

LIGHTPATH TECHNOLOGIES INC  
Form 10-K  
September 08, 2011

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SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended June 30, 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 000-27548

LIGHTPATH TECHNOLOGIES, INC.  
(Exact name of registrant as specified in its charter)

DELAWARE  
(State or other jurisdiction of incorporation  
or organization)

86-0708398  
( I.R.S. Employer Identification No)

<http://www.lightpath.com>

2603 Challenger Tech Court, Suite 100  
Orlando, Florida 32826  
(Address of principal executive offices,  
including zip code)

(407) 382-4003  
(Registrant's telephone number, including  
area code)

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

None  
(Title of each class)

None  
(Name of each exchange on which registered)

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

Class A Common Stock, \$.01 par value  
Series D Participating Preferred Stock Purchase Rights  
(Title of Class)

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

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 and 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 Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES  NO

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer, or a smaller reporting company. As defined in Rule 12b-2 of the Exchange Act: See the definitions of "large accelerated filer", "accelerated filer", "non-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

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

The aggregate market value of the registrant's voting stock held by non-affiliates (based on the closing sale price of the registrant's Common Stock on the NASDAQ Capital Market, and for the purpose of this computation only, on the assumption that all of the registrant's directors and officers are affiliates as well as one party filing on Form SC 13-G) was approximately \$13,417,519 as of December 31, 2010.

As of September 6, 2011, the number of shares of the registrant's Class A Common Stock outstanding was 9,719,217.

LightPath Technologies, Inc.  
Form 10-K

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## PART I

### Item 1. Business.

#### General

LightPath Technologies, Inc. (“LightPath”, “Company”, “we”, “us”, or “our”) manufactures optical components and higher-level assemblies including precision molded glass aspheric optics, precision molded infrared molded optics, isolators, proprietary fiber-optic collimators, GRADIUM glass lenses and other optical materials used to produce products that manipulate light. We design, develop, manufacture and distribute optical components and assemblies utilizing advanced optical manufacturing processes. Our products are incorporated into a variety of applications by our customers in many industries, including defense products, medical devices, laser aided industrial tools, automotive safety applications, barcode scanners, optical data storage, hybrid fiber coax datacom, telecom, machine vision and sensors, among others. All the products that we produce enable lasers and imaging devices to function more effectively. For example:

- Molded glass aspheres are used in various high performance optical applications primarily based on laser technology;
- Isolators prevent the back-reflection of optical signals that can degrade optical transmitter and amplifier performance whenever light must enter or exit a fiberoptic cable (“fiber”);
- Collimators are assemblies that are used to straighten and make parallel diverging light as it exits a fiber, and are used in laser delivery applications like fiber lasers; and
- GRADIUM extends the performance of a spherically polished glass lens technology improving optical performance so that it approximates aspheric lens performance.

LightPath was incorporated under Delaware law in June 1992 as the successor to LightPath Technologies LP, a New Mexico limited partnership formed in 1989, and its predecessor, Integrated Solar Technologies Corporation, a New Mexico corporation, organized in 1985. Our initial business objectives focused on solar energy technology, however, over time, we expanded our business to other optics applications primarily driven by laser based technology.

During fiscal 1998, as a result of the number of inquiries we received from prospective customers about the ability of one of the proprietary materials we developed, GRADIUM glass, to solve optoelectronic problems, we refocused our sales and marketing efforts to expand our business to include the optoelectronics and photonics markets, specifically in the area of fiber telecommunications. During fiscal 2000 we acquired Horizon Photonics, Inc. (“Horizon”), a California corporation that utilized automated production platforms to manufacture passive optical components for the telecommunications and data communications markets. In September 2000, we also acquired Geltech, Inc. (“Geltech”), a Delaware corporation that manufactured precision molded glass aspheric optics used in the active telecom components market to provide a highly efficient means to couple laser diodes to fibers or waveguides.

From 1998 through 2002, we were heavily reliant on the telecommunications capital equipment market, which went through a rapid increase and a subsequent rapid decrease during this period. During fiscal 2003 following the contraction of this market, we consolidated our corporate headquarters and all production, including production for GRADIUM glass lenses and collimators previously performed in New Mexico and production of isolators previously performed in California, in Orlando, Florida to reduce costs and adapt to the market changes.

In November 2005, we announced the formation of LightPath Optical Instrumentation (Shanghai) Co., Ltd (“LPOI”), a wholly owned manufacturing subsidiary, located in Jiading, People’s Republic of China. The manufacturing operations are housed in a 16,000 square foot facility located in the Jiading Industrial Zone near Shanghai. This plant increased overall production capacity and enabled LightPath to compete for larger production volumes of optical components

and assemblies, and strengthen partnerships within the Asia/Pacific region. It also provided a launching point to drive our sales expansion in the Asia/Pacific region.

In 2006, the Company began a program to reduce its operating costs, including restructuring its manufacturing operations. By 2008, the major elements of this program were implemented resulting in a significant reduction of costs. The elements of the program were: 1) move the majority of our manufacturing to our Shanghai facility, 2) convert our tooling to a less expensive ceramic system and 3) introduce lower cost glass materials. In exploiting our new cost structure we have focused on leveraging our facility in Shanghai to address high volume, lower cost applications. These applications include laser tools, laser gun sights and certain imaging applications. We have established relationships with some of the larger OEM customers in these areas. We have expanded our sales channels by adding distribution coverage in North America and Asia, and adding a master distributor in Europe. Finally, we are designing lenses specifically for our existing and new target markets. Our new designs and new marketing approach have brought additional requests for product information from new customers. We believe we are well positioned to take advantage of new opportunities in these areas.

## Business Strategy

LightPath intends to focus on three primary product markets which we believe will provide significant growth opportunities over the next several years. These markets are: 1) glass aspheres, which we project to grow to \$1.2 billion globally by 2014 driven by OEM laser modules and the demand for internet mobility; 2) specialty optics, which we project to grow to \$500 million globally by 2014 driven by high-power laser applications and custom designs; and 3) infrared systems, which we project to grow to \$3.2 billion globally by 2014 driven by defense and commercial applications. These large overall markets total \$4.9 billion globally.

LightPath has targeted specific applications in each of these areas: laser tools, gun sights, biomedical instruments and telecommunication subsystems for the glass aspheres market; laser line generators, industrial tools, optical cutting/welding, scientific lasers, semiconductors metrology systems and telecommunication subsystems for the specialty optics market; and thermal imaging, security cameras, thermography, gas sensing and defense targeting and tracking for the infrared optics market. Within the larger overall markets discussed above, we believe there is a market of approximately \$450 million for our current products and capabilities.

Given these specific markets and applications, our strategy is to leverage our technology, know-how, established low cost manufacturing capability and partnerships to grow our business.

We will accomplish this growth by:

- Continuing our penetration into high volume applications by leveraging our low cost structure;
  - Introducing new value added products;
- Expanding our market presence by broadening our customer base and leveraging our Shanghai subsidiary to gain direct access to the Asian market;
- Adding new products for industrial tools, laser based measurement tools and laser based gas sensing instruments;
  - Leveraging our expanded sales distribution channels worldwide; and
- Completing the development of molded infrared lenses and assembly products which will enable future revenue growth.

### Precision Molded Aspheric Lenses

We have rights under a royalty-free perpetual license to the Precision Molded Optics process originally developed by Corning, Inc., whose business in this field we acquired in 1994. Products manufactured using this technology include glass aspheric lenses, sub-millimeter lenses and lens arrays. Precision Molded Aspheres are our base business and this business tracks with the growth of the laser diode markets which have a 5% cumulative annual growth rate. We anticipate we will be able to grow this product line at a rate faster than that in the immediate future as we shift from low volume applications to high volume commercial and consumer applications. These growth opportunities are well diversified and include laser tools, telecom transceivers, micro-projectors, scientific and bench top lasers, range finders, medical devices, bar code scanners and laser based spectrometers. We are aggressively pursuing new sales opportunities in all of these areas.

### Infrared Molded Glass Aspheric Lenses & Assemblies

Infrared Systems represent a market that is forecasted to grow to \$3.2 billion by 2014. LightPath has proprietary manufacturing and material technology to manufacture molded optics that addresses applications across a broad cross section of this market. We are continuing to develop a molded infrared aspheric optic product line with short (SWIR), mid (MWIR) and long wave (LWIR) materials. This product line is called the Black Diamond™ precision molded glass aspheric optics. Advances in optical material now provide a technology path to produce molded infrared

aspheric optics over the wavelength range of 1 to 14 microns. Traditionally, infrared optics relies on individually diamond turned, polished or other lengthy manufacturing methods. Utilizing precision molded aspheric optics significantly reduces the number of lenses required for typical thermal imaging systems and the cost to manufacture these lenses.

We have enhanced our precision molded infrared aspheric optics products for imaging applications in firefighting, predictive maintenance, homeland security, surveillance, automotive and defense. Since 2008, LightPath has delivered customized lens assemblies to clients and increased our presence in the market for molded precision infrared optics. In addition, we have targeted niche markets, such as infrared laser systems that are used in gas sensing and environmental monitoring, because the demand for infrared imaging systems has been growing significantly based on the steep decline in prices of the infrared detectors. These growing markets provide a unique opportunity for high volume molded infrared aspheres.

Overall, we anticipate the growth of infrared optics and increased requirements for systems requiring molded aspheric optics over traditional ground and polished lenses. As infrared imaging systems become widely available, the cost of optical components



needs to decrease before the market demand will increase. The commercial market has the potential to be the largest market opportunity within the infrared market with products such as automotive imaging/warning systems and infrared cameras. The aspheric character of LightPath's lenses enables system designers to reduce the lens elements in a system and provide similar performance at a lower cost. LightPath's aspheric molding process is an enabling technology for the cost reduction and commercialization of infrared imaging systems.

### Specialty Products & Assemblies

LightPath has a group of products that take advantage of our unique technologies and capabilities. These include custom optical designs, mounted lenses, assemblies, isolators, collimators and GRADIUM lenses.

#### Isolators

We manufacture a qualified family of laminate and custom isolators, and sell isolator assemblies for applications in all communication markets. Isolators for communications, in general, is a very cost sensitive product. We moved the production of our isolators to our Shanghai facility in order to help cut costs and improve our gross margin. This is a product line which fluctuates with the telecommunications market.

#### Collimators

We are specifically targeting and selling high power collimators in diverse markets such as fiber laser systems, Nd:YAG laser cutting and welding systems and communications systems. Our standard collimator products provide higher performance in back reflection and insertion loss and can withstand in excess of ten watts of optical power. Customers have passively tested our collimators to over 100 watts in the forward direction. The process to manufacture these collimators uses patented laser fusion technologies and robotics. These products may incorporate aspheric molded optics and GRADIUM lenses.

#### GRADIUM Lenses

We developed GRADIUM glass as an optical quality glass material with axially varying refractive index, capable of reducing optical aberrations inherent in conventional lenses and performing with a single lens tasks traditionally performed by multi-element, conventional lens systems. Typical applications include surgical lasers, high power YAG lasers for welding, cutting and marking, defense-market uses, and test and measurement. GRADIUM has a unique capability to handle up to 10 kilowatts of power and is servicing a niche market for laser high-power cutting and laser welding.

#### Optical Assemblies

We produce optical assemblies based on our proprietary technologies. We design, build and sell optical assemblies into markets for test and measurement, medical devices, military, industrial and communications. Many of our assemblies consist of several products that LightPath manufactures. The OASIS product line consists of an optical isolator that is aligned and mounted to a molded aspheric lens. This product has been particularly well received in the communications market for its value in reducing assembly time and component count for the customer.

#### Sales and Marketing

Extensive product diversity and varying levels of product maturity characterize the optics industry. Product markets range from consumer (e.g., cameras, copiers) to industrial (e.g., lasers, data storage, infrared imaging), from products where the lenses are the central feature (e.g., telescopes, microscopes, lens systems) to products incorporating lens

components (e.g., robotics, semiconductor production equipment) and communications (various optics are required for bandwidth expansion and improved data transfer for the optical network). As a result, we market our products across a wide variety of customer groups including laser systems manufacturers, laser OEMs, infrared-imaging systems vendors, industrial laser tool manufacturers, telecommunications equipment manufacturers, medical and industrial measurement equipment manufacturers, government defense agencies and researcher institutions worldwide.

## Sales Organization

We have regional sales forces that market and sell our products directly to customers in North America and China. In addition to our direct regional sales forces in the United States and China, we use two other distinct channels to market our products. First, we have formalized relationships with fifteen industrial, laser, and optoelectronics distributors and channel partners located in foreign countries and in the United States to assist in distribution of our products in highly specific target markets. Second, we have reseller arrangements with the top three product catalogs in the optics and opto-electronics market. In addition, we also produce and maintain our own product catalog and internet website ([www.lightpath.com](http://www.lightpath.com)) as vehicles for broader promotion of our products. We make use of print media advertisements in various trade magazines and participate in appropriate domestic and foreign trade shows.

All of our partners work diligently to expand opportunities in emerging geographic markets and through alternate channels of distribution. We believe that we provide a high level of support in developing and maintaining our long-term relationships with our customers. Customer service and support are provided through our offices and those of our partners that are located throughout the world.

## Trade Shows

We display our product line additions and enhancements at one or more trade shows each year. For example, we participated in several United States based shows including SPIE's Photonics West in January 2011 and Society of Photographic Instrumentation Engineers ("SPIE") Defense, Security and Sensing in April 2011. We also participate in shows in China such as the China International Optoelectronic Exposition in Shenzhen. In addition, we partner with key distributors to attend exhibitions such as a Laser World of Photonics in Munich, Germany. Such a strategy underscores LightPath's strategic directive of broadening our base of innovative optical components and assemblies. These trade shows provide an opportunity to meet with and enhance existing business relationships, meet and develop potential customers, and to distribute information and samples regarding our products.

## New Products

LightPath has identified three market categories to focus our new product efforts that we believe will provide significant growth opportunities over the next several years: molded glass aspheres, specialty optics and infrared systems.

LightPath has targeted specific applications in each of these areas for new product launches in the near future. For example, in glass aspheres: laser tools, gun sights, biomedical instruments and telecommunication subsystems; in specialty optics: laser line generators, industrial tools, optical cutting/welding, scientific lasers, semiconductor metrology systems and telecommunication subsystems; and in infrared optics: thermal imaging, security cameras, thermography, gas sensing and defense targeting and tracking.

Given these specific markets and applications, our strategy is to leverage our technology, know-how, established low cost manufacturing capability and partnerships to grow the business dramatically.

## Competition

The market for optical components generally is highly competitive and highly fragmented. We compete with manufacturers of conventional spherical lenses and optical components, providers of aspheric lenses and optical components and producers of optical quality glass. To a lesser extent, we compete with developers of specialty optical components and assemblies. Many of these competitors have greater financial, manufacturing, marketing and other resources than we do.

We believe we can be successful in securing business because of our unique capabilities in optical design engineering that we make available on the merchant market, our low cost structure and our substantial presence in China. Additionally, we believe that we offer value to some customers as a second or backup source of supply in the United States should they be unwilling to commit all of their source of supply of a critical component to a foreign production source. We also have a broad product offering in addition to the molded aspheric lenses with proprietary GRADIUM lens glass, collimators, isolators, infrared lenses and assembly technology.

#### Precision Molded Aspheric Lenses

Manufacturers of conventional lenses and optical components include corporations such as Nikon, Olympus Optical Company, Carl Zeiss and Leica AG. In addition to being substantial producers of optical components, these entities are also some of the primary

customers for such components, incorporating them into finished products for sale to end-users. Consequently, these competitors have significant control over certain markets for our products. Our products compete with other products currently produced by these manufacturers.

Manufacturers of aspheric lenses provide significant competition for our molded glass aspheric lenses in providing products that improve the shortcomings of conventional lenses. Aspheric lens system manufacturers include Panasonic, ALP's and Hoya Corporation. The use of aspheric surfaces provides the optical designer with a powerful tool in correcting spherical aberrations and enhancing performance in state-of-the-art optical products. We believe that our optical design expertise and our flexibility in providing custom high performance optical components at a low price are key competitive advantages for us over these competitors.

Plastic molded aspheres and hybrid plastic/glass aspheric optics, such as manufactured by Anteryon, on the other hand, allow for high volume production, but primarily are limited to low cost consumer products that do not place a high demand on performance (such as plastic lenses in disposable or mobile phone cameras). Molded plastic aspheres appear in products that stress cost as their measure of success over performance and durability. LightPath's low cost structure allows us to compete with these lenses based on higher performance and durability from our glass lenses at only a small premium in price over plastic or plastic/glass hybrid lenses.

#### Infrared Molded Glass Aspheric Lenses & Assemblies

LightPath's infrared molded aspheric optics compete with traditional infrared lenses manufactured from germanium such as those produced by Janos Technologies. These lenses can either be polished spherical or are diamond turned aspherical. LightPath's molded lenses compete with spherical lenses because like all aspheres they can replace doublets or triplets based on the higher performance of an aspheric lens. Diamond turned aspheres from germanium are expensive in volume and time consuming to manufacture. LightPath's molded aspheric lenses compete with these technologies through lower costs at high production volumes.

Companies that produce molded infrared optics include Umicore and Rochester Precision Optics. We believe that our optical design expertise and our flexibility in providing custom high performance infrared optical components are key advantages over both of these companies. A specific advantage over Umicore, a foreign company, is that the infrared market is highly dependent on the United States defense industry, which prefers to purchase from United States based companies such as LightPath.

#### Specialty Products & Assemblies

Due to the unique nature of each of these product lines, we have few direct competitors. However, each technology has alternate technologies that indirectly compete with our products.

#### GRADIUM

GRADIUM lenses are competitive in a niche market for high power laser optics. GRADIUM is unique technology that no other manufacturer possesses for lenses in this market space. However, there are other competing technologies such as traditional fused silica doublets and triplets as well as newer large diameter aspheres, such as those manufactured by Asphericon or Edmund Optics. GRADIUM is a well-established technology that has a successful history in the high power laser marketplace.

#### Isolators

We compete with a few specific players in the isolator segment of the components market. These include Namiki, TDK, Tokin, Kyocera and Sumitomo. Our strategy does not involve direct competition with the “catalog” offerings of these companies; rather, we focus our efforts on designing and manufacturing custom specialty and hybrid components according to particular OEM specifications. The manufacturing of our isolator products is done in our Shanghai facility.

#### Collimators

LightPath’s collimator line focuses on high performance and high durability fiber optic systems for lasers and optical systems. There are currently only a handful of direct competitors for our collimators, such as Optoskand and Oz Optics. The key difference between our collimators and our competitors’ collimators is in our fiber fusion technology. This fusion technology eliminates the air interface at the tip of a fiber providing a more robust, reliable construction than our competition.

## Manufacturing

### Facilities

Our manufacturing is performed in a 22,000 square foot production facility in Orlando, Florida and in a 16,000 square foot production facility in Shanghai. With space remaining in the Shanghai and Orlando facilities, we believe our facilities are adequate to accommodate our foreseeable needs. Both facilities feature areas for each step of the manufacturing process including tooling and coating work areas, pre-form manufacturing, and a clean room for pressing and integrated assembly. Both facilities include new product development laboratories and space that includes development and metrology equipment.

In our Orlando facility, our molded glass aspheres manufacturing area includes lens pressing equipment, high precision mold production equipment, advanced metrology and inspection equipment and coating facilities. It also features a tooling and machine shop, which can support: new product development; commercial production requirements for our lens holders; and the fabrication of proprietary press workstations and mold equipment. In Orlando, we have glass coring equipment for our current needs of GRADIUM product sales in the United States and Europe. Our Orlando facility also includes a clean room for our collimator assembly workstations which include our proprietary laser fusion and housing equipment, automated testing processes, and laser polishing stations. They are all International Traffic in Arms and Regulations (ITAR) compliant.

Our Shanghai facility also features a molded glass aspheres manufacturing area, which includes lens pressing equipment, advanced metrology and inspection equipment and coating facilities. The clean room in our Shanghai facility features our isolator manufacturing equipment, sub-micron alignment engines, automated dispensing systems and precision dicing equipment.

We are ISO 9001:2008 certified in both of our Orlando and Shanghai facilities. Much of our product qualification is performed in-house at both facilities. Our test and evaluation capabilities include Damp Heat, High/Low Temp Storage, and a Thermal Shock Oven, which are representative of the equipment required to meet Telcordia requirements and other customer required product specifications. Our New Product Development department has CAD tools and technical support. The continuing implementation of various statistical process controls (SPCs) is being pursued to improve product yields and allow us to reduce costly manual testing operations. Quality control in manufacturing to ensure a quality end product is critical to our ability to bring our products to market, as our customers demand rigorous testing prior to their purchase of our products.

### Subcontractors and Strategic Alliances

We believe that low-cost manufacturing will be crucial to our long-term success. In that regard, we have generally used subcontractors in our production process to accomplish certain processing steps requiring specialized capabilities. For example, we presently use a number of qualified subcontractors for fabricating some lenses, polishing certain lenses where required, and coating them. We have taken steps to protect our proprietary methods of repeatable high quality manufacturing by patent disclosures and internal trade secret controls.

### Suppliers

We utilize a number of glass compositions in manufacturing our molded glass aspheres and lens array products. These precuts are available from a large number of suppliers, including Hikari Glass.

Base optical materials, used in both GRADIUM and collimator products, are manufactured and supplied by a number of major optical and glass manufacturers. Optical fiber and collimator housings are manufactured and supplied by a

number of major manufacturers. We believe that a satisfactory supply of such production materials will continue to be available at reasonable prices, although there can be no assurance in this regard. We obtain GRADIUM boules from Hikari Glass in Japan.

We also rely on local and regional vendors for component materials and services such as housings, fixtures, magnets, chemicals and inert gases, specialty ceramics, UV and AR coatings, and other specialty coatings. In addition, certain products require external processing such as brazing and metallization. To date, we have found a suitable number of qualified vendors for these materials and services.

We currently purchase a few key materials from single or limited sources. The polarizing glass used in our isolator products is supplied by Corning, Inc. (“Corning USA”) and Hoya. To date, we have been able to acquire an ample supply of polarizing glass. Garnet and other crystals used in our isolator products are provided by Integrated Photonics. We believe that the available quantities of garnet we will need are available at stable, adequate prices and are available in the open market. We believe that a satisfactory supply of production materials will continue to be available at competitive prices, although there can be no assurance in this regard.



## Patents and Other Proprietary Intellectual Property

Our policy is to protect our technology by, among other things, patents, trade secret protection, trademarks and copyrights. The products and technologies that we employ use patents that are either owned and maintained by us or licensed to us by others. Patents have been issued, and/or patent applications have been filed, in the areas of glass composition, glass molding, gradient geometries, and certain production processes such as fiber attachment, robotic assembly and micro-fabrication. The first of our issued patents expired in 2006; the remainder expire at various times through 2017.

Issued patents owned or available to us may not afford adequate protection to us or may be challenged, invalidated, infringed or circumvented. Patent applications relating to our products may not result in patents being issued. Patent rights granted to us for technologies that we may license in the future may not provide competitive advantages to us. Patents that are owned or licensed by us that are issued in one jurisdiction may not be issued in any other jurisdiction. The validity of any of our patents may not be upheld if challenged by others in litigation or if such litigation alleges that our activities infringe upon patents owned by others.

In addition to patent protection, certain process inventions, lens designs and innovations are retained as trade secrets. A key feature of GRADIUM glass is that, once fabricated, it does not reveal our formula upon inspection and, to our knowledge, cannot be reverse-engineered.

We own several registered and unregistered service marks and trademarks which are used in the marketing and sale of our products. The following sets forth our registered and unregistered service marks and trademarks, whether it is a service mark or trademark, whether it is registered or unregistered, if registered, the country in which the mark is filed, and the renewal date for such mark.

Mark	Type	Registered	Country	Renewal Date
LightPath®	service mark	Yes	United States	November 10, 2014
GRADIUM™	trademark	Yes	United States	February 5, 2017
Circulight	trademark	No	-	-
BLACK DIAMOND	trademark	No	-	-
GelTech	trademark	No	-	-
Oasis	trademark	No	-	-

## Environmental and Governmental Regulation

Currently, emissions and waste from our present manufacturing processes are at such low levels that no special environmental permits or licenses are required. In the future, we may need to obtain special permits for disposal of increased waste by-products. The glass materials we utilize contain lead and other toxic elements in a stabilized molecular form. However, the high temperature diffusion process results in low-level emissions of such elements in gaseous form. If production reaches a certain level, we believe that we will be able to efficiently recycle certain of our raw material waste, thereby reducing disposal levels. We believe that we are presently in compliance with all material federal, state and local laws and regulations governing our operations and have obtained all material licenses and permits necessary for the operation of our business.

We utilize certain chemicals, solvents and adhesives in our manufacturing process. We believe we maintain all necessary permits and believe we are in full compliance with all applicable regulations.

To our knowledge there are currently no United States federal, state or local regulations that restrict the manufacturing and distribution of our products. Certain end-user applications require that the complete optical systems receive government approval, such as United States Food and Drug Administration approval for use in endoscopy. In these cases, we will generally be involved on a secondary level and the OEM customer will be responsible for the license and approval process.

#### New Product Development

For many years, we were engaged in basic research and development that resulted in the invention of GRADIUM glass and certain proprietary processes for fabricating GRADIUM glass lenses. Thereafter, new product development efforts were broadened or acquired that led to the development of our capabilities in molded aspheric lenses, infrared lenses, isolators and collimators. Throughout fiscal 2011, however, as part of our cash conservation strategy, we conducted very limited basic research and development. Our efforts in this area were concentrated on product development to support existing and new customers in the design and manufacture of items in two of our product lines: lenses and collimators. Going forward we will focus the majority of our research and development efforts in the area of infrared materials, lenses and assemblies.

Our present new product development efforts are focused on markets that include Infrared Optics for imaging and sensing, blue lens applications, fiber lasers, defense, medical devices, industrial, optical data storage, machine vision, sensors and environmental monitoring. We incurred expenditures for new product development during fiscal years 2011 and 2010 of approximately \$995,000 and

\$869,000, respectively. We currently plan to expend approximately \$1,175,000 for new product development during fiscal 2012, which could vary depending upon revenue levels, customer requirements and perceived market opportunities. For more difficult or customized products, we bill our customers for engineering services as a non-recurring engineering fee.

#### Concentration of Customer Risk

In fiscal 2011, sales to three customers, which individually comprised at least 5% of our annual revenue, were sales to Thorlabs at 9%, sales to Crimson Trace at 7%, and sales to Edmunds Industrial Optics at 6%. In fiscal 2010, sales to three customers, which individually comprised at least 5% of our annual revenue, were sales to Crimson Trace at 12%, sales to Thorlabs at 7% and sales to Edmunds Industrial Optics at 6%. The loss of any of these customers, or a significant reduction in sales to any such customer, would adversely affect our revenues.

In fiscal 2011, 39% of our revenue was derived from sales outside of the United States. 87% of our foreign sales were to customers in Europe and Asia.

#### Backlog

Sales growth has been and continues to be our best indicator of success. Our best view into the efficacy of our sales efforts is in our “order book.” Our order book equates to sales “backlog.” It has a quantitative and a qualitative aspect: quantitatively, our backlog’s prospective dollar value and qualitatively, what percent of the backlog is scheduled by the customer for date-certain delivery. We define our “Disclosure Backlog” as that which is requested by the customer for delivery within one year and which is reasonably likely to remain in the backlog and be converted into revenues. This includes customer purchase orders and may include amounts under supply contracts if they meet the aforementioned criteria. Generally, a higher backlog is better for the Company.

Disclosure Backlog, as defined above, has been as follows in the immediately preceding eight fiscal quarters:

Fiscal Quarter	Ended	Approximate Disclosure Backlog
Q4-2011	6/30/2011	\$3,873,000
Q3-2011	3/31/2011	\$3,633,000
Q2-2011	12/31/2010	\$3,273,000
Q1-2011	9/30/2010	\$3,186,000
Q4-2010	6/30/2010	\$2,950,000
Q3-2010	3/31/2010	\$3,927,000

#### Employees

As of June 30, 2011, we had 200 full-time equivalent employees, with 54 in Florida and 146 in China. Any employee additions or terminations over the next twelve months will be dependent upon the actual sales levels realized during fiscal 2012. We have 21 employees engaged in management, administrative and clerical functions, 16 in new product development, 11 in sales and marketing and 152 are in production and quality functions. We have used and will continue utilizing part-time help, temporary employment agencies and outside consultants, where appropriate, to qualify prospective employees and to ramp up production as required from time to time. None of our employees are represented by a labor union.

#### Item 2. Properties.

We occupy a 22,000 square foot facility in Orlando, Florida, which includes a 6,000 square foot clean room and houses our corporate headquarters, engineering, marketing, internal sales, manufacturing management and some manufacturing operations. Lease terms on our Orlando facility call for monthly rental payments of approximately \$40,000 through February 2015, which includes all charges, including common area maintenance, escalation, and certain pass-through of taxes and other operating costs.

Due to the transfer of manufacturing for over 90% of our production requirements for our precision molded optic line and our isolator product line to our Shanghai facility, we reduced the leased space in our Orlando facility from 41,063 square feet to 21,557 square feet. The third and fourth amendments to the Orlando facility lease, effective December 1, 2007 and May 1, 2009, respectively, reflect this reduction in leased space and the related rental obligations. The lease term was also extended from November 30, 2008, to February 28, 2015, and minimum rental rates for the extension term were established based on annual increases of three percent. Additionally, there are two 3-year extension options exercisable by the Company. The minimum rental rates for such additional extension options will be determined at the time an option is exercised and will be based on a "fair market rental rate" as determined in accordance with the third lease amendment.

We also lease a 16,000 square foot facility located in Jiading, People's Republic of China. In May 2009 the Chinese government paid us to move to a new facility in the Jiading Industrial Zone near Shanghai. We signed a five year lease that will expire April 30, 2014. The Shanghai facility houses 146 employees. The rent is approximately \$6,000 per month. The facility is used primarily for manufacturing operations and has increased our overall production capacity, enabling us to compete for larger production volumes of optical components and assemblies and strengthen partnerships within the Asia/Pacific region. It has also provided a launching point to drive our sales expansion in the Asia/Pacific region. We believe our facilities are suitable for our production needs and adequate to meet our future needs. Current production levels for both of our facilities are at 62% of capacity and therefore, we have the ability to add equipment and additional work shifts to meet forecasted demand.

The territorial sales personnel maintain an office from their homes to serve their geographical territories.

Item 3.                    Legal Proceedings.

As disclosed in note 13 under the "Notes to the Consolidated Financial Statements" heading, the Company is involved in various legal actions arising in the normal course of business. Management, after reviewing with legal counsel all of these actions and proceedings, believes that the aggregate losses, if any, will not have a material adverse effect on the Company's financial position or results of operations.

## PART II

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

## Market Information

Our Class A common stock is traded on the NASDAQ Capital Market ("NCM") under the symbol "LPTH".

The following table sets forth the range of high and low bid prices for the Class A common stock for the periods indicated, as reported by NCM from the appropriate market. The quotation information below reflects inter-dealer prices, without retail mark-up, markdown or commission, and may not represent actual transactions. The closing ask price on June 30, 2011 was \$1.54 per share.

	Class A Common Stock	
	High	Low
Fiscal Year Ended June 30, 2011		
Quarter ended June 30, 2011	\$ 2.18	\$ 1.50
Quarter ended March 31, 2011	\$ 2.35	\$ 1.27
Quarter ended December 31, 2010	\$ 2.83	\$ 1.61
Quarter ended September 30, 2010	\$ 3.44	\$ 1.57
Fiscal Year Ended June 30, 2010		
Quarter ended June 30, 2010	\$ 2.66	\$ 1.57
Quarter ended March 31, 2010	\$ 3.00	\$ 1.51
Quarter ended December 31, 2009	\$ 2.74	\$ 1.59
Quarter ended September 30, 2009	\$ 3.50	\$ 1.13

## Holders

As of August 15, 2011, we estimate there were approximately 244 holders of record and approximately 4,289 street name holders of the Class A common stock.

## Dividends

We have never declared or paid any cash dividends on our common stock and we do not intend to pay any cash dividends in the foreseeable future. We currently intend to retain all future earnings in order to finance the operation and expansion of our business. We are currently prohibited from declaring dividends without the prior written consent of the holders of at least 80% in principal amount of the then outstanding convertible debentures issued on August 1, 2008. In addition, the payment of dividends, if any, in the future, will depend on our earnings, capital requirements, financial conditions and other relevant factors.

## Securities Authorized For Issuance Under Equity Compensation Plans

The following table sets forth information with respect to compensation plans under which equity securities of the Company are authorized for issuance as of the end of fiscal 2011:

Equity Compensation Plans

Equity Compensation Plans Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise and grant price of outstanding options, warrants and rights	Number of securities remaining available for future issuance
Equity compensation plans approved by security holders	1,715,625	\$2.53	335,239

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

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of the Company. All statements in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this report, other than statements of historical facts, which address activities, events or developments that we expect or anticipate will or may occur in the future, including such things as future capital expenditures, growth, product development, sales, business strategy and other similar matters are forward-looking statements. These forward-looking statements are based largely on our current expectations and assumptions and are subject to a number of risks and uncertainties, many of which are beyond our control. Actual results could differ materially from the forward-looking statements set forth herein as a result of a number of factors, including, but not limited to, our products current stage of development, the need for additional financing, competition in various aspects of its business and other risks described in this report and in our other reports on file with the Securities and Exchange Commission. In light of these risks and uncertainties, all of the forward-looking statements made herein are qualified by these cautionary statements and there can be no assurance that the actual results or developments anticipated by us will be realized. We undertake no obligation to update or revise any of the forward-looking statements contained in this report.

### Liquidity and Capital Resources

#### History and Background:

From February 1996 (when our IPO occurred) through fiscal 2011, inclusive, we have raised a net total of approximately \$102 million from the issuance of common and preferred stock, the sale of convertible debt and the exercise of options and warrants for our capital stock.

Overtime, LightPath has transformed its business model to accommodate the changes in the optical market. In 2006, the Company began a program to reduce its operating costs, including restructuring its manufacturing operations. By 2008, the major elements of this program were implemented resulting in a significant reduction of costs. The elements of the program were: 1) moving the majority of our manufacturing to our Shanghai facility; 2) converting our tooling to a less expensive ceramic system; and 3) introducing lower cost glass materials. With this new cost structure we have focused on leveraging our facility in Shanghai to address high volume, lower cost applications. During this period, we enhanced our sales channels by adding distribution coverage in North America and Asia, and adding a master distributor in Europe. Additionally, we have designed lenses specifically for particular markets.

As we have implemented this new business strategy the fundamentals of the company have been improving each year and as we continue to build the business volume we anticipate that the company will reach profitability in the future. However, we did not reach a status of positive cash flow or profitability during fiscal 2011 or 2010.

As shown in the accompanying financial statements, the Company has incurred recurring losses from operations and as of June 30, 2011 the Company has an accumulated deficit of approximately \$204 million. Cash provided by (used in) operations was \$95,000, (\$471,000) and (\$1.5 million) during fiscal 2011, 2010 and 2009, respectively. The improvements in the cash flows from operations are as a result of the cost reductions we implemented and the additional markets the Company is able to address due to its lower cost structure. In addition, starting in fiscal 2009 we redesigned the collimator product line, increased sales prices on GRADIUM products, obtained more favorable material costs by sourcing some purchased components in China, and instituted more efficient management techniques, all of which have improved our product yields. Management believes these factors will contribute towards achieving profitability, assuming we meet our sales targets.



Management has developed an operating plan for fiscal 2012 and believes the Company has adequate financial resources for achievement of that plan and to sustain its current operations in the coming year. Nevertheless, management will be monitoring the plan closely during the year and should the plan objectives not be met during the year, remedial actions will be initiated. The Company had a cash balance of approximately \$929,000 at June 30, 2011. During fiscal 2010, the Company raised approximately \$2.4 million from the sale of common stock and warrants. The Company may still seek external debt or equity financing if it can be obtained in an amount and on terms that are acceptable; however, the Company may be required to seek external financing regardless of whether the terms would otherwise be acceptable if the Company's financial resources are not sufficient to sustain its operations or to pursue its business plan.

The fiscal 2012 operating plan and related financial projections we have developed anticipate sales growth primarily from precision molded optics, with the emphasis on low cost high volume applications, optical assemblies including our redesigned collimator product line and infrared products. We expect margin improvements based on production efficiencies and reductions in product costs as a result of the shifting of our manufacturing operations to Shanghai, and improved overhead absorption as we increase the volume of products produced, which in turn lowers our material costs since we are able to purchase materials in higher

volumes. We also will continue to implement new cost reductions with programs to improve tool life and lower anti-reflective coating costs.

We have taken certain actions to conserve our cash including extending payment terms with certain of our suppliers and by delaying purchases for as long as practical using just in time ordering practices.

In March 2009 the Orlando staff was reduced to a four day work week. Increased sales allowed us to return to a five day work week in November 2009. This reduced work week resulted in savings of \$438,000 in fiscal 2010 in wages and benefits. In fiscal 2011, we redesigned certain product lines – collimators and precision molded optics, increased sales prices on GRADIUM products, obtained more favorable material costs by sourcing some purchased components in China, and have instituted more efficient management techniques which have improved our product yields. We believe these factors will contribute towards achieving profitability assuming we meet our sales targets. The financial statements do not include any adjustments that might be necessary if we are unable to continue as a going concern.

We continue to face financial challenges along with many in the industries we do business with, as the worldwide economic instability continues to create turbulence in the market. We engaged in continuing efforts to keep costs under control as we sought renewed sales growth. Our efforts were directed toward reaching positive cash flow and profitability. If these efforts are not successful, we will need to raise additional capital. Should capital not be available to us at reasonable terms, other actions may become necessary in addition to cost control measures and continued efforts to increase sales. These actions may include exploring strategic options for the sale of the Company, the sale of certain product lines, the creation of joint ventures or strategic alliances under which we will pursue business opportunities, the creation of licensing arrangements with respect to our technology, or other alternatives. On September 6, 2011, the Company had a book cash balance of approximately \$658,034.

We execute all foreign sales from our Orlando facility and inter-company transactions in United States dollars, mitigating the impact of foreign currency fluctuations. Assets and liabilities denominated in non-United States currencies, primarily the Chinese Renminbi, are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the year. During the years ended June 30, 2011 and 2010 we incurred a \$27,127 gain and a \$34,767 loss on foreign currency translation, respectively.

#### Cash Flows - Financings:

On August 1, 2008, we executed a Securities Purchase Agreement with twenty-four institutional and private investors with respect to the private placement of 8% senior convertible debentures (the “Debentures”). The Debentures are secured by substantially all of our previously unencumbered assets pursuant to a Security Agreement and are guaranteed by our wholly-owned subsidiaries, Geltech and LPOI pursuant to a Subsidiary Guarantee. The sale of the Debentures generated gross proceeds of approximately \$2.9 million and net proceeds of \$2.7 million. We used the funds to provide working capital for our operations. Among the investors were Steven Brueck, J. James Gaynor, Louis Leeburg, Robert Ripp, Gary Silverman and James Magos, all of whom were directors or officers of LightPath as of August 1, 2008. Mr. Magos resigned effective September 2, 2008.

The original maturity date of the Debentures was August 1, 2011, on which date the outstanding principal amount of the Debentures would have been due. Interest of \$39,053 was due on October 1, 2008 and was prepaid by the Company on August 1, 2008 by issuing 27,893 shares of common stock in payment of such interest based upon the closing price of \$1.40 per share (the “October Interest Shares”). The interest accruing on the Debentures from October 1, 2008 to August 1, 2011 was prepaid by issuing common stock in December 2008.

Upon issuance the Debentures were immediately convertible into 1,901,948 shares of common stock, based on a conversion price of \$1.54 per share, which was 110% of the closing bid price of our common stock on the NASDAQ

Capital Market on July 31, 2008. Investors also received warrants to purchase up to 950,974 shares of our common stock (the "Warrants"). The Warrants are exercisable for a period of five years beginning on August 1, 2008 with 65% of the Warrants, exercisable for 618,133 shares, priced at \$1.68 per share and the remaining 35% of the Warrants, exercisable for 332,841 shares, priced at \$1.89 per share.

Investors who participated in our July 2007 offering were given an incentive to invest in the debenture offering. Four investors from the July 2007 offering participated in the debenture offering and as a result, we reduced the exercise price of the warrants they received in the July 2007 offering from \$5.50 per share to \$2.61 per share. The reduced exercise price lowered potential proceeds on the exercise of the warrants from the July 2007 offering by \$119,212 to \$107,663. Additionally, such investors were issued an aggregate of 73,228 shares of common stock (the "Incentive Shares"), valued at \$75,131.

We paid a commission to the exclusive placement agent for the offering, First Montauk Securities Corp. ("First Montauk"), in an amount equal to \$216,570 plus costs and expenses. We also issued to First Montauk and its designees warrants to purchase an aggregate of 190,195 shares of our common stock at an exercise price equal to \$1.68 per share, which was 120% of the closing bid

price of the our common stock on the NASDAQ Capital Market on July 31, 2008. The warrants were valued at \$194,057 using the Black-Scholes-Merton pricing model and were recorded as debt costs. The warrants are exercisable for a period of five years beginning on August 1, 2008. In addition, the exercise price of 50% of the warrants previously issued to First Montauk and its designees at the closing of the July 2007 offering was reduced from \$5.50 to \$2.61 per share. This reduced warrant exercise price lowered potential proceeds on the exercise of the warrants issued to First Montauk from the July 2007 offering by \$115,600 to \$104,400.

The private placement was exempt from the registration requirements of the Securities Act of 1933, as amended (the "Act"), pursuant to Section 4(2) of the Act (in that we sold the Debentures, Warrants and shares of common stock in a transaction not involving any public offering) and pursuant to Rule 506 of Regulation D promulgated thereunder. The shares into which the Debentures are convertible, the shares issuable upon exercise of the Warrants, the October Interest Shares and the Incentive Shares have been registered for resale under the Act. The registration was declared effective on October 16, 2008.

The Warrants and the Incentive Shares issued to the debenture holders were valued at issuance at \$790,830 and recorded as a discount on the debt. The Incentive Shares were valued using the fair market value of the Company's stock on the date of issuance. The Warrants were valued using the Black-Scholes-Merton valuation model using assumptions similar to those used to value the Company's stock options and restricted stock units. In addition a beneficial conversion feature associated with the Debentures was valued at the date of issuance at \$600,635 and was recorded as a discount on the debt. The total debt discount of \$1,391,465 was amortized using the effective interest method over the original 36-month term of the Debentures and subsequently adjusted for the extension of the maturity date of the Debentures.

We also incurred debt issuance costs associated with the issuance of the Debentures of \$554,308 which were amortized over the original 36-month term using the effective interest method, adjusted for accelerated conversions of the Debentures and the extension of the maturity date of the Debentures. The costs were for broker commissions, legal and accounting fees, filing fees and \$194,057 representing the fair value of the 190,195 warrants shares issued to First Montauk. We used the Black-Scholes-Merton model to determine fair value of the warrants issued to First Montauk. The warrants carry a five year term, expiring on August 1, 2013, and are immediately exercisable at a per share price of \$1.68 for one-third of the warrants and \$1.89 for two-thirds of the warrants. For the year ended June 30, 2011 and 2010, \$118,977 and \$147,550, respectively of the debt issuance costs were amortized through interest expense on the consolidated statement of operations.

On December 31, 2008 the Debentures were amended to allow debenture holders to convert 25% of their Debentures into shares of common stock. As a result, \$732,250 of the Debentures were converted into 475,496 shares of common stock. As an inducement to partially convert the Debentures, we issued additional warrants (valued at \$215,975 using the Black-Scholes-Merton method and recorded as interest expense) and prepaid the interest of \$453,995 on the unconverted portion of the Debentures through the original maturity date of August 1, 2011, which resulted in the issuance of 589,614 shares of common stock. The interest payment of \$58,580 for the quarter ended December 31, 2008 resulted in the issuance of 76,078 shares of common stock. As a result of the Debenture conversion, \$304,382 of debt discount was written off to interest expense. On May 29, 2009 we filed a registration statement to register those additional interest shares and the shares underlying the warrants which were issued in December 2008. The registration statement was declared effective on June 16, 2009.

During the year ended June 30, 2011, the Company's debt obligations were reduced by \$832,500 through the conversions of certain Debentures into shares of common stock. Costs associated with the conversion of these Debentures were \$6,748, which reduced the proceeds recognized. These transactions increased interest expense by \$101,300 for the year ending June 30, 2011, reflecting debt issue costs, prepaid interest and discount on the debt that were written off as a result of the debt conversions of certain of the Debentures into shares of common stock. During

the fiscal year ended June 30, 2010, the Company's debt obligations were reduced by \$262,500 through conversion of certain of the Debentures into shares of common stock.

On March 30, 2011 debenture holders holding approximately 98.71% of the outstanding principal amount of the Debentures consented to an amendment to extend the maturity date from August 2011 to August 2013. The one debenture holder electing not to participate in the extension was paid all amounts due under the Debenture held by such holder, or \$14,250, in April 2011. Pursuant to the terms of the amendment, interest will be prepaid in common stock annually each August. The extension of the maturity date of the Debentures was determined to be substantial and therefore triggered "debt extinguishment" accounting under ASC 470-50-40, which requires the Debentures to be adjusted to fair value. The Debentures are hybrid financial instruments that blend characteristics of both debt and equity securities. The Debentures embody settlement alternatives to the holder providing for either redemption of principal and interest in cash (forward component) or conversion into the Company's common stock (embedded conversion feature). As a result of the debt extinguishment accounting, \$63,692 of the unamortized debt discount and \$25,372 of the unamortized debt issuance costs were written off to loss on extinguishment of debt. The calculated fair value of the amended Debentures as of March 31, 2011 was \$1,706,919, and included \$924,844 for the forward component and \$782,075 for the embedded conversion feature. The forward component was valued using the present value of discounted cash flows arising from the contractual principal and interest payment terms and the embedded conversion feature was valued using a Monte Carlo simulations method. The fair value of the amended

Debentures exceeded the carrying value of the Debentures just prior to the amendment date by \$619,419, recognized as a premium. Approximately 93% of the Debentures are held by related parties and as such \$576,700 of the premium was considered a capital contribution and was not included in the loss on extinguishment and therefore had no impact on additional paid in capital. The remaining \$42,719 of the premium was associated with the Debentures to non-related parties and thus was recorded to loss on extinguishment of debt and additional paid in capital.

For the years ended June 30, 2011 and 2010, \$316,693 and \$370,385, respectively, of the amortized debt discount was amortized through interest expense on the consolidated statement of operations.

Total principal outstanding on the Debentures and the gross amount outstanding for directors', officers' and stockholders' purchases under the Debentures was \$1,087,500 and \$1,012,500, respectively at June 30, 2011.

We can force the debenture holders to convert the Debentures into shares of our common stock if our stock price exceeds \$5.00 per share. A forced conversion of the Debentures would include a 10% premium on the face amount. No payment of dividends may be made while the Debentures are outstanding.

During fiscal 2010, we completed two private placement offerings with certain institutional and private investors. On August 19, 2009, we executed a Securities Purchase Agreement with thirty-three investors with respect to a private placement of an aggregate of 1,298,827 shares of our common stock at \$1.26 per share and warrants to purchase 649,423 shares of our common stock at an exercise price of \$1.73 per share (the "August 2009 Warrants"). The August 2009 Warrants are exercisable for a period of five years beginning on February 19, 2010. We received aggregate gross cash proceeds from the issuance of the common stock (exclusive of proceeds from any future exercise of the August 2009 Warrants) in the amount \$1,636,500. We used the funds to provide working capital for our operations.

We paid a commission to the exclusive placement agent for the offering, Garden State Securities, Inc. ("Garden State"), in an amount equal to \$148,100 plus costs and expenses. We also issued to Garden State and its designees warrants to purchase an aggregate of 155,860 shares of our common stock at exercise price equal to \$1.73 per share, for a five-year term beginning February 19, 2010. Legal and other expenses to register the shares of \$71,310 were netted against the proceeds.

The private placement is exempt from the registration requirements of the Act, pursuant to Section 4(2) of the Act (in that the shares of common stock and August 2009 Warrants were sold by the Company in a transaction not involving any public offering) and pursuant to Rule 506 of Regulation D promulgated thereunder. The shares of common stock and the shares of common stock underlying the August 2009 Warrants have been registered for resale under the Act. The registration statement was declared effective on October 21, 2009.

On April 8, 2010, we executed a Securities Purchase Agreement with seven institutional and private investors, with respect to a private placement of an aggregate of 507,730 shares of common stock at \$2.20 per share for all non-insider purchasers, and warrants to purchase 50,776 shares of common stock (the "April 2010 Warrants"). The April 2010 Warrants have an exercise price of \$2.48 per share, are exercisable after October 8, 2010, and have a five-year term. We received aggregate gross cash proceeds from the issuance of the common stock (exclusive of proceeds from any future exercise of the April 2010 Warrants) in the amount of \$1,117,006. We used the funds to provide working capital for its operations. Among the investors were J. James Gaynor and Louis Leeburg, both of whom are directors or officers of LightPath, who paid \$2.2325 per share of Common Stock.

We paid a commission to the exclusive placement agent for the offering, Garden State, in an amount equal to \$88,610 plus costs and expenses. We also issued to Garden State and its designees warrants to purchase an aggregate of 50,773 shares of Common Stock at exercise price equal to \$2.48 per share. The April 2010 Warrants have a five-year term and are exercisable by Garden State and its designees after October 8, 2010.

The private placement is exempt from the registration requirements of the Act, pursuant to Section 4(2) of the Act (in that the shares of common stock and the April 2010 Warrants were sold by the Company in a transaction not involving any public offering) and pursuant to Rule 506 of Regulation D promulgated thereunder. The shares of common stock and the shares of common stock underlying the warrants have been registered for resale under the Act. The registration statement was declared effective on May 20, 2010.

#### Cash Flows – Operating and Investing:

Cash provided during fiscal 2011 was approximately \$95,000, an increase of approximately \$566,000 from fiscal 2010. We anticipate lower glass costs to result from our replacement of internally fabricated material with purchased materials from suppliers in Asia and lower coating costs due to larger unit volumes. These cost reductions are expected to improve our cash flow in future years.

While progress has been made to reduce operating cash outflow since fiscal 2004, significant risk and uncertainty remains. Our cash provided by operations was approximately \$162,000 for the fourth quarter of fiscal 2011. Cost cutting measures were implemented in fiscal 2010 and 2011 but revenues were not high enough to cover fixed costs. The fiscal 2012 operating plan and related financial projections we developed anticipate continued sales growth and continuing margin improvements based on production efficiencies and reductions in product costs, offset by marginal increases in selling, administrative and new product development expenditures.

During fiscal 2011, we expended approximately \$908,000 for capital equipment in comparison to \$988,000 during fiscal 2010. The majority of the capital expenditures during both fiscal 2011 and fiscal 2010 were related to equipment used to enhance or expand our production capacity and for tooling for our precision molded products. Our operating plan for fiscal 2012 estimates expenditures at increased levels to enhance or expand our capacity, however, we may spend more or less depending on opportunities and circumstances.

#### Results of Operations

Operating Results for Fiscal Year Ended June 30, 2011 compared to the Fiscal Year Ended June 30, 2010:

Revenue for fiscal year 2011 totaled \$10.0 million compared to \$9.3 million for fiscal year 2010, an increase of 8%. The increase from the prior fiscal year was primarily attributable to higher sales volumes for precision molded optics, collimators and GRADIUM lenses. Our precision molded optics sales units were significantly higher but our average selling price was lower. This is the result of our pursuit of the high volume low cost lens business. Growth in sales going forward is expected to be derived primarily from the precision molded optics product line, particularly our low cost lenses being sold in Asia and the growth of our infrared lens business.

Our gross margin percentage in fiscal 2011 compared to fiscal 2010 decreased to 39% from 47%. Total manufacturing cost of \$6.1 million was \$1.1 million higher in fiscal 2011 compared to the prior fiscal year. This increase in cost of goods sold resulted from increased costs associated with ramping up production volumes which included tooling and labor costs, competitive price pressures and product mix changes. We incurred increased labor costs of \$225,000 for additional staff needed to manage our increased production volume and an increase in the Chinese labor rates totaling \$238,000, higher freight costs of \$124,000 and a one-time expense of \$229,000 associated with increasing the amount of tooling inventory to support higher production levels. In addition, the changes in our product mix increased our costs by \$286,000. The product mix change was due to higher sales of isolators, collimators and gradium lenses which all have a higher material cost. Unit shipment volume in precision molded optics was up 38% in fiscal 2011 compared to last year. Direct costs, which include material, labor and services, were 27% of revenue in fiscal 2011, as compared to 24% in the prior year. Our average selling price decreased by 21% while our average cost per unit decreased by 10%.

Our plant capacity and overhead structure are sufficient to handle much higher levels of production. Going forward into fiscal 2012, the emphasis will be continued unit cost reductions driven by efficient purchasing and more sourcing in China of raw materials and coating services and improved productivity due to a more experienced workforce at the Shanghai facility. Over the course of fiscal 2011, as we focused on new product development, we increased our headcount in Orlando from 49 to 54. We continue to produce over 95% of our precision molded optics production in



our Shanghai facility.

Selling, general and administrative expenses increased by approximately \$512,000 to \$3.8 million in fiscal 2011 from \$3.3 million in fiscal 2010. This increase is due to higher wages and benefits of \$155,000, \$55,000 higher recruiting fees in fiscal 2011 and the occurrence of some one-time events in fiscal 2010 that resulted in a \$331,000 net reduction in selling, general and administrative expenses for fiscal 2010. These one-time events included receipt of \$556,000 on our D&O insurance as a refund for legal expenses, a litigation settlement and corresponding legal expenses and a \$76,000 reduction of legal expenses related to the reversal of accruals for litigation. Our operating plan for fiscal 2012 projects business levels that will require selling, general and administrative expenses to increase as we support a higher level of sales. We plan to manage our workforce size to meet profit and cash flow goals.

New product development costs in fiscal 2011 increased by approximately \$126,000 to approximately \$995,000. This increase was primarily due to an increase in the cost of product development materials and higher labor costs. Our operating plan for fiscal 2012 projects that product development spending will increase due to enhanced efforts in the development of the infrared product line.

In fiscal 2011 our amortization of intangibles remained at approximately \$33,000 and is expected to remain at this level for fiscal 2012.

Interest expense was approximately \$606,000 for fiscal 2011 as compared to approximately \$728,000 for fiscal 2010. Approximately \$5,600 of the interest expense for fiscal 2010 was attributable to our equipment term loan and our capital equipment lease. The convertible debentures issued on August 1, 2008 accounted for approximately \$606,000 and \$722,000 of interest during fiscal 2011 and 2010, respectively. This represents periodic interest of 8% per annum, amortization and the write-off of the related debt issuance costs and debt discount. Included in these totals are related debt discount, debt issue costs and prepaid interest of \$262,500 for debentures which were converted into common stock during fiscal 2010. In fiscal 2011 we had \$132,000 for loss on extinguishment of debt incurred when we extended the maturity date of the debentures during fiscal 2011.

Investment and other income decreased by approximately \$11,000 to an expense of \$6,000 in fiscal 2011 from an income of approximately \$5,000 in fiscal 2010, due to foreign currency exchange rate impacts during the year.

Net loss for fiscal 2011 was approximately \$1.6 million compared with approximately \$561,000 in fiscal 2010, a decline of approximately \$1.0 million. This increase in loss in the current year was comprised principally of:

- Cost of goods sold increased by \$648,000 primarily due to the change in product mix and increased labor rates in China and higher freight costs;
  - One-time tooling costs of \$229,000 to increase tooling inventory to support higher production levels; and
  - Increased SG&A salaries and benefits of \$155,000.

#### Key Performance Indicators

#### How we operate

We have continuing sales of two basic types: occasional sales via ad-hoc purchase orders of mostly standard product configurations (our “turns” business) and the more challenging and potentially more rewarding business of customer product development. In this latter type of business we work with a customer to help them determine optical specifications and even create certain optical designs for them, including complex multi-component designs that we call “engineered assemblies.” This is followed by “sampling” small numbers of the product for the customer’s test and evaluation. Thereafter, should the customer conclude that our specification or design is the best solution to their product need; we negotiate and “win” a contract (sometimes called a “design win”) – whether of a “blanket purchase order” type or a supply agreement. The strategy is to create an annuity revenue stream that makes the best use of our production capacity as compared to the turns business, which is unpredictable and uneven. A key business objective is to convert as much of our business to the design win and annuity model as is possible. We have several challenges in doing so:

- Maintaining an optical design and new product sampling capability, including a high-quality and responsive optical design engineering staff;
- The fact that as our customers take products of this nature into higher volume, commercial production (for example, in the case of molded optics, this may be volumes over one million pieces per year) they begin to work seriously to reduce costs – which often leads them to turn to larger or overseas producers, even if sacrificing quality; and
- Our small business mass means that we can only offer a moderate amount of total productive capacity before we reach financial constraints imposed by the need to make additional capital expenditures – in other words, because of our limited cash resources and cash flow, we may not be able to service every opportunity that presents itself in our markets without arranging for such additional capital expenditures.

Despite these challenges to winning more “annuity” business, we nevertheless believe we can be successful in procuring this business because of our unique capabilities in optical design engineering that we make available on the merchant market, a market that we believe is underserved in this area of service offering. Additionally, we believe that we offer value to some customers as a source of supply in the United States should they be unwilling to commit their entire source of supply of a critical component to foreign merchant production sources. We also continue to have the proprietary GRADIUM lens glass technology to offer to certain laser markets.

#### Our key indicators

Usually on a weekly basis, management reviews a number of performance indicators. Some of these indicators are qualitative and others are quantitative. These indicators change from time to time as the opportunities and challenges in the business change. They are mostly non-financial indicators such as units of shippable output by major product line, production yield rates by major product line and the output and yield data from significant intermediary manufacturing processes that support the production of the finished

shippable product. These indicators can be used to calculate such other related indicators as fully yielded unit production per-shift, which varies by the particular product and our state of automation in production of that product at any given time. Higher unit production per shift means lower unit cost and therefore improved margins or improved ability to compete where desirable for price sensitive customer applications. The data from these reports is used to determine tactical operating actions and changes. We believe that our non-financial production indicators, such as those noted, are proprietary information.

The discussions of our results as presented in this Annual Report include use of the non-GAAP terms “EBITDA” and “gross margin.” Gross margin is determined by deducting the cost of sales from operating revenue. Cost of sales includes manufacturing direct and indirect labor, materials, services, fixed costs for rent, utilities and depreciation, and variable overhead. Gross margin should not be considered an alternative to operating income or net income, which are determined in accordance with GAAP. We believe that gross margin, although a non-GAAP financial measure is useful and meaningful to investors as a basis for making investment decisions. It provides investors with information that demonstrates our cost structure and provides funds for our total costs and expenses. We use gross margin in measuring the performance of our business and have historically analyzed and reported gross margin information publicly. Other companies may calculate gross margin in a different manner.

Financial indicators that are usually reviewed at the same time include the major elements of the micro-level business cycle:

- sales backlog;
- EBITDA;
- inventory levels; and
- accounts receivable levels and quality.

These indicators are similarly used to determine tactical operating actions and changes and are discussed in more detail below.

#### Sales Backlog:

Sales growth has been and continues to be our best indicator of success. Our best view into the efficacy of our sales efforts is in our “order book.” Our order book equates to sales “backlog.” It has a quantitative and a qualitative aspect: quantitatively, our backlog’s prospective dollar value and qualitatively, what percent of the backlog is scheduled by the customer for date-certain delivery. We define our “Disclosure Backlog” as that which is requested by the customer for delivery within one year and which is reasonably likely to remain in the backlog and be converted into revenues. This includes customer purchase orders and may include amounts under supply contracts if they meet the aforementioned criteria. Generally, higher backlog is better for us.

Disclosure Backlog, as defined above, has been as follows in the immediately preceding eight fiscal quarters:

Fiscal Quarter	Ended	Approximate Disclosure Backlog
Q4-2011	6/30/2011	\$3,873,000
Q3-2011	3/31/2011	\$3,633,000
Q2-2011	12/31/2010	\$3,273,000
Q1-2011	9/30/2010	\$3,186,000
Q4-2010	6/30/2010	\$2,950,000
Q3-2010	3/31/2010	\$3,927,000
Q2-2010	12/31/2009	\$4,001,000

Q1-2010      9/30/2009      \$3,093,000

Our disclosure backlog at June 30, 2011 was approximately \$3.9 million. In the fourth quarter of fiscal 2010 we debooked orders to two large customers, one due to non-payment and one due to customer cancellation.

We believe our backlog will grow as a result of our efforts to enter high volume lower cost commercial markets, including the industrial laser tool market and other imaging related product markets. We have seen increased quote activity for our Black Diamond product line and our new blue lenses. With the continuing diversification of our backlog we expect to show increases in revenue starting in fiscal 2012. We have experienced an increase in bookings for our industrial low cost lenses in Asia. We project continued production and shipment growth for these low cost lenses in Asia.

**EBITDA:**

EBITDA is a non-GAAP financial measure used by management, lenders and certain investors as a supplemental measure in the evaluation of some aspects of a corporation's financial position and core operating performance. Investors sometimes use EBITDA as it allows for some level of comparability of profitability trends between those businesses differing as to capital structure and capital intensity by removing the impacts of depreciation and amortization. EBITDA also does not include changes in major working capital items such as receivables, inventory and payables, which can also indicate a significant need for, or source of, cash. Since decisions regarding capital investment and financing and changes in working capital components can have a significant impact on cash flow, EBITDA is not a good indicator of a business's cash flows. We use EBITDA for evaluating the relative underlying performance of the Company's core operations and for planning purposes. We calculate EBITDA by adjusting net loss to exclude net interest expense, income tax expense or benefit, depreciation and amortization, thus the term "Earnings Before Interest, Taxes, Depreciation and Amortization" and the acronym "EBITDA."

Our EBITDA as defined above, has been as follows in the immediately preceding eight fiscal quarters:

Fiscal Quarter	Ended	EBITDA
Q4-2011	6/30/2011	\$281,285
Q3-2011	3/31/2011	\$73,477
Q2-2011	12/31/2010	(\$44,860)
Q1-2011	9/30/2010	(\$260,897)
Q4-2010	6/30/2010	\$488,423
Q3-2010	3/31/2010	\$397,308
Q2-2010	12/31/2009	\$363,345
Q1-2010	9/30/2009	(\$382,089)

**Inventory levels:**

We manage inventory levels to minimize investment in working capital but still have the flexibility to meet customer demand to a reasonable degree. We review our inventory for obsolete items quarterly. While the mix of inventory is an important factor, including adequate safety stocks of long lead-time materials, an important aggregate measure of inventory in all phases of production is the quarter's ending inventory expressed as a number of days' worth of the quarter's cost of sales, also known as "days cost of sales in inventory," or "DCSI." It is calculated by dividing the quarter's ending inventory by the quarter's cost of goods sold, multiplied by 365 and divided by 4. Generally, a lower DCSI measure equates to a lesser investment in inventory and therefore more efficient use of capital. The table below shows our DCSI for the immediately preceding eight fiscal quarters:

Fiscal Quarter	Ended	DCSI (days)
Q4-2011	6/30/2011	89
Q3-2011	3/31/2011	105
Q2-2011	12/31/2010	87
Q1-2011	9/30/2010	78
Fiscal 2011 average		90
Q4-2010	6/30/2010	86
Q3-2010	3/31/2010	71
Q2-2010	12/31/2009	76

Q1-2010	9/30/2009	98
Fiscal 2010 average		83

In comparison, our days cost of sales in inventory for the year ended June 30, 2010 was 83, compared to 90 for the year ended June 30, 2011. We believe this upward trend in DCSI was principally caused by our decision to run the production schedule to meet the sales forecast. We increased our inventory in order to meet our sales forecast. However, our sales did not reach forecasted levels.

Accounts receivable levels and quality:

Similarly, we manage accounts receivable levels to minimize investment in working capital. We escalate our collection efforts when invoices are fifteen days past the due date. Weekly we also review all receivables that are sixty days past terms. These past due accounts are contacted and all future shipments to them are placed on hold. We measure the quality of receivables by the proportions of the total that are at various increments past due from our normally extended terms, which are generally 30-45 days. The most

important aggregate measure of accounts receivable is the quarter's ending balance of net accounts receivable expressed as a number of days' worth of the quarter's net revenues, also known as "days sales outstanding," or "DSO." It is calculated by dividing the quarter's ending net accounts receivable by the quarter's net revenues, multiplied by 365 and divided by 4. Generally, a lower DSO measure equates to a lesser investment in accounts receivable and therefore more efficient use of capital. The table below shows our DSO for the immediately preceding eight fiscal quarters:

Fiscal Quarter	Ended	DSO (days)
Q4-2011	6/30/2011	60
Q3-2011	3/31/2011	60
Q2-2011	12/31/2010	60
Q1-2011	9/30/2010	71
Fiscal 2011 average		63
Q4-2010	6/30/2010	71
Q3-2010	3/31/2010	68
Q2-2010	12/31/2009	60
Q1-2010	9/30/2009	57
Fiscal 2010 average		64

Our days sales outstanding for the year ended June 30, 2011 was 63 compared to 64 at June 30, 2010. We plan to monitor our collections efforts to keep this key indicator as low as reasonably possible. We strive to have DSO no higher than 55.

#### Critical Accounting Policies

The preparation of 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 reported amounts of income and expense during the reporting periods presented. Our significant estimates include the allowance for trade receivables which is made up of reserves for bad debts, inventory reserves for obsolescence, revenue recognition, valuation of compensation expense on stock-based awards and beneficial conversion and warrant valuation related to convertible debentures. Although we believe that these estimates are reasonable, actual results could differ from those estimates given a change in conditions or assumptions that have been consistently applied.

Management has discussed the selection of critical accounting policies and estimates with our Board of Directors, and the Board of Directors has reviewed our disclosure relating to critical accounting policies and estimates in this Annual Report on Form 10-K. The critical accounting policies used by management and the methodology for its estimates and assumptions are as follows:

Allowance for accounts receivable, is calculated by taking 100% of the total of invoices that are over 90 days past due from the due date and 10% of the total of invoices that are over 60 days past due from the due date. Accounts receivable are customer obligations due under normal trade terms. The Company performs continuing credit evaluations of its customers' financial condition. Recovery of bad debt amounts previously written off is recorded as a reduction of bad debt expense in the period the payment is collected. If the Company's actual collection experience changes, revisions to its allowance may be required. After all attempts to collect a receivable have failed, the receivable is written off against the allowance.

Inventories, which consist principally of raw materials, work-in-process and finished lenses, isolators, collimators and assemblies are stated at the lower of cost or market, on a first-in, first-out basis. Inventory costs include materials,



labor and manufacturing overhead. Acquisition of goods from our vendors has a 9% purchase burden added to cover customs, shipping and handling costs. Fixed costs related to excess manufacturing capacity have been expensed. We look at the following criteria for parts to consider for the inventory reserve: items that have not been sold in two years or that have not been purchased in two years or of which we have more than a two year supply. These items as identified are reserved at 100%, as well as reserving 50% for other items deemed to be slow moving within the last twelve months and reserving 25% for items deemed to have low material usage within the last six months. The parts identified are adjusted for recent order and quote activity to determine the final inventory reserve.

Property and equipment are stated at cost and depreciated using the straight-line method over the estimated useful lives of the related assets ranging from one to ten years. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful lives of the related assets using the straight-line method.

Long-lived assets, such as property, plant, and equipment, tooling and purchased intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to its estimated

undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet.

Intangible assets, consisting of patents and trademarks, are recorded at cost. Upon issuance of the patent or trademark, the assets are amortized on the straight-line basis over the estimated useful life of the related assets ranging from two to seventeen years.

Debt costs consist of third party fees incurred and other costs associated with the issuance of long-term debt. Debt costs are capitalized and amortized to interest expense over the term of the debt using the effective interest method.

Deferred rent relates to certain of the Company's operating leases containing predetermined fixed increases of the base rental rate during the lease term being recognized as rental expense on a straight-line basis over the lease term. The Company has recorded the difference between the amounts charged to operations and amounts payable under the leases as deferred rent in the accompanying consolidated balance sheets.

Income taxes are accounted for under the asset and liability method. Deferred income tax assets and liabilities are computed on the basis of differences between the financial statement and tax basis of assets and liabilities that will result in taxable or deductible amounts in the future based upon enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances have been established to reduce deferred tax assets to the amount expected to be realized.

The Company has not recognized a liability for uncertain tax positions. A reconciliation of the beginning and ending amount of unrecognized tax benefits or penalties has not been provided since there is no unrecognized benefit or penalty since the date of adoption. If there were an unrecognized tax benefit or penalty, the Company would recognize interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expenses.

The Company files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. The Company is no longer subject to U.S. federal, state or local, or non-U.S. income tax examinations by tax authorities for years before 2004.

Revenue is recognized from product sales when products are shipped to the customer, provided that the Company has received a valid purchase order, the price is fixed, title has transferred, collection of the associated receivable is reasonably assured, and there are no remaining significant obligations. Revenues from product development agreements are recognized as milestones and are completed in accordance with the terms of the agreements and upon shipment of products, reports or designs to the customer. Invoice amounts for sales or VAT taxes are posted to the balance sheet and not included in revenue.

New product development costs are expensed as incurred.

Stock based compensation is measured at grant date, based on the fair value of the award, and is recognized as an expense over the employee's requisite service period. We estimate the fair value of each stock option as of the date of grant using the Black-Scholes-Merton pricing model. Most options granted under our Amended and Restated Omnibus Incentive Plan vest ratably over two to four years and generally have ten-year contract lives. The volatility rate is based on four-year historical trends in common stock closing prices and the expected term was determined based primarily on historical experience of previously outstanding options. The interest rate used is the United States

Treasury interest rate for constant maturities. The likelihood of meeting targets for option grants that are performance based are evaluated each quarter. If it is determined that meeting the targets is probable then the compensation expense will be amortized over the remaining vesting period.

Management makes estimates and assumptions during the preparation of the Company's consolidated financial statements that affect amounts reported in the financial statements and accompanying notes. Such estimates and assumptions could change in the future as more information becomes available, which in turn could impact the amounts reported and disclosed herein.

Financial instruments. The Company accounts for financial instruments in accordance with FASB ASC 820, Fair Value Measurements and Disclosures ("ASC 820"), which provides a framework for measuring fair value and expands required disclosure about fair value measurements of assets and liabilities. ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable.

Level 3 - Unobservable inputs that are supported by little or no market activity, therefore requiring an entity to develop its own assumptions about the assumptions that market participants would use in pricing.

Fair value estimates discussed herein are based upon certain market assumptions and pertinent information available to management as of June 30, 2011. The Company uses the market approach to measure fair value for its Level 1 financial assets and liabilities, which include cash equivalents of \$449,000 at June 30, 2011. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets and liabilities.

The respective carrying value of certain on-balance-sheet financial instruments approximated their fair values. These financial instruments which include cash, trade receivables, accounts payable and accrued liabilities. Fair values were assumed to approximate carrying values for these financial instruments since they are short term in nature and their carrying amounts approximate fair values or they are receivable or payable on demand.

On August 1, 2008, the Company executed a Securities Purchase Agreement with respect to the private placement of 8% senior convertible debentures (the “Debentures”) as described in Note 16 to the accompanying consolidated financial statements. The Debentures issued were valued using observable inputs other than quoted prices (Level 2). The fair value of the Debentures as of June 30, 2011 was calculated to be approximately \$1.1 million.

The Company does not have other financial or non-financial assets or liabilities that would be characterized as Level 2 or Level 3 instruments.

Derivative Financial Instruments. The Company accounts for derivative instruments in accordance with FASB ASC 815, Derivatives and Hedging (formerly referenced as SFAS No. 161, Disclosures about Derivative Instruments and Hedging Activities – an Amendment of FASB Statement No. 133) (“ASC 815”), which requires additional disclosures about the Company’s objectives and strategies for using derivative instruments, how the derivative instruments and related hedged items are accounted for, and how the derivative instruments and related hedging items affect the financial statements.

The Company does not use derivative instruments to hedge exposures to cash flow, market or foreign currency risk. Terms of convertible debt instruments are reviewed to determine whether or not they contain embedded derivative instruments that are required under ASC 815 to be accounted for separately from the host contract, and recorded on the balance sheet at fair value. The fair value of derivative liabilities, if any, is required to be revalued at each reporting date, with corresponding changes in fair value recorded in current period operating results.

Freestanding warrants issued by the Company in connection with the issuance or sale of debt and equity instruments are considered to be derivative instruments. Pursuant to ASC 815, an evaluation of specifically identified conditions is made to determine whether the fair value of warrants issued is required to be classified as equity or as a derivative liability.

Beneficial Conversion and Warrant Valuation. The Company recorded a beneficial conversion feature (“BCF”) related to the issuance of convertible debt instruments that had conversion features at fixed rates that were in-the-money when issued, and the fair value of warrants issued in connection with those instruments. The BCF for the convertible instruments was recognized and measured by allocating a portion of the proceeds to warrants, based on their relative fair value, and as a reduction to the carrying amount of the convertible instrument equal to the intrinsic value of the conversion feature. The discounts recorded in connection with the BCF and warrant valuation were recognized as non-cash interest expense debt discount over the term of the convertible debt, using the effective interest method.

Comprehensive Income (Loss) of the Company is defined as the change in equity (net assets) of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners. Comprehensive income (loss) has two components, net income (loss) and other comprehensive income (loss), and is included on the statement of stockholders' equity. Our other comprehensive income (loss) consists of the foreign currency translation adjustment. For more information see Note 14 to the accompanying consolidated financial statements.

Business segments are required to be reported by the Company. As the Company only operates in principally one business segment, no additional reporting is required.

Reclassifications of certain items have been reclassified in the fiscal 2010 financial statements to conform to the fiscal 2011 presentation.

Recent accounting pronouncements issued by FASB (including EITF), the AICPA and the SEC did not or are not believed by management to have a material impact on the Company's present or future financial statements.

Item 8. Financial Statements and Supplementary Data.

See index at page F-1 for the Financial Statements for each of the years in the two-year period ended June 30, 2011.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of the end of the fiscal year ended June 30, 2011, LightPath carried out an evaluation, under the supervision and with the participation of members of our management, including our Chief Executive Officer ("CEO") and our Chief Financial Officer ("CFO"), of the effectiveness of the design and operation of LightPath's disclosure controls and procedures pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934 (the "Exchange Act"). Our CEO and our CFO have concluded, based on their evaluation, that as of June 30, 2011, our disclosure controls and procedures were effective at the end of the fiscal year to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit with the SEC under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control over Financial Reporting

LightPath's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Internal control over financial reporting is a process, including policies and procedures, designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. Our management assessed our internal control over financial reporting based on the Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the results of this assessment, our management concluded that our internal control over financial reporting was effective as of June 30, 2011 based on such criteria.

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met under all potential conditions, regardless of how remote, and may not prevent or detect all errors and all fraud. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within LightPath have been prevented or detected. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Auditor's Report on Internal Control over Financial Reporting

This annual report does not include an attestation report of LightPath's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public

accounting firm pursuant to rules of the SEC that permit LightPath to provide only management's report in this annual report.

#### Changes in Internal Controls over Financial Reporting

In connection with our continued monitoring and maintenance of our controls procedures as part of the implementation of Section 404 of the Sarbanes-Oxley Act, we continue to review, test and improve the effectiveness of our internal controls. There have not been any changes in LightPath's internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fourth quarter and since the year ended June 30, 2011 that have materially affected, or are reasonably likely to materially affect, LightPath's internal control over financial reporting.

### PART III

#### Item 10. Directors, Executive Officers and Corporate Governance.

Each of our directors and officers serves until his or her successor is elected and qualified. The names and ages of our directors and officers, the years they became directors or officers, their principal occupations or employment for at least the past five years and certain of their other directorships is set forth below. The Class I directors' term expires at the annual meeting of stockholders

proposed to be held in 2014. The Class II directors' term expires at the annual meeting of stockholders proposed to be held in 2013. The Class III directors' term expires at the annual meeting of stockholders proposed to be held in 2012.

Class I Directors

Robert Ripp, 70  
Director (Chairman of the Board)

Mr. Ripp has served as a director of the Company since 1999 and as Chairman of the Board since November 1999. During portions of fiscal year 2002 he also served as the Company's Interim President and Chief Executive Officer. Mr. Ripp held various executive positions at AMP Incorporated ("AMP") from 1994 to 1999, including serving as Chairman and Chief Executive Officer of AMP from August 1998 until April 1999, when AMP was sold to TYCO International Ltd. Mr. Ripp previously spent 29 years with IBM of Armonk, New York. He held positions in all aspects of operations within IBM culminating in the last four years as Vice President and Treasurer. He retired from IBM in 1993. Mr. Ripp graduated from Iona College and received a Masters of Business Administration degree from New York University. Mr. Ripp is currently on the board of directors of Ace, Ltd., and PPG Industries, both of which are listed on the New York Stock Exchange. Mr. Ripp also serves on the Company's Compensation and Finance Committees. Mr. Ripp has dedicated over ten years of service to the Company. His extensive executive management experience, in addition to his financial expertise gained from various executive positions, qualify him for service as a director of our Company.

J. James Gaynor, 60  
President & Chief Executive Officer,  
Director

Mr. Gaynor was appointed as President, Chief Executive Officer and as a director on February 1, 2008 and prior to that served as Interim Chief Executive Officer from September 18, 2007. Mr. Gaynor previously served as the Company's Corporate Vice President of Operations since July 2006. Mr. Gaynor is a mechanical engineer with over 25 years business and manufacturing experience in volume component manufacturing in the electronics and optics industries. Prior to joining the Company, from August 2002 to July 2006, Mr. Gaynor was Director of Operations and Manufacturing for Puradyn Filter Technologies. Previous to that, he was Vice President of Operations and General Manager for JDS Uniphase Corporation's Transmission Systems Division. He has also held executive positions with Spectrum Control, Rockwell International and Corning Glass Works. His experience includes various engineering, manufacturing and management positions in specialty glass, electronics, telecommunications components and mechanical assembly operations. His global business experience encompasses strategic planning, budgets, capital investment, employee development, and cost reduction, acquisitions and business start-up and turnaround success. Mr. Gaynor holds a Bachelor of Mechanical Engineering degree from the Georgia



Institute of Technology and has worked in the manufacturing industries since 1976. Mr. Gaynor has an in-depth knowledge of the optics industry gained through over 25 years of working in various capacities in the industry. Mr. Gaynor understands the engineering aspects of our business, due to his engineering background, and has the management experience necessary to lead our Company and serve as a director.

Class II Directors

Louis Leeburg, 58  
Director

Mr. Leeburg has served as a director of the Company since May 1996. Mr. Leeburg is currently a self-employed business consultant. From 1988 until 1993 he was the Vice President for Finance of The Fetzer Institute, Inc. From 1980 to 1988 he was in financial positions with different organizations with an emphasis in investment management. Mr. Leeburg was an audit manager for Price Waterhouse & Co. until 1980. Mr. Leeburg is currently on the board of directors of BioValve Inc., a private venture capital backed company. Mr. Leeburg received a Bachelor of Science degree in Accounting from Arizona State University. He is a member of Financial Foundation Officers Group and the treasurer and trustee for the John E. Fetzer Memorial Trust Fund and The Institute for Noetic Sciences. Mr. Leeburg also serves on the Company's Audit and Finance Committees. Mr. Leeburg has a broad range of experience in accounting and financial matters. His expertise gained in his role as an audit manager for Price Waterhouse & Co. and his service as Vice President of Finance of the Fetzer Institute, Inc. add invaluable knowledge to our Board and qualify him for service as a director of our Company.

Gary Silverman, 72  
Director

Mr. Silverman has served as a director of the Company since September 2001. Mr. Silverman is currently the managing partner of GWS Partners, established in 1995 to conduct searches for senior-level executives and board of director candidates for a broad cross section of publicly held corporations. From 1983 to 1995 he worked for Korn/Ferry International as an executive recruiter and held the position of Managing Director. He spent fourteen years with Booz, Allen & Hamilton, and in his last position as Vice President and Senior Client Officer was responsible for generation of new business, the management of client assignments and the development of professional staff. Mr. Silverman is a graduate of the University of Illinois with both a Bachelor of Science degree and Masters of Science degree in Finance. Mr. Silverman also serves on the Company's Compensation Committee and Audit Committee. Mr. Silverman contributes a unique attribute to our Board in that he has extensive experience in the human resources aspect of our Company. Mr. Silverman's background in advising companies in the development of professional staff qualifies him for service as a director of our Company.

Class III Directors  
Sohail Khan, 57  
Director

Mr. Khan has served as a director of the Company since February 2005. He was the President and Chief Executive Officer of SiGe Semiconductor ("SiGe"), a leader in silicon based RF front end solutions which was acquired by Skyworks in June 2011. Prior to SiGe, Mr. Khan was Entrepreneur in Residence and Operating Partner of Bessemer Venture Partners, a venture capital group focused on technology investments. From 1996 to 2006 he held various executive positions with Agere Systems/Lucent Technologies ending as Executive Vice President and Chief Strategy & Development Officer of Agere Systems. Mr. Khan has also held various management positions at NEC Electronics, Intel and the National Engineering Services of Pakistan. Mr. Khan received a Bachelor of Science in Electrical Engineering from the University of Engineering and Technology in Pakistan. Additionally, he received a Masters of Business Administration from the University of California at Berkeley. Mr. Khan's experience in venture financing, specifically technology investments, is an invaluable asset Mr. Khan contributes to the Board composition. In addition, Mr. Khan's significant experience in executive management positions at various manufacturing companies, as well as his background in engineering qualifies him for service as a director of our Company. Mr. Khan serves on the board of directors for Gainspan Corporation

Dr. Steven Brueck, 67  
Director

Dr. Brueck has served as a director of the Company since July 2001. He is the Director of the Center for High Technology

Materials (CHTM) and Professor of Electrical and Computer Engineering and Professor of Physics at the University of New Mexico in Albuquerque, New Mexico, which he joined in 1985. He is a graduate of Columbia University with a Bachelor of Science degree in Electrical Engineering and a graduate of the Massachusetts Institute of Technology where he received his Masters of Science degree in Electrical Engineering and Doctorate of Science degree in Electrical Engineering. Dr. Brueck is a fellow of the OSA, the IEEE and the AAAS. Dr. Brueck serves on the Company's Audit Committee. Dr. Brueck's background in engineering and his significant experience in research and material systems qualify him for service as a director of our Company.

Executive Officers Who Do Not Serve as Directors

Dorothy Cipolla, 55 Chief Financial Officer, Secretary and Treasurer	Ms. Cipolla has been the Company's Chief Financial Officer, Secretary and Treasurer since February 2006. Ms. Cipolla was Chief Financial Officer and Secretary of LaserSight Technologies, Inc., ("LaserSight") from March 2004 to February 2006. Prior to joining LaserSight, she served in various financial management positions. From 1994 to 1999, she was Chief Financial Officer and Treasurer of Network Six, Inc., a NASDAQ-listed professional services firm. From 1999 to 2002, Ms. Cipolla was Vice President of Finance with Goliath Networks, Inc., a privately held network consulting company. From 2002 to 2003, Ms. Cipolla was Department Controller of Alliant Energy Corporation, a regulated utility. She received a Bachelor of Science degree in Accounting from Northeastern University and is a Certified Public Accountant in Massachusetts.
Dr. Brian Soller, 38 Vice President, Business Development and Sales	Dr. Soller started serving as the Company's Vice President of Business Development and Sales in September 2010. Previously, Dr. Soller was Corporate Vice President of Strategic Business Development at Luna Innovations Incorporated ("Luna") from June 2009 to August 2010, where he focused on corporate growth via strategic alliances, marketing and sales and channel strategy. Dr. Soller also held the following positions at Luna: Division President of the Products Division from January 2008 to May 2009, Vice President & General Manager of the Luna Technologies Division from November 2006 to December 2007, and Business Unit Director of the Products Division from October 2005 to November 2006. From December 2001 to September 2005, he was a Senior Optical Engineer at Luna. Dr. Soller is a Goldwater scholar who received his Bachelor of Science degree in mathematics and physics from the University of Wisconsin-LaCrosse. He conducted his doctoral studies as a National Defense Science and Engineering Graduate fellow in optical science at the University of Rochester in New York. He has authored numerous publications and has several patents pending.
Alan Symmons, 40 Vice President of Engineering	Mr. Symmons has been the Company's Director of Engineering since October 2006. In September 2010, he was promoted to Corporate Vice President of Engineering. Prior to joining LightPath, Mr. Symmons was Engineering Manager for Aurora Optical, a subsidiary of Multi-Fineline Electronix, ("MFLEX"), dedicated to the manufacture of cell phone camera modules. From 2000 to 2006, Mr. Symmons worked for Applied Image Group – Optics, ("AIG/O"), a recognized leader in precision injection molded plastic optical components and assemblies, working up to Engineering Manager. AIG/O was purchased by MFLEX in 2006.

Prior to 2000, Mr. Symmons held engineering positions at Ryobi N.A., SatCon Technologies and General Dynamics. Mr. Symmons has a Bachelor of Science degree in Mechanical Engineering from Rensselaer Polytechnic Institute and a Masters of Business Administration degree from the Eller School of Management at the University of Arizona.

## Other Significant Employees

Michael Lancaster, 47  
Director of Operations  
Interim General Manager,  
Shanghai Operations

Mr. Lancaster has been the Company's Director of Operations since November 2006. He was appointed interim General Manager of our Shanghai facility in March 2011. Mr. Lancaster was the Materials Manager for Bolton Medical from August 2005 to November 2006. Prior to joining Bolton Medical he held the position of Logistics/Materials Manager for Hydro Aluminum from March 2000 to May 2005. Mr. Lancaster was also Materials Manager at Yuasa, Inc. from October 1998 to April 2005. He obtained a Masters of Business Administration degree and a Bachelor of Arts degree in Industrial Relations from Western Illinois University.

## Section 16(a) Beneficial Ownership Reporting Compliance

To the best of our knowledge, no officer, director and/or beneficial owner of more than 10% of our common stock, failed to file on a timely basis reports as required by Section 16(a) of the Securities Exchange Act of 1934 during the period covered by this report. In making the above statements, the Company has relied solely on its review of copies of the reports furnished to the Company and written representations from certain reporting persons.

## Code of Ethics

The Company has adopted a Code of Ethics that applies to all of its employees, including our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The text of the Company's Code of Conduct and Ethics is available on the Company's website at [www.lightpath.com](http://www.lightpath.com) or may be obtained free of charge by writing to: Secretary, LightPath Technologies, Inc., 2603 Challenger Tech CT, Suite 100, Orlando, FL 32826. A copy of our Code of Ethics is filed as an exhibit to this Annual Report on Form 10-K.

## Audit Committee and Audit Committee Financial Expert

The Audit Committee, which consists of Dr. Steven Brueck, Louis Leeburg (Chairman) and Gary Silverman, met five times during fiscal 2011, which meetings included discussions with management and with the Company's independent auditors to discuss the interim and annual financial statements and the annual report of the Company, and the effectiveness of the Company's financial and accounting functions and organization. The Audit Committee acts pursuant to a written charter adopted by the Board of Directors, a copy of which is available on the Company's website at [www.lightpath.com](http://www.lightpath.com). The Audit Committee's responsibilities include, among others, direct responsibility for the engagement and termination of the Company's independent accountants, and overseeing the work of the accountants and determining the compensation for their engagement(s). The Board of Directors has determined that the Audit Committee is comprised entirely of independent members as defined under applicable listing standards set out by the SEC, the National Association of Securities Dealers (NASD) and the NASDAQ Capital Market. The Board of Directors has also determined that at least one member of the Audit Committee, Mr. Leeburg, is an "audit committee financial expert" as defined by SEC rules. Mr. Leeburg's business experience that qualifies him to be determined an "audit committee financial expert" is described above.

## Item 11. Executive Compensation.

### Summary Compensation Table for Executive Officers

The following table sets forth certain compensation awarded to, earned by or paid to (i) the Chief Executive Officer, (ii) the Chief Financial Officer, and (ii) the three other most highly compensated executive officers of the Company serving as an executive officer at the end of fiscal 2011 for services rendered in executive officer capacities to the Company during fiscal 2011 and fiscal 2010. The Company did not have any individuals for whom disclosure would have been provided pursuant to clause (iii) above but for the fact that the individual was not serving as an executive officer of the Company as of the end of fiscal 2011.

Name and Position (a)	Fiscal Year (b)	Salary (\$) (c)	Option Awards (\$)** (f)	All Other Compensation (\$) * (i)	Total (\$) (j)
J. James Gaynor	2011	199,039	44,632	—	243,671
President & Chief Executive Officer	2010	196,442	60,984	—	257,426
Dorothy M. Cipolla	2011	144,692	15,170	—	159,862
Chief Financial officer, Treasurer & Secretary	2010	138,173	32,585	—	170,758
Alan Symmons	2011	118,103	8,763	—	126,866
Corporate Vice President, Vice President Engineering	2010	101,115	12,618	—	113,733
Brian Soller	2011	107,327	7,088	—	114,415
Corporate Vice President,	2010	—			