

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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 ARE DEPENDENT ON KEY IN-HOUSE MANUFACTURING EQUIPMENT OR PROCESSES TO DELIVER A CUSTOM PRODUCT (SOLUTION) WITH THE HIGHEST PERFORMANCE AND SHORT TIME TO MARKET.

We depend on key in-house manufacturing equipment and assembly processes. We believe that these key manufacturing and assembly process 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 effect 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 2005, approximately 33.0 % of our sales were related to products purchased by military contractors. Our business depends upon continued federal government expenditures on defense, intelligence, aerospace and other programs that we support. In fiscal 2005, our sales to military contractors enjoyed a strong steady growth rate. 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 U.S. defense and military budget will continue to grow or that sales of defense related items to foreign governments will continue at present levels. In addition, 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 effect on us.

OUR INDUSTRY IS HIGHLY COMPETITIVE AND FRAGMENTED.

We compete with a range of companies for the custom optoelectronic and silicon photodetector requirements of customers in our target markets. We believe that our principal competitors for sales of custom devices are small to medium size companies. Because we specialize in custom 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 manufacturers of standard "off the shelf" optoelectronic components or silicon photodetectors. We cannot assure you that we will be able to compete successfully in our markets against these or any future competitors.

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OUR INDUSTRY IS SENSITIVE TO CHANGING ECONOMIC CONDITIONS.

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 or Gross National Product growth has a direct impact on our customers and the demand for our products. We cannot assure you that our business will not be adversely affected as a result of an industry or general economic downturn.

WE ARE SUBJECT TO ENVIRONMENTAL REGULATIONS.

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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.

We utilize proprietary design rules and processing steps in the development and fabrication of our PIN photodiodes, avalanche photodiodes and our Terahertz systems and sensors. In addition, we have over 100 patents or patents pending utilized in our products. 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 effect on our operating results. Furthermore, there can be no assurance that our APD 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 APD technology, and a review of the published materials, we believe that our competitors hold no patents, licenses or other rights to the APD 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.

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WE FACE STRONG COMPETITION FOR SKILLED WORKERS.

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.

Over the past three years, we have acquired 3 businesses and we continually explore opportunities to acquire related businesses, some of which could be material to us. 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

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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.

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;

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- 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; and
- stock market price and volume fluctuations.

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

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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 effect 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 US.

We may sell additional shares of Class A common stock in subsequent offerings. In addition, holders of warrants to purchase our Class A common stock will, most likely, exercise their warrants to purchase shares of our Class A common stock after this registration statement is declared effective. 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 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.

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.

We have never declared or paid any cash dividends on our Class A common stock. 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.

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USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares offered pursuant to this prospectus. All of the proceeds will be payable solely to the selling stockholders. We have, however, received the proceeds from the exercise of the outstanding additional investment rights issued to the selling stockholders and will receive proceeds from the exercise of the warrants issued to the selling stockholders if and when they are exercised. We anticipate that the net proceeds from such exercise will be used to pay down existing debt, for working capital and general corporate purposes.

The selling stockholders will pay any expenses customarily borne by selling stockholders (including underwriting discounts, commissions and fees and expenses of counsel to the extent not required to be paid by us). We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, but not limited to, all registration and filing fees, listing fees and expenses of our counsel and our accountants.

SELLING STOCKHOLDERS

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The shares of Class A common stock being offered by the selling stockholders are issuable upon conversion of the additional convertible notes issued in connection with the selling stockholders' exercise of their additional investment rights and upon exercise of the additional warrants issued upon exercise of their additional investment rights. For additional information regarding the issuance of those convertible notes, warrants and additional investment rights, see "Prospectus Summary -- The Private Placement" above. We are registering the shares of Class A common stock in order to permit the selling stockholders to offer the shares for resale from time to time. Except for the ownership of the securities issued in connection with the October 2004 private placement, the selling stockholders have not had any material relationship with us within the past three years.

The term "selling stockholders" includes the stockholders listed below and their respective transferees, assignees, pledgees, donees or other successors. The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of Class A common stock by each of the selling stockholders. The second column lists the number of shares of Class A common stock beneficially owned by each selling stockholder, based on its ownership of the convertible notes and warrants and the additional convertible notes and additional warrants, as of March 24, 2006, assuming conversion of all convertible notes and exercise of all warrants held by the selling stockholders on that date, without regard to any limitations on conversions or exercise.

The third column lists the shares of Class A common stock being offered by this prospectus by the selling stockholders.

In accordance with the terms of registration rights agreements with the selling stockholders, this prospectus generally covers the resale of at least 130% of the sum of (i) the number of shares of Class A common stock issuable upon conversion of the additional convertible notes, as of the trading day immediately preceding the date the registration statement

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is initially filed with the SEC and (ii) the number of shares of Class A common stock issuable upon exercise of the related warrants as of the trading day immediately preceding the date the registration statement is initially filed with the SEC. Because the conversion price of the convertible notes and the exercise price of the warrants may be adjusted, the number of shares that will actually be issued may be more or less than the number of shares being offered by this prospectus. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Each selling stockholder has agreed not to convert the additional convertible notes or exercise the additional warrants to the extent such conversion or exercise would cause such selling stockholder, together with its affiliates, to beneficially own a number of shares of Class A common stock which would exceed 4.99% of our then outstanding shares of Class A common stock after giving effect to such conversion or exercise, excluding for purposes of such determination shares of Class A common stock issuable upon conversion of any convertible notes which have not been converted and any warrants which have not been exercised. The number of shares in the second column does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

Number of Shares

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| Name of Selling Stockholder | Beneficially Owned Prior to the Offering | Maximum Number of Shares to be Sold Pursuant to this Prospectus (3) | Number of Shares Beneficially O After the Offe |
|-------------------------------|--|---|--|
| Smithfield Fiduciary, LLC (1) | 1,295,571 | 3,133,863 | 0 |
| Iroquois Capital LP (2) | 171,454 | 208,924 | 0 |

- (1) Highbridge Capital Management, LLC ("Highbridge"), is the trading manager of Smithfield Fiduciary LLC ("Smithfield") and consequently has voting control and investment discretion over the shares of Class A common stock held by Smithfield. Glenn Dubin and Henry Swieca control Highbridge. Each of Highbridge and Messrs. Dubin and Swieca disclaims beneficial ownership of the shares held by Smithfield.
- (2) Joshua Silverman has voting control and investment discretion over securities held by Iroquois Capital LP. Mr. Silverman disclaims beneficial ownership of the Class A common stock held by Iroquois Capital LP.
- (3) The number of shares of Class A common stock to be sold by the selling stockholders is based on (i) 100% of the number of shares of Class A common stock issuable to the selling stockholders upon conversion of the additional convertible notes and exercise of the additional warrants, and (ii) 30% of the number of shares of Class A common stock issuable to the selling stockholders representing a good faith estimate of the maximum number of additional shares that may become issuable pursuant to a contractual agreement with the selling stockholders.

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PLAN OF DISTRIBUTION

We are registering the shares of Class A common stock issuable upon conversion of the additional convertible notes and upon exercise of the additional warrants issued in connection with the selling stockholders' exercise of their additional investment rights to permit the resale of these shares of Class A common stock by the holders of the additional convertible notes and additional warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of Class A common stock. We will bear all fees and expenses incident to our obligation to register the shares of Class A common stock. We will not be paying any underwriting discounts or commissions in this offering. We have also agreed with the selling stockholders to reimburse them for fees and disbursement in an amount not to exceed \$5,000 incurred in connection with this registration statement

The selling stockholders may sell all or a portion of the shares of Class A common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of Class A common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of Class A common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, such as:

- sales on any national securities exchange or quotation service on

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which the securities may be listed or quoted at the time of sale;

- sales in the over-the-counter market;
- transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- the writing of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;

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- sales pursuant to Rule 144;
- sales through broker-dealers who may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

If the selling stockholders effect such transactions by selling shares of Class A common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of Class A common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of Class A common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of Class A common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of Class A common stock short and deliver shares of Class A common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of Class A common stock to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the convertible notes, warrants, additional investment rights or shares

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of Class A common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of Class A common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933, as amended, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of Class A common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer participating in the distribution of the shares of Class A common stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of Class A common stock is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of shares of Class A common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling shareholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

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Under the securities laws of some states, the shares of Class A common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of Class A common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of Class A common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of Class A common stock by the selling stockholders and any other person participating in this offering. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of Class A common stock to engage in market-making activities with respect to the shares of Class A common stock. All of the foregoing may affect the marketability of the shares of Class A common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of Class A common stock.

We will pay all expenses of the registration of the shares of our Class A common stock pursuant to the registration rights agreement, estimated to be \$5,000 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or "blue sky" laws. However, the selling stockholders will pay all underwriting discounts and selling commissions, if any. We have agreed to indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreements, or the selling shareholders will be entitled to

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contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of Class A common stock will be freely tradable in the hands of persons other than our affiliates.

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LEGAL MATTERS

Dornbush Schaeffer Strongin & Venaglia, LLP, New York, New York, will pass on certain legal matters in connection with the offering, including the validity of the issuance of the shares being offered hereby.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended March 27, 2005 have been audited by Farber & Hass LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any public offering document we file, including a copy of the registration statement on Form S-3 of which this prospectus is a part, without charge at the SEC's Public Reference Room, 450 Fifth Street, N.W., Room 204, Washington, D.C. 20549. You can also request copies of all or any portion of these documents by writing the Public Reference Section and paying certain prescribed fees. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Section. Additionally, these documents are available to the public from the SEC's web site at <http://www.sec.gov>.

The SEC allows us to "incorporate by reference" into this prospectus the information we file with the SEC. This means that we are disclosing important information to you by referring to other documents. The information incorporated by reference is considered to be part of this prospectus, except for any information superceded by information contained directly in this prospectus. Information that we file later with the SEC under the Exchange Act will automatically update information in this prospectus. In all cases, you should rely on the later information over different information included in this prospectus. We incorporate by reference the documents listed below and any future filings made with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act until this offering is completed:

- Annual Report on Form 10-KSB for the fiscal year ended March 27, 2005;
- Current Report on Form 8-K, filed on June 28, 2005;

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- Current Report on Form 8-K filed on July 7, 2005;
- Current Report on Form 8-K/A, filed on July 11, 2005;
- Current Report on Form 8-K/A, filed on July 18, 2005;
- Current Report on Form 8-K/A filed on August 4, 2005;
- Current Report on Form 8-K, filed on August 15, 2005;
- Quarterly Report on Form 10-Q for the quarter ended June 26, 2005;
- Current Report on Form 8-K, filed on September 9, 2005;
- Current Report on Form 8-K, filed on September 16, 2005;
- Quarterly Report on Form 10-Q for the quarter ended September 25, 2005;
- Current Report of Form 8-K, filed on October 27, 2005;
- Current Report of Form 8-K, filed on November 14, 2005;
- Quarterly Report on Form 10-Q for the quarter ended December 25, 2005;
- Current Report of Form 8-K, filed on March 15, 2006;
- Current Report of Form 8-K, filed on March 22, 2006;
- The description of our Class A common stock contained in our Registration Statement on Form 8-A dated January 16, 1991 filed under the Exchange Act, including any amendments or reports filed for the purposes of updating such description.

You may request a copy of these filings, or any other documents or other information referred to in, or incorporated by reference in, this prospectus, at no cost, by writing or calling us at the following address or telephone number:

Advanced Photonix, Inc.
1240 Avenida Acaso
Camarillo, California 93012
Attention: Secretary
(805) 987-0146

Exhibits to any documents incorporated by reference in this prospectus will not be sent, however, unless those exhibits have been specifically referenced in this prospectus.

INDEMNIFICATION

Our Certificate of Incorporation allows us to indemnify our officers and directors to the maximum extent allowed under Delaware law. This includes indemnification for liabilities which could arise under the Securities Act. Insofar as we are permitted to indemnify our officers and directors, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

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ADVANCED PHOTONIX, INC.

3,342,787 Shares of

Class A Common Stock

PROSPECTUS

April 4, 2006

PROSPECTIVE INVESTORS MAY RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROSPECTUS. NEITHER ADVANCED PHOTONIX, INC. NOR ANY SELLING STOCKHOLDER HAS AUTHORIZED ANYONE TO PROVIDE PROSPECTIVE INVESTORS WITH INFORMATION DIFFERENT FROM THAT CONTAINED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS. THIS PROSPECTUS IS NOT AN OFFER TO SELL NOR IS IT SEEKING AN OFFER TO BUY THE SHARES OF OUR CLASS A COMMON STOCK BEING OFFERED HEREBY IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED. THE INFORMATION CONTAINED IN THIS PROSPECTUS IS CORRECT ONLY AS OF THE DATE OF THIS PROSPECTUS, REGARDLESS OF THE TIMES OF THE DELIVERY OF THIS PROSPECTUS OR ANY SALE OF THE SHARES OF OUR CLASS A COMMON STOCK.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

We have agreed to bear all expenses relating to the registration of our Class A common stock registered pursuant to the registration statement of which this prospectus is a part (other than underwriter's discounts and commissions to be paid by the selling stockholders). We estimate these expenses to be approximately \$23,893, which include the following categories of expenses:

AMOUNT

| | |
|---------------------------------|----------|
| SEC Registration Fee..... | \$ 893 |
| Printing fees..... | \$ 5,000 |
| Accounting Fees and Expenses... | \$ 4,000 |
| Legal Fees and Expenses..... | \$10,000 |
| Miscellaneous Expenses..... | \$ 5,000 |
| | ----- |
| Total..... | \$24,893 |

The foregoing, except for the SEC registration fee, are estimates. We will pay all of the above expenses. The selling stockholders will be responsible for all expenses customarily borne by selling stockholders (including underwriting discounts, commissions and fees and expenses of counsel).

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Our Certificate of Incorporation contains a provision permitted by Delaware General Corporation Law that generally eliminates the personal liability of directors for monetary damages for breaches of their fiduciary duty, including breaches involving negligence or gross negligence in business combinations,

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unless the director has breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or a knowing violation of law, paid a dividend or approved a stock repurchase in violation of the Delaware General Corporation Law or obtained an improper personal benefit. This provision does not alter a director's liability under the federal securities laws. Also this provision does not affect the availability of equitable remedies, such as an injunction or rescission, for breach of fiduciary duty.

Our By-Laws also provide that directors and officers shall be indemnified against liabilities arising from their service as directors or officers to the fullest extent permitted by law, which generally requires that the individual act in good faith and in a manner he or she reasonably believes to be in or not opposed to Advanced Photonix's best interests.

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ITEM 16. EXHIBITS

(a) Exhibits

| No. --- | Description ----- |
|------------|---|
| 2.1 | Stock Purchase Agreement dated December 21, 2004, by and among the Company and the Stockholders named therein - incorporated by reference to Exhibit 2.1 to the Registrants Form 8-K filed with the Securities and Exchange Commission on December 23, 2004 |
| 2.2 | Agreement and Plan of Merger dated March 8, 2005, by and among the Company, Michigan Acquisition Sub, LLC, Picotronix, Inc., Robin Risser and Steven Williamson - incorporated by reference to Exhibit 2.1 to the Registrant's Form 8-K filed with the Securities and Exchange Commission on March 14, 2005 |
| 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 with the Securities and Exchange Commission on November 23, 1990 |
| 3.1.1 | 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 |
| 3.2 | By-laws of the Registrant, as amended - incorporated by reference to Exhibit 3.2 to the Registrant's March 30, 2003 Annual Report on Form 10-KSB |
| 4.1 | Rights Agreement, dated September 19, 2002 by and between the Company and Continental Stock Transfer |

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and Trust Company, Certificate of Designations for the Company's Series B Junior Preferred Stock - incorporated by reference to Exhibits 4.1 and 4.2 to the Registrant's Form 8-K filed with the Securities and Exchange Commission on September 26, 2002

- 4.2 Amended and Restated Rights Agreement, dated February 4, 2005 by and between the Company and Continental Stock Transfer and Trust Company - incorporated by reference to Exhibits 4.1 to the Registrant's Form 8-K filed with the Securities and Exchange Commission on February 9, 2005
- 5.1 Opinion of Dornbush Schaeffer Strongin & Venaglia, LLP.
- 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. 1990 Incentive Stock Option and Non-Qualified Stock Option Plan - incorporated by reference to Exhibit No. 10.11 to the Registrant's Registration Statement on Form S-1, filed with the Securities and Exchange Commission on November 23, 1990
- 10.3 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
- 10.4 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
- 10.5 Advanced Photonix, Inc. 2000 Stock Option Plan - incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-8, filed with the Securities and Exchange Commission on March 15, 2001

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- 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 Employment Agreement dated August 21, 2002 between Advanced Photonix, Inc. and Paul D. Ludwig - incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on September 5, 2002
- 10.12 Employment Agreement dated February 10, 2003 between Advanced Photonix, Inc. and Richard D. Kurtz - incorporated by reference to

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Exhibit 10.12 to the Registrant's March 30, 2003 Annual Report on Form 10-KSB

- 10.13 Securities Purchase Agreement dated October 11, 2004 between Advanced Photonix, Inc. and Smithfield Fiduciary LLC, Iroquois Capital LP, Bluegrass Growth Fund, LP and Bluegrass Growth Fund, Ltd. (the "Buyers") - incorporated by reference to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on October 12, 2004
 - 10.13.1 Registration Rights Agreement dated October 11, 2004 between Advanced Photonix, Inc. and the Buyers, as amended - incorporated by reference to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on October 12, 2004.
 - 10.13.2 Form of Senior Subordinated Convertible Note - incorporated by reference to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on October 12, 2004
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- 10.13.3 Form of Warrant - incorporated by reference to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on October 12, 2004
 - 10.13.4 Form of Additional Investment Right - incorporated by reference to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on October 12, 2004
 - 10.13.5 Promissory Note to Picotronix, Inc. dated March 10, 2005 - incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed with the Securities and Exchange Commission on March 14, 2005
 - 10.13.6 Letter Agreement dated March 9, 2005, by and among the Company and Bluegrass Growth Fund, Ltd. - incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on March 14, 2005
 - 10.13.7 Letter Agreement dated March 9, 2005, by and among the Company and Bluegrass Growth Fund, LP - incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on March 14, 2005
 - 10.13.8 Letter Agreement dated March 9, 2005, by and among the Company and Smithfield Fiduciary LLC - incorporated by reference to Exhibit 10.4 to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on March 14, 2005
 - 10.13.9 Letter Agreement dated March 9, 2005, by and among the Company and Iroquois Capital, LP - incorporated by reference to Exhibit 10.5 to the Registrant's Form 8-K as filed with the Securities and Exchange Commission on March 14, 2005
 - 21.1 List of Subsidiaries of Registrant - incorporated by reference to Exhibit 21.1 to the Registrant's March 30, 2003 Annual Report on Form 10-KSB

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- 23.1 Consent of Farber Hass Hurley & McEwen LLP (formerly known as Farber & Hass LLP)
- 23.2 Consent of Dornbush Schaeffer Strongin & Venaglia, LLP, included in Exhibit 5.1
- 24.1 Power of Attorney (contained on Page II-9)

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ITEM 17. UNDERTAKINGS

The Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement: (i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933; (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for determining any liability under the Securities Act of 1933, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As

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provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the "Act") may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York on the 4th day of April, 2006.

ADVANCED PHOTONIX, INC.

By: /s/ Richard D. Kurtz

Name: Richard D. Kurtz

Title: Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Richard D. Kurtz and Robin F. Risser, and each of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them or their substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| SIGNATURE ----- | TITLE ----- | DATE ----- |
|---|--|---------------|
| PRINCIPAL EXECUTIVE OFFICER: | | |
| /s/ Richard D. Kurtz ----- Richard D. Kurtz | Chairman of the Board and Chief Executive Officer | April 4, 2006 |
| PRINCIPAL FINANCIAL AND ACCOUNTING OFFICER: | | |
| /s/ Robin F. Risser ----- Robin F. Risser | Chief Financial Officer and Secretary | April 4, 2006 |
| DIRECTORS: | | |
| /s/ M. Scott Farese ----- M. Scott Farese | Director | April 4, 2006 |

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/s/ Stephen P. Soltwedel Director April 4, 2006

Stephen P. Soltwedel

/s/ Paul D. Ludwig Director April 4, 2006

Paul D. Ludwig

/s/ Lance Brewer Director April 4, 2006

Lance Brewer

/s/ Donald Pastor Director April 4, 2006

Donald Pastor

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EXHIBIT INDEX

| NO. | DESCRIPTION |
|------|--|
| --- | ----- |
| 5.1 | Opinion of Dornbush Schaeffer Strongin & Venaglia, LLP |
| 23.1 | Consent of Farber Hass Hurley & McEwen LLP |