

LIGHTPATH TECHNOLOGIES INC
Form S-1
September 29, 2016

As filed with the Securities and Exchange Commission on September 29, 2016

Registration No. 333-_____

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

LIGHTPATH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware 86-0708398
(State or other jurisdiction of (IRS Employer

incorporation or organization) Identification Number)
2603 Challenger Tech Court, Suite 100

Orlando, Florida 32826

(407) 382-4003

(Address, including zip code, and telephone number, including area code of registrant's principal executive offices)

J. JAMES GAYNOR, PRESIDENT & CHIEF EXECUTIVE OFFICER

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Approximate date of commencement of proposed sale to the public: From time to time after the effectiveness of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box:

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

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

offering.

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price(1)	Amount of registration fee
Class A Common Stock, par value \$0.01 per share (2)	9,200,000	\$1.77 (3)	\$16,284,000	\$1,639.80
Preferred Stock Purchase Rights (2)(4)	—	—	—	—
Total Offering	9,200,000	—	\$16,284,000	\$1,639.80

The proposed maximum aggregate price of the securities has been estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(a) under the Securities Act (1) of 1933, as amended (the “Securities Act”), and includes shares of Class A Common Stock, par value \$0.01 per share (“Class A Common Stock”) that the underwriters have an option to purchase to cover over-allotments, if any.

(2) Pursuant to Rule 416 of the Securities Act, there are also being registered such indeterminable additional securities as may be issued to prevent dilution as a result of stock splits, stock dividends or similar transactions.

(3) Calculated pursuant to Rule 457(c) of the Securities Act based on the price of \$1.77, which was the average of the high and low prices of the Class A Common Stock on September 22, 2016, as

reported on the NASDAQ Capital Market.

Our Class A Common Stock currently includes certain preferred stock purchase rights issued pursuant to that certain Rights Agreement, dated May 1, 1998 (filed as an exhibit to our Registration Statement on Form 8-A filed with the Securities and Exchange Commission on April 28, 1998), as amended on February 25, 2008 (filed as an exhibit to Amendment No. 1 to Form 8-A filed with the Securities and Exchange Commission on February 25, 2008) (the "Rights Agreement"), between the Registrant and Continental Stock Transfer & Trust

(4) Company. Until the occurrence of certain events specified in the Rights Agreement, none of which have occurred, the preferred stock purchase rights are not exercisable, are evidenced by the certificate for our Class A Common Stock and will be transferred along with and only with, and are not severable from, our Class A Common Stock. The value attributable to the preferred stock purchase rights, if any, is reflected in the market price of our Class A Common Stock. No separate consideration will be payable for the preferred stock purchase rights.

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

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy the securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED SEPTEMBER 29, 2016

PRELIMINARY PROSPECTUS

_____ **Shares**

Class A Common Stock

We are offering _____ shares of our Class A common stock, par value \$0.01 per share (“Class A Common Stock”). Our Class A Common Stock is traded on the NASDAQ Capital Market (“NCM”) under the symbol “LPTH.” On September 22, 2016, the last reported sale price of our Class A Common Stock was \$1.77 per share.

We have granted the underwriters an option to purchase up to an additional _____ shares of Class A Common Stock from us to cover over-allotments. The underwriters may exercise this option at any time and from time to time during the 45-day period from the date of this prospectus.

	No Exercise of		Full Exercise of	
	Over-Allotment		Over-Allotment	
	Per	Total	Per	Total
	Share		Share	
Offering price	\$	\$	\$	\$
Underwriting discounts and commissions (1)	\$	\$	\$	\$
Offering proceeds, before expenses, to us	\$	\$	\$	\$

(1) In addition, we have agreed to reimburse the underwriters for certain expenses. See “Underwriting” on page 83 for additional information.

Investing in our securities involves a high degree of risk. See the section entitled “Risk Factors” appearing on page 4 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of Class A Common Stock to the purchasers on or about _____, 2016.

The date of this prospectus is _____, 2016.

Sole Book-Running Manager

Roth Capital Partners

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You should rely only upon the information contained or incorporated by reference in this prospectus. We have not, and the underwriters have not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it.

The securities are not being offered in any jurisdiction where the offer is not permitted.

You should not assume that the information in this prospectus is accurate as of any date other than the date on the front of this prospectus.

In this prospectus, we refer to information regarding potential markets for our products and other industry data. We believe that all such information has been obtained from reliable sources that are customarily relied upon by companies in our industry; however, we have not independently verified any such information.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth under the section titled “Risk Factors” in this prospectus and in our most recent annual and quarterly filings with the Securities and Exchange Commission (the “SEC”), if any, as well as other information in this prospectus, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results, and financial condition, as well as adversely affect the value of an investment in our securities.

Unless otherwise indicated or unless the context otherwise requires, all references in this prospectus to “LightPath,” “we,” “us,” “our,” or similar references mean LightPath Technologies, Inc. and our subsidiaries.

Company Overview

We manufacture optical components and higher level assemblies including precision molded glass aspheric optics, infrared aspheric lenses, 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, telecommunications, machine vision, and sensors, among others. All the products that we produce enable lasers and imaging devices to function more effectively.

In November 2005, we formed LightPath Optical Instrumentation (Shanghai) Co., Ltd (“LPOI”), a wholly-owned subsidiary located in Jiading, People’s Republic of China. The LPOI facility is primarily used for sales and support functions.

In December 2013, we formed LightPath Optical Instrumentation (Zhenjiang) Co., Ltd. (“LPOIZ”), a wholly-owned subsidiary located in the New City district, of the Jiangsu province, of the People’s Republic of China. LPOIZ’s 26,000 square foot manufacturing facility serves as our primary manufacturing facility in China and provides a lower cost structure for production of larger volumes of optical components and assemblies.

Product Groups and Markets

During fiscal 2015, we started evaluating our business based on five product groups: low volume precision molded optics (“LVPMO”), high volume precision molded options (“HVPMO”), specialty products, infrared products, and non-recurring engineering (“NRE”). Our LVPMO product group consists of precision molded optics with a sales price greater than \$10 per lens that are usually sold in smaller lot quantities. Our HVPMO product group consists of precision molded optics with a sales price of less than \$10 per lens that are usually sold in larger lot quantities. Our infrared product group is comprised of both molded lens and assemblies. Our specialty product group is comprised of value-added products such as optical subsystems, assemblies, GRADIUM lenses, and isolators. Our NRE product group consists of those products we develop pursuant to product development agreements we enter into with customers. Typically, customers approach us and request that we develop new products or applications for our existing products to fit their particular needs or specifications. The timing and extent of any such product development is outside of our control.

We currently serve the following major markets: industrial, laser, defense, medical, telecommunications, and instrumentation. Within our product groups, we have various applications that serve these major markets. For example, our HVPMO lenses are typically used in industrial tools, especially in China. Our HVPMO and LVPMO lenses are also used in applications for the telecommunications market, such as data centers, digital video distribution, wireless broadband, and machine-to-machine interface, and, the laser market, such as laser tools, scientific and bench top lasers, and bar code scanners. Our infrared products can also be used in various applications within our major markets. Currently, sales of our infrared products are primarily for customers in the industrial market that use thermal imaging cameras. Our infrared products can be used for gas sensing devices, spectrometers, night vision systems, automotive driver systems, thermal weapon gun sights, and infrared counter measure systems, among others. Within the larger overall markets, which are estimated to be in the multi-billions of dollars, we believe there is a market of approximately \$355 million for our current products and capabilities. We continue to believe our products will provide significant growth opportunities over the next several years and, therefore, we will continue to target specific applications in each of these major markets. In addition to these major markets, a large percentage of our revenues is derived from sales to unaffiliated companies that purchase our products to fulfill their customers’ orders, as well unaffiliated companies that offer our products for sale in their catalogs. Our strategy is to leverage our technology, know-how, established low cost manufacturing capability, and partnerships to grow our business.

Proposed Acquisition

On August 3, 2016, we entered into a Stock Purchase Agreement (the “Stock Purchase Agreement”), by and among ISP Optics Corporation, a New York corporation (“ISP”), Joseph Menaker and Mark Lifshotz (the “ISP Stockholders”), and us, pursuant to which we will acquire (the “Acquisition”) all of the outstanding common stock of ISP (the “Purchased Shares”) for a purchase price of \$18 million (the “Purchase Price”), to be paid in a combination of cash (the “Cash Amount”) and a promissory note (the “Note”). The Cash Amount, subject to a net working capital adjustment, debt adjustment, and cash adjustment as provided in the Stock Purchase Agreement, will not be less than \$12,000,000. The aggregate original principal amount of the Note will equal the Purchase Price less the Cash Amount, as adjusted pursuant to the Stock Purchase Agreement, but in no event less than \$3,000,000. We plan to use the net proceeds from this offering, together with proceeds from a loan from a third party lender, to fund the Cash Amount. For additional information see “The Proposed Acquisition of ISP” and “Use of Proceeds.”

ISP Overview

ISP was incorporated in New York in 1993 and is a vertically integrated manufacturer offering a full range of infrared products from custom infrared optical elements to catalog and high performance lens assembly. ISP’s core capabilities include crystal growth, conventional numerical control (“CNC”) and conventional grinding, polishing, diamond turning, metrology, coatings, as well as optical and mechanical design, lens assembly, and testing. ISP manufactures its precision optical components, which includes spherical, aspherical, and diffractive coated infrared lenses, windows and prisms. ISP complements its lens offerings by developing a full spectrum of infrared coatings ranging from extreme high durability, anti-reflection coatings on Germanium, Silicon, and other infrared materials and crystals to complex beamsplitter, filter, and special protective coatings. Some of these coatings are also used by third party manufacturers. ISP manufactures optics using a wide variety of infrared crystals such as: Ge, Si, ZnSe, ZnS, CaF₂, GaAs, BaF₂, Amtir, Gasir, IG infrared glass, and others. ISP’s infrared Lens Assembly product line includes A-thermal fixed focal length lenses for cooled and un-cooled cameras, including designs targeted for lightweight and compact models, as well as dual field-of-view lenses. ISP has a global manufacturing footprint with strategically located manufacturing facilities in both the United States and Europe, providing greater access to its customers and operational flexibility. ISP leverages its highly qualified and cost efficient labor force in its state-of-the-art European facility in Riga, Latvia to provide high quality and cost-effective solutions.

ISP’s New York facility functions as its global headquarters for operations, marketing, and sales, while also providing manufacturing capabilities, optical coatings, optical and mechanical design, assembly, and testing.

ISP’s wholly-owned subsidiary, ISP Optics Latvia, SIA, is a limited liability company founded in 1997 under the Laws of the Republic of Latvia (“ISP Latvia”). ISP Latvia manufactures high precision optics offering a full range of infrared products including catalog and custom infrared optics. ISP Latvia provides broad-scale optical manufacturing and a presence for international sales in Europe and the Middle East.

ISP’s revenues in fiscal 2015 were \$12.12 million, compared to \$10.33 million in fiscal 2014, a 17% increase. ISP’s revenues for the six months ended June 30, 2016 were \$6.39 million versus \$6.13 million for the six months ended June 30, 2015, a 4% increase. ISP’s net income in fiscal 2015 was \$1.47 million versus approximately \$240,000 in the

prior period, a \$1.23 million increase. ISP's net income for the six month ended June 30, 2016 was \$825,000, compared to \$1.32 million in the prior period, a decrease of \$495,000. For additional information see "The Proposed Acquisition of ISP," "Business of ISP," and "Management's Discussion and Analysis of Financial Condition of Results of Operation – ISP."

Corporate Information

We were incorporated under Delaware law in 1992 as the successor to LightPath Technologies Limited Partnership, a New Mexico limited partnership formed in 1989, and its predecessor, Integrated Solar Technologies Corporation, a New Mexico corporation formed in 1985. Our principal offices are located at 2603 Challenger Tech Court, Suite 100, Orlando, Florida 32826. Our telephone number is (407) 382-4003. Our website address is <http://www.lightpath.com>, the content of which shall not be deemed incorporated by reference into this prospectus.

The Offering

Securities offered	_____ shares of Class A Common Stock (or _____ shares of Class A Common Stock if the underwriters exercise the over-allotment option in full).
Offering price	\$_____
Class A Common Stock outstanding before this offering	15,653,258 shares (1)
Class A Common Stock to be outstanding after this offering	_____ shares, assuming _____ are issued in this offering (1)

Over-allotment option

The underwriters have an option for a period of 45 days after the date of this prospectus to purchase up to an additional _____ shares of Class A Common Stock, on the same terms and conditions as set forth above, to cover any over-allotments.

We estimate that we will receive net proceeds from this offering of approximately \$____ million, or approximately \$____ million if the underwriters exercise the over-allotment option in full, after deducting the estimated underwriting discounts and commissions and offering expenses.

Use of proceeds

We plan to use the net proceeds from this offering, together with proceeds from a loan from a third party lender, to fund the Cash Amount of the Purchase Price payable to the ISP Stockholders upon the Acquisition of the Purchased Shares. For a more complete description of our intended use of the net proceeds from this offering, see “Use of Proceeds” and “The Proposed Acquisition of ISP.”

Risk factors

Investing in our securities involves a significant degree of risk. You should read the “Risk Factors” section beginning on page 4 and other information included in this prospectus for a discussion of factors you should carefully consider before investing in our securities.

NASDAQ Capital Market symbol

Our Class A Common Stock is listed under the symbol “LPTH.”

Excludes (i) 819,260 shares of our Class A Common Stock issuable upon exercise of stock options outstanding and having a weighted-average exercise price of approximately \$1.19 per share; (ii) 1,311,795 shares of our Class A Common Stock underlying outstanding restricted stock units of which 870,196 have vested; (iii) 1,139,429 shares (1) of our Class A Common Stock reserved for issuance under our Amended and Restated Omnibus Incentive Plan (the “Plan”); (iv) 390,094 shares of our Class A Common Stock reserved for issuance under our Employee Stock Purchase Plan (the “2014 ESPP”); and (v) 1,023,606 shares of our Class A Common Stock issuable upon the exercise of all outstanding warrants.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully review and consider the risks and uncertainties described below, in addition to the other information presented in this prospectus or incorporated by reference into this prospectus, in light of your particular investment objectives and financial circumstances. The risks so described are not the only risks we face. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Our business, financial condition, results of operations, or prospects could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment.

Risks Related To Our Business and Financial Results

We have a history of losses. We achieved net income of \$1.41 million for fiscal 2016; however we incurred net losses of \$715,000 and \$313,000 for fiscal 2015 and 2014, respectively, and have a history of losses preceding such periods. As of June 30, 2016, we had an accumulated deficit of approximately \$204 million. We may incur losses in the future if we do not achieve sufficient revenue to maintain profitability. We expect revenue to grow by seeking to improve gross margins and generating additional sales, but we cannot guarantee such improvement or growth.

Factors which could adversely affect our future profitability, include, but are not limited to, a decline in revenue either due to lower sales unit volumes or decreasing selling prices or both, our ability to order supplies from vendors, which in turn affects our ability to manufacture our products, and slow payments from our customers on accounts receivable.

Any failure to maintain profitability would have a materially adverse effect on our ability to implement our business plan, our results and operations, and our financial condition, and could cause the value of our Class A Common Stock to decline, resulting in a significant or complete loss of your investment.

We may need additional capital to sustain our operations in the future, and may need to seek further financing, which we may not be able to obtain on acceptable terms or at all, which could affect our ability to implement our business strategies. We have limited capital resources. To date, our operations have been largely funded from the proceeds of equity financings with some level of debt financing. We anticipate requiring additional capital in the future to support our operations and further expand our business and product lines. We may not be able to obtain additional financing when we need it on terms acceptable to us, or at all.

Our future capital needs will depend on numerous factors including: (i) profitability; (ii) the release of competitive products by our competition; (iii) the level of our investment in research and development; and (iv) the amount of our capital expenditures, including equipment and acquisitions. We cannot assure you that we will be able to obtain capital in the future to meet our needs. If we are unable to raise capital when needed, our business, financial condition, and results of operations would be materially adversely affected, and we could be forced to reduce or discontinue our operations.

We are dependent on a few key customers, and the loss of any key customer could cause a significant decline in our revenues. In fiscal 2016, we had sales to three customers that comprised approximately 25% of our annual revenue, with one customer at 10% of our sales, another customer at 8% of our sales, and the third customer at 7% of our sales. In fiscal 2015, we had sales to three customers that comprised approximately 27% of our annual revenue, with one customer at 11% of our sales, another customer at 10% of our sales, and the third customer at 6% of our sales. Part of our continuing strategy has been to gain key customer relationships of more significance and impact to generate higher revenues at lower costs. This strategy has met with some success, and, therefore, we believe our operating results will continue to be notably dependent on sales to a relatively small number of significant customers. However, we continue to diversify our business in order to minimize our sales concentration risk. The loss of any of these customers, or a significant reduction in sales to any such customer, would adversely affect our revenues.

We may be affected by political and other risks as a result of our sales to international customers and/or our sourcing of materials from international suppliers. In fiscal 2016, approximately 59% of our net revenues were from sales to international customers. In fiscal 2015, approximately 54% of our net revenues were from sales to international customers. Our international sales will be limited, and may even decline, if we cannot establish relationships with new international distributors, maintain relationships with our existing international distributors, maintain and expand our foreign operations, expand international sales, and develop relationships with international service providers. Additionally, our international sales may be adversely affected if international economies weaken. We are subject to the following risks, among others:

- greater difficulty in accounts receivable collection and longer collection periods;

- potentially different pricing environments and longer sales cycles;
- the impact of recessions in economies outside the United States;
- unexpected changes in foreign regulatory requirements;
- the burdens of complying with a wide variety of foreign laws and different legal standards;
- certification requirements;
- reduced protection for intellectual property rights in some countries;
- difficulties in managing the staffing of international operations;
- potentially adverse tax consequences, including the complexities of foreign value-added tax systems, restrictions on the repatriation of earnings, and changes in tax rates;
- terrorist attacks and security concerns in general; and
- political and economic instability.

Our future growth is partially dependent on our market penetration efforts. Our future growth is partially dependent on our market penetration efforts, which include diversifying our sales to high-volume, low-cost optical applications and other new market and product opportunities in multiple industries. While we believe our existing products are commercially viable, we anticipate the need to educate the optical components markets in order to generate market demand and market feedback may require us to further refine these products. Expansion of our product lines and sales into new markets will require significant investment in equipment, facilities, and materials. There can be no assurance that any proposed products will be successfully developed, demonstrate desirable optical performance, be capable of being produced in commercial quantities at reasonable costs or be successfully marketed.

We rely, in large part, on key business and sales relationships for the successful commercialization of our products, which if not developed or maintained, will have an adverse impact on achieving market awareness and acceptance and will result in a loss of business opportunities. To achieve wide market awareness and acceptance of our products and technologies, as part of our business strategy, we will attempt to enter into a variety of business relationships with other companies that will incorporate our technologies into their products and/or market products based on our technologies. The successful commercialization of our products and technologies will depend in part on our ability to meet obligations under contracts with respect to the products and related development requirements. The failure of these business relationships will limit the commercialization of our products and technologies, which will have an adverse impact on our business development and our ability to generate revenues.

If we do not expand our sales and marketing organization, our revenues may not increase. The sale of our products requires prolonged sales and marketing efforts targeted at several key departments within our prospective customers' organizations and often time involves our executives, personnel, and specialized systems and applications engineers working together. Currently, our direct sales and marketing organization is somewhat limited. We believe we will need to increase our sales force in order to increase market awareness and sales of our products. There is significant competition for qualified personnel, and we might not be able to hire the kind and number of sales and marketing personnel and applications engineers we need. If we are unable to expand our sales operations, particularly in China, we may not be able to increase market awareness or sales of our products, which would adversely affect our revenues, results of operations, and financial condition.

If we are unable to develop and successfully introduce new and enhanced products that meet the needs of our customers, our business may not be successful. Our future success depends, in part, on our ability to anticipate our customers' needs and develop products that address those needs. Introduction of new products and product enhancements will require that we effectively transfer production processes from research and development to manufacturing, and coordinate our efforts with the efforts of our suppliers to rapidly achieve efficient volume production. If we fail to effectively transfer production processes, develop product enhancements, or introduce new products that meet the needs of our customers as scheduled, our net revenues may decline, which would adversely affect our results of operations and financial condition.

If we are unable to effectively compete, our business and operating results could be negatively affected. We face substantial competition in the optical markets in which we operate. Many of our competitors are large public and private companies that have longer operating histories and significantly greater financial, technical, marketing, and other resources than we have. As a result, these competitors are able to devote greater resources than we can to the development, promotion, sale, and support of their products. In addition, the market capitalization and cash reserves of several of our competitors are much larger than ours, and, as a result, these competitors are much better positioned than we are to exploit markets, develop new technologies, and acquire other companies in order to gain new technologies or products. We also compete with manufacturers of conventional spherical lens products and aspherical lens products, producers of optical quality glass, and other developers of gradient lens technology, as well as telecommunications product manufacturers. In both the optical lens and communications markets, we are competing against, among others, established international companies, especially in Asia. Many of these companies also are primary customers for optical and communication components, and, therefore, have significant control over certain markets for our products. There can be no assurance that existing or new competitors will not develop technologies that are superior to or more commercially acceptable than our existing and planned technologies and products or that competition in our industry will not lead to reduced prices for our products. If we are unable to successfully compete with existing companies and new entrants to the markets we compete in, our business, results of operations, and financial condition could be adversely affected.

We anticipate further reductions in the average selling prices of some of our products over time, and, therefore, must increase our sales volumes, reduce our costs, and/or introduce higher margin products to reach and maintain financial stability. We have experienced decreases in the average selling prices of some of our products over the last ten years, including most of our passive component products. We anticipate that as products in the optical component and module market become more commodity-like, the average selling prices of our products will decrease in response to competitive pricing pressures, new product introductions by us or our competitors, or other factors. We attempt to offset anticipated decreases in our average selling prices by increasing our sales volumes and/or changing our product mix. For example, the average selling price of our precision molded optics increased by 2% in fiscal 2016, as compared to fiscal 2015, due to a product mix shift in the LVPMO group with higher volumes sold to customers in the distribution, medical applications, and telecommunications sectors. If we are unable to offset this anticipated decrease in our average selling prices by increasing our sales volumes or changing our product mix, our net revenues and gross margins will decline, increasing the projected cash needed to fund operations. To address these pricing pressures, we must develop and introduce new products and product enhancements that will generate higher margins or change our product mix in order to generate higher margins. For example, our gross margin percentage for fiscal 2016 was 54% compared to 44% in fiscal 2015, primarily due to a \$3.6 million increase in revenues with a favorable product mix of higher margin products that resulted in higher sales prices and provided leverage of our increased sales volume against our fixed manufacturing overhead costs. If we cannot maintain or improve our gross margins, our financial position, and results of operations may be harmed.

Because of our limited product offerings, our ability to generate additional revenues may be limited without additional growth. We evaluate our business based on five product groups: LVPMOs, HVPMOs, infrared products, specialty products, and NREs. In fiscal 2016, sales of our LVPMOs generated approximately 42% of our net revenues, sales of our HVPMOs generated approximately 23% of our net revenues, sales of our infrared products generated approximately 10% of our net revenues, sales of our specialty products generated approximately 22% of our net revenues, and sales of our NRE products generated approximately 3% of our net revenues. Accordingly, in fiscal 2016, approximately 87% of our net revenues were derived from sales of our LVPMOs, HVPMOs, and specialty

products. In fiscal 2015, sales of our LVPMOs generated approximately 50% of our net revenues, sales of our HVPMOs generated approximately 19% of our net revenues, sales of our infrared products generated approximately 9% of our net revenues, sales of our specialty products generated approximately 20% of our net revenues, and sales of our NRE products generated approximately 2% of our net revenues. Accordingly, in fiscal 2015, approximately 89% of our net revenues were derived from our LVPMO, HVPMO, and specialty products. We expect the LVPMO, HVPMO, and specialty product groups to continue to account for a substantial portion of our total net revenues. Demand for products in the optical market has declined materially in recent years. Continued and expanding market acceptance of these products is critical to our future success. There can be no assurance that our current or new products will achieve market acceptance at the rate at which we expect, or at all, which could adversely affect our results of operations and financial condition.

Litigation may adversely affect our business, financial condition, and results of operations. From time to time in the normal course of business operations, we may become subject to litigation that may result in liability material to our financial statements as a whole or may negatively affect our operating results if changes to our business operations are required. The cost to defend such litigation may be significant and is subject to inherent uncertainties. Insurance may not be available at all or in sufficient amounts to cover any liabilities with respect to these or other matters. There also may be adverse publicity with litigation that could negatively affect customer perception of our business, regardless of whether the allegations are valid or whether we are ultimately found liable. An adverse result in any such matter could adversely impact our operating results or financial condition. Additionally, any litigation to which we are subject could also require significant involvement of our senior management and may divert management's attention from our business and operations.

We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows. We execute all foreign sales from our Orlando facility and inter-company transactions in United States dollars in order to mitigate the impact of foreign currency fluctuations. However, in the future, a portion of our international revenues and expenses may be denominated in foreign currencies. Accordingly, we could experience the risks of fluctuating currencies and corresponding exchange rates. In fiscal years 2016, 2015, and 2014, we incurred a gain of approximately \$75,000 and losses of \$1,000 and \$1,100 on foreign currency translation, respectively. Any such fluctuations that result in a less favorable exchange rate could adversely affect our revenues, which could negatively impact our results of operations and financial condition.

We also source certain raw materials from outside the United States. Some of those materials, priced in non-dollar currencies, have lowered in price due to the recent increase of the United States dollar against non-dollar-pegged currencies, especially the Euro and Reniminbi. This increases our margins and helps with our ability to reach positive cash flow and profitability. If the strength of the United States dollar decreases, the cost of foreign sourced materials could increase, which would adversely affect our financial condition and results of operations.

Our future success depends on our key executive officers and our ability to attract, retain, and motivate qualified personnel. Our future success largely depends upon the continued services of our key executive officers, management team, and other engineering, sales, marketing, manufacturing, and support personnel. If one or more of our key employees are unable or unwilling to continue in their present positions, we may not be able to replace them readily, if at all. Additionally, we may incur additional expenses to recruit and retain new key employees. If any of our key employees joins a competitor or forms a competing company, we may lose some or all of our customers. Because of these factors, the loss of the services of any of these key employees could adversely affect our business, financial condition, and results of operations, and thereby an investment in our Class A Common Stock.

Our continuing ability to attract and retain highly qualified personnel will also be critical to our success because we will need to hire and retain additional personnel to support our business strategy. We expect to continue to hire selectively in the manufacturing, engineering, sales and marketing, and administrative functions to the extent consistent with our business levels and to further our business strategy. We face significant competition for skilled personnel in our industry. This competition may make it more difficult and expensive to attract, hire, and retain qualified managers and employees. Because of these factors, we may not be able to effectively manage or grow our business, which could adversely affect our financial condition or business. As a result, the value of your investment could be significantly reduced or completely lost.

We depend on single or limited source suppliers for some of the key materials or process steps in our products, making us susceptible to supply shortages, poor performance, or price fluctuations. We currently purchase several key materials, or have outside vendors perform process steps, such as lens coatings, used in or during the manufacture of our products from single or limited source suppliers. We may fail to obtain required materials or services in a timely manner in the future, or could experience delays as a result of evaluating and testing the products or services of these potential alternative suppliers. The decline in demand in the telecommunications equipment industry may have adversely impacted the financial condition of certain of our suppliers, some of whom have limited financial resources.

We have in the past, and may in the future, be required to provide advance payments in order to secure key materials from financially limited suppliers. Financial or other difficulties faced by these suppliers could limit the availability of key components or materials. Additionally, financial difficulties could impair our ability to recover advances made to these suppliers. Any interruption or delay in the supply of any of these materials or services, or the inability to obtain these materials or services from alternate sources at acceptable prices and within a reasonable amount of time, would impair our ability to meet scheduled product deliveries to our customers and could cause customers to cancel orders, thereby negatively affecting our business, financial condition, and results of operation.

We face product liability risks, which could adversely affect our business. The sale of our optical products involves the inherent risk of product liability claims by others. We do not currently maintain product liability insurance coverage. Product liability insurance is expensive, subject to various coverage exclusions, and may not be obtainable on terms acceptable to us if we decide to procure such insurance in the future. Moreover, the amount and scope of any coverage may be inadequate to protect us in the event that a product liability claim is successfully asserted. If a claim is asserted and successfully litigated by an adverse party, our financial position and results of operations could be adversely affected.

Business interruptions could adversely affect our business. We manufacture our products at manufacturing facilities located in Orlando, Florida and Zhenjiang, China. Our revenues are dependent upon the continued operation of these facilities. The Orlando facility is subject to a lease that expires in April 2022, and the Zhenjiang facility is subject to a lease that expires in March 2019. Our operations are vulnerable to interruption by fire, hurricane winds and rain, earthquakes, electric power loss, telecommunications failure, and other events beyond our control. We do not have detailed disaster recovery plans for our facilities and we do not have a backup facility, other than the other facility, or contractual arrangements with any other manufacturers in the event of a casualty to or destruction of any facility or if any facility ceases to be available to us for any other reason. If we are required to rebuild or relocate either of our manufacturing facilities, a substantial investment in improvements and equipment would be necessary. We carry only a limited amount of business interruption insurance, which may not sufficiently compensate us for losses that may occur.

Our facilities may be subject to electrical blackouts as a consequence of a shortage of available electrical power. We currently do not have backup generators or alternate sources of power in the event of a blackout. If blackouts interrupt our power supply, we would be temporarily unable to continue operations at such facility.

Any losses or damages incurred by us as a result of blackouts, rebuilding, relocation, or other business interruptions, could result in a significant delay or reduction in manufacturing and production capabilities, impair our reputation, harm our ability to retain existing customers and to obtain new customers, and could result in reduced sales, lost revenue, and/or loss of market share, any of which could substantially harm our business and our results of operations.

Our failure to accurately forecast material requirements could cause us to incur additional costs, have excess inventories, or have insufficient materials to manufacture our products. Our material requirements forecasts are based on actual or anticipated product orders. It is very important that we accurately predict both the demand for our products and the lead times required to obtain the necessary materials. Lead times for materials that we order vary significantly and depend on factors such as specific supplier requirements, the size of the order, contract terms, and the market demand for the materials at any given time. If we overestimate our material requirements, we may have excess inventory, which would increase our costs. If we underestimate our material requirements, we may have inadequate inventory, which could interrupt our manufacturing and delay delivery of our products to our customers. Any of these occurrences would negatively impact our results of operations. Additionally, in order to avoid excess material inventories we may incur cancellation charges associated with modifying existing purchase orders with our vendors, which, depending on the magnitude of such cancellation charges, may adversely affect our results of operations.

If we do not achieve acceptable manufacturing yields our operating results could suffer. The manufacture of our products involves complex and precise processes. Our manufacturing costs for several products are relatively fixed, and, thus, manufacturing yields are critical to the success of our business and our results of operations. Changes in our manufacturing processes or those of our suppliers could significantly reduce our manufacturing yields. In addition, we may experience manufacturing delays and reduced manufacturing yields upon introducing new products to our manufacturing lines. The occurrence of unacceptable manufacturing yields or product yields could adversely affect

our financial condition and results of operations.

If our customers do not qualify our manufacturing lines for volume shipments, our operating results could suffer.

Our manufacturing lines have passed our qualification standards, as well as our technical standards. However, our customers may also require that our manufacturing lines pass their specific qualification standards, and that we be registered under international quality standards, such as ISO 9001:2008 certification. This customer qualification process determines whether our manufacturing lines meet the customers' quality, performance, and reliability standards. Generally, customers do not purchase our products, other than limited numbers of evaluation units, prior to qualification of the manufacturing line for volume production. We may be unable to obtain customer qualification of our manufacturing lines or we may experience delays in obtaining customer qualification of our manufacturing lines. If there are delays in the qualification of our products or manufacturing lines, our customers may drop the product from a long-term supply program, which would result in significant lost revenue opportunity over the term of each such customer's supply program, or our customers may purchase from other manufacturers. The inability to obtain customer qualification of our manufacturing lines, or the delay in obtaining such qualification, could adversely affect our financial condition and results of operations.

Risks Related To Our Intellectual Property

If we are unable to protect and enforce our intellectual property rights, we may be unable to compete effectively.

We believe that our intellectual property rights are important to our success and our competitive position, and we rely on a combination of patent, copyright, trademark, and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Although we have devoted substantial resources to the establishment and protection of our intellectual property rights, the actions taken by us may be inadequate to prevent imitation or improper use of our products by others or to prevent others from claiming violations of their intellectual property rights by us.

In addition, we cannot assure that, in the future, our patent applications will be approved, that any patents that we may be issued will protect our intellectual property, or that third parties will not challenge any issued patents. Other parties may independently develop similar or competing technology or design around any patents that may be issued to us. We also rely on confidentiality procedures and contractual provisions with our employees, consultants, and corporate partners to protect our proprietary rights, but we cannot assure the compliance by such parties with their confidentiality obligations, which could be very time consuming and expensive to enforce.

It may be necessary to litigate to enforce our patents, copyrights, and other intellectual property rights, to protect our trade secrets, to determine the validity of and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation can be time consuming, distracting to management, expensive, and difficult to predict. Our failure to protect or enforce our intellectual property could have an adverse effect on our business, financial condition, prospects, and results of operation.

We do not have patent protection for our formulas and processes, and a loss of ownership of any of our formulas and processes would negatively impact our business. We believe that we own our formulas and processes. However, we have not sought, and do not intend to seek, patent protection for all of our formulas and processes. Instead, we rely on the complexity of our formulas and processes, trade secrecy laws, and employee confidentiality agreements. However, we cannot assure you that other companies will not acquire our confidential information or trade secrets or will not independently develop equivalent or superior products or technology and obtain patent or similar rights. Although we believe that our formulas and processes have been independently developed and do not infringe the patents or rights of others, a variety of components of our processes could infringe existing or future patents, in which event we may be required to modify our processes or obtain a license. We cannot assure you that we will be able to do so in a timely manner or upon acceptable terms and conditions and the failure to do either of the foregoing would negatively affect our business, results of operations, financial condition, and cash flows.

We may become involved in intellectual property disputes and litigation, which could adversely affect our business. We anticipate, based on the size and sophistication of our competitors and the history of rapid technological advances in our industry that several competitors may have patent applications in progress in the United States or in foreign countries that, if issued, could relate to products similar to ours. If such patents were to be issued, the patent holders or licensees may assert infringement claims against us or claim that we have violated other intellectual property rights. These claims and any resulting lawsuits, if successful, could subject us to significant liability for damages and invalidate our proprietary rights. The lawsuits, regardless of their merits, could be time-consuming and expensive to resolve and would divert management time and attention. Any potential intellectual property litigation could also force us to do one or more of the following, any of which could harm our business and adversely affect our financial condition and results of operations:

- stop selling, incorporating or using our products that use the disputed intellectual property;

- obtain from third parties a license to sell or use the disputed technology, which license may not be available on reasonable terms, or at all; or
- redesign our products that use the disputed intellectual property.

Risks Related To An Investment In Our Securities

Historically, our quarterly results have fluctuated and continued fluctuations could negatively impact our stock price. Revenues and results of operations are difficult to predict and may fluctuate substantially from quarter to quarter. As a result, the market price of our Class A Common Stock may also fluctuate substantially.

We may issue additional securities with rights superior to those of our Class A Common Stock, which could materially limit the ownership rights of our stockholders. We may offer additional debt or equity securities in private and/or public offerings in order to raise working capital or to refinance our debt. Our board of directors (our “Board”) has the right to determine the terms and rights of any debt securities and preferred stock without obtaining the approval of the stockholders. It is possible that any debt securities or preferred stock that we sell would have terms and rights superior to those of our Class A Common Stock and may be convertible into shares of our Class A Common Stock. Any sale of securities could adversely affect the interests or voting rights of the holders of our Class A Common Stock, result in substantial dilution to existing stockholders, or adversely affect the market price of our Class A Common Stock.

The price of our Class A Common Stock has been, and may continue to be, subject to substantial volatility. Broad market fluctuations or fluctuations in our operations may adversely affect the price of our Class A Common Stock. The market for our Class A Common Stock is volatile, the bid-ask spread is often large, and the trading volume and activity can be low and sporadic. The price of our Class A Common Stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

• volatility in the trading markets generally and in our particular market segment;

• limited trading of our Class A Common Stock;

• actual or anticipated fluctuations in our results of operations;

• the financial projections we may provide to the public, any changes in these projections, or our failure to meet these projections;

• announcements regarding our business or the business of our customers or competitors;

• changes in accounting standards, policies, guidelines, interpretations, or principles;

• actual or anticipated developments in our business or our competitors' businesses or the competitive landscape generally;

• developments or disputes concerning our intellectual property or our offerings, or third-party proprietary rights;

• announced or completed acquisitions of businesses or technologies by us or our competitors;

• new laws or regulations or new interpretations of existing laws or regulations applicable to our business;

• any major change in our Board or management;

• sales of shares of our Class A Common Stock by us or our stockholders;

• lawsuits threatened or filed against us; and

• other events or factors, including those resulting from war, incidents of terrorism, or responses to these events.

Statements of, or changes in, opinions, ratings, or earnings estimates made by brokerage firms or industry analysts relating to the markets in which we operate or expect to operate could have an adverse effect on the market price of our Class A Common Stock. In addition, the stock market as a whole, as well as our particular market segment, have from time to time experienced extreme price and volume fluctuations, which may affect the market price for the securities of many companies, and which often have appeared unrelated to the operating performance of such companies.

Although our shares are publicly traded on the NCM, the trading market for shares of our Class A Common Stock has been inconsistent with wide fluctuations in the trading volume. There are periods where the trading volume is extremely low and somewhat limited, which could negatively affect our stockholders' ability to sell their shares of our Class A Common Stock at the time and price they desire.

We do not currently pay dividends on our Class A Common Stock, and do not anticipate paying dividends on our Class A Common Stock in the foreseeable future. Our Board has never declared a dividend on our Class A Common Stock and we do not anticipate paying dividends on our Class A Common Stock in the foreseeable future. We intend to retain our cash and future earnings, if any, to fund our business plan. Our future dividend policy is within the discretion of our Board and will depend upon various factors, including our business, financial condition, results of operations, and capital requirements. Therefore, we cannot offer any assurance that our Board will determine to pay special or regular dividends in the future. Unless our Board determines to pay dividends, stockholders will be required to look to appreciation of our Class A Common Stock to realize a gain on their investment. There can be no assurance that this appreciation will occur.

Our management and principal stockholders control a substantial amount of our stock and, therefore, may influence our affairs. If our management and a few principal stockholders act in concert, they could determine the outcomes of matters submitted to stockholders or the election of our Board. We estimate that management, including directors, and our principal stockholders (stockholders owning more than 5% of our Class A Common Stock) beneficially owned approximately 41.3% of Class A Common Stock outstanding, on a fully-diluted basis, as of September 22, 2016.

Our charter documents and Delaware law may inhibit a takeover. In certain circumstances, the fact that corporate devices are in place that will inhibit or discourage takeover attempts could reduce the market value of our Class A Common Stock. Our Certificate of Incorporation, as amended (the “Certificate of Incorporation”), Amended and Restated Bylaws (the “Bylaws”), and certain other agreements contain certain provisions that may discourage other persons from attempting to acquire control of us. These provisions include, but are not limited to, the following:

- staggered-terms of service for our Board;
- the authorization of our Board to issue shares of undesignated preferred stock in one or more series without the specific approval of the stockholders;
- the adoption of a stockholder rights plan in 1998 and a dividend distribution of a right to purchase one share of Series D Participating Preferred Stock (the “Rights”) for each outstanding share of Class A Common Stock. The description and terms of such rights are set forth in the Rights Agreement dated as of May 1, 1998 between LightPath and Continental Stock Transfer & Trust Company, as Rights Agent (the “Rights Agreement”) (a copy of the Rights Agreement and related documents are filed as Exhibit 1 to the Form 8-A for Registration of Certain Classes of Securities Pursuant to Section 12(b) or (g) of the Exchange Act, filed on April 28, 1998). The Rights Agreement was amended on February 25, 2008 to extend the termination date through February 25, 2018;
- the establishment of advance notice requirements for director nominations and actions to be taken at annual meetings; and
- the fact that special meetings of the stockholders may be called only by our Chairman, President, or upon the request of a majority of our Board.

All of these provisions, as well as the provisions of Section 203 of the Delaware General Corporation Law (“DGCL”) (to which we are subject), could impede a merger, consolidation, takeover, or other business combination involving us or discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

Our outstanding warrants, stock options, and restricted stock units may inhibit our ability to accomplish future financings and adversely affect the price and liquidity of our Class A Common Stock. As of September 22, 2016, there were issued and outstanding:

• 15,653,258 shares of our Class A Common Stock;

• warrants issued to certain stockholders pursuant to which 1,023,606 shares of our Class A Common Stock are issuable at a weighted average exercise price of approximately \$1.26 per share;

outstanding options under the Plan to purchase an aggregate of 819,260 shares of our Class A Common Stock, with a weighted average exercise price of approximately \$1.90 per share; and

restricted stock unit awards for 1,311,795 shares of our Class A Common Stock that have been granted but that remain unissued, of which 870,196 have vested.

In addition, 1,139,429 shares of our Class A Common Stock were reserved as of September 22, 2016, for issuance pursuant to future grants to be made under the Plan and 390,094 shares of our Class A Common Stock were reserved as of September 22, 2016 for issuance pursuant to the 2014 ESPP. The existence of our outstanding warrants, options, and restricted stock units, and the potential for sales of significant amounts of previously unregistered shares of our Class A Common Stock in the public market, or the perception that such sales could occur, following the exercise of these derivative securities may adversely affect the terms on which we can obtain additional financing or the prevailing price of our Class A Common Stock.

We may issue additional shares of our Class A Common Stock in the future, which could cause significant dilution to all stockholders. Our authorized capital stock consists of 45,000,000 shares, divided into 40,000,000 shares of common stock, par value \$0.01 per share, and 5,000,000 shares of preferred stock, par value \$0.01 per share. As of September 22, 2016, 15,653,258 shares of our Class A Common Stock were outstanding. We may issue additional shares of Class A Common Stock in the future in connection with a financing, acquisition, upon exercise of outstanding options or warrants, or in connection with the grant of restricted stock units. In addition, certain of our outstanding rights to purchase additional shares of our Class A Common Stock are subject to full-ratchet anti-dilution protection, which could result in the right to purchase more shares of our Class A Common Stock or a reduction in the purchase price for any such shares or both. Any issuance of additional shares of our Class A Common Stock, or equity securities convertible into our Class A Common Stock, including, but not limited to, preferred stock, warrants, and options, will dilute the percentage ownership interest of all stockholders, may dilute the book value per share of our Class A Common Stock, and may negatively impact the market price of our Class A Common Stock.

Sales of a substantial number of shares of our Class A Common Stock in the public market, or the perception that they may occur, may depress the market price of our Class A Common Stock. Of the total number of shares of Class A Common Stock currently issued and outstanding, almost all of our outstanding shares are freely transferable or can be publicly resold pursuant to Rule 144 promulgated under the Securities Act of 1933, as amended (the “Securities Act”). In general, under Rule 144 as currently in effect, a person (or persons whose shares are aggregated) who has beneficially owned restricted securities for at least six months, including our affiliates, would be entitled to sell such securities, subject to the availability of current public information about the company. A person who has not been our affiliate at any time during the three months preceding a sale, and who has beneficially owned his shares for at least one year, would be entitled under Rule 144 to sell such shares without regard to any limitations under Rule 144. Under Rule 144, sales by our affiliates are subject to volume limitations, manner of sale provisions and notice requirements. The ability to sell shares of our Class A Common Stock to the public, whether pursuant to an effective registration statement, Rule 144, or an exemption from the registration requirements, may adversely affect the price of our Class A Common Stock by creating an excessive supply, the scope or extent of which effect we cannot predict. Likewise, the ability for sale of substantial amounts of our Class A Common Stock could reduce the prevailing market price.

Risks Relating to the Proposed Acquisition of ISP

If we fail to obtain stockholder approval for the issuance of Class A Common Stock in connection with the Acquisition of ISP as required by the NASDAQ Listing Rules, we will be unable to consummate the transaction. In order to raise the capital necessary to pay the Cash Amount and consummate the Acquisition of ISP, we may need to issue more than 20 percent of the total number of shares of our Class A Common Stock outstanding before the transaction. NASDAQ Listing Rule 5635(a) requires stockholder approval when, in connection with an acquisition of stock or assets of another company, we issue a number of shares of our Class A Common Stock that equals or exceeds 20 percent of the total number of shares of our Class A Common Stock or voting power outstanding before the transaction. As of September 22, 2016, there were 15,653,258 shares of our Class A Common Stock outstanding. Accordingly, based on the number of shares issued and outstanding as of such date, and assuming we do not issue any additional shares of Class A Common Stock, we could issue up to 3,130,651 shares of our Class A Common Stock without obtaining stockholder approval in connection with the Acquisition of ISP, which would include, but is not

limited to, shares of Class A Common Stock issued and sold pursuant to this prospectus since we intend to use the net proceeds from such sales to partially fund the ISP Acquisition.

If we are unable to raise sufficient funds from this offering and from the loan we are seeking from a third party lender to satisfy the Cash Amount of the Purchase Price, we will need to seek alternative sources of financing. We may not be able to obtain alternative sources of financing sufficient to complete the Acquisition of ISP on terms acceptable to us, if at all. If unable to obtain financing, the ISP Stockholders can terminate the Stock Purchase Agreement and we would be required to pay them a termination fee. See “The Proposed Acquisition of ISP” for additional information.

Cash expenditures associated with the Acquisition of ISP may create significant liquidity and cash flow risks for us. We expect to incur significant transaction costs and some integration costs in connection with the proposed Acquisition of ISP. While we have assumed that this level of expense will be incurred, there are many factors beyond our control that could affect the total amount or the timing of the Acquisition and integration expenses. Moreover, many of the expenses that will be incurred are, by their nature, difficult to estimate accurately. To the extent these Acquisition and integration expenses are higher than anticipated, we may experience liquidity or cash flow issues.

We will incur substantial debt in order to satisfy our obligations incurred in connection with the Acquisition of ISP. We will incur substantial debt, in the form of the Note and additional third-party debt, in order to finance a portion of the purchase price of the Acquisition and expenses associated therewith. In order to service the debt, we will require a significant amount of cash. Our ability to make scheduled payments of principal and interest depends on our future performance, which is subject to economic, financial, competitive, and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt, or obtaining additional debt or equity financing on terms that may not be favorable to us or available to us at all. Our ability to refinance any such debt will depend on the capital markets and our financial condition at the time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default under current or future indebtedness. Any event of default or inability to otherwise satisfy our obligations could have a material adverse effect on our future operating results and financial condition.

Failure to complete the proposed Acquisition of ISP could materially and adversely affect our results of operations and the market price of our Class A Common Stock. Our consummation of the proposed Acquisition of ISP is subject to many contingences, including the approval of the issuance of shares of Class A Common Stock offered by this prospectus by our stockholders and raising the financing required to pay the cash portion of the purchase price. We cannot assure you that we will be able to successfully consummate the proposed Acquisition as currently contemplated or at all. Risks related to the failure of the proposed Acquisition to be consummated include, but are not limited to, the following:

- we would not realize any of the potential benefits of the transaction, which could have a negative effect on our stock price;

- we may remain liable for significant transaction costs, including a termination fee if we or ISP terminates the Stock Purchase Agreement for failure to meet the certain of the closing conditions;

- we may experience negative reactions to the Acquisition from customers, clients, business partners, lenders, and employees;

- the trading price of our Class A Common Stock may decline to the extent that the current market price for our stock reflects a market assumption that the Acquisition will be completed; and

- the attention of our management may be diverted to the Acquisition rather than to our own operations and the pursuit of other opportunities that could have been beneficial to us.

The occurrence of any of these events individually or in combination could materially and adversely affect our results of operations and the market price of our Class A Common Stock.

If the Acquisition of ISP is consummated, the combined company may not perform as we or the market expects, which could have an adverse effect on the price of our Class A Common Stock. Even if the Acquisition is consummated, the combined company may not perform as we or the market expects. Risks associated with the combined company following the Acquisition include:

integrating businesses is a difficult, expensive, and time-consuming process, and the failure to integrate successfully our businesses with the business of ISP in the expected time frame would adversely affect our financial condition and results of operation;

the Acquisition of ISP will materially increase the size of our operations, and if we are not able to effectively manage our expanded operations, our Class A Common Stock price may be adversely affected;

it is possible that our key employees or key employees of ISP might decide not to remain with us after the Acquisition is completed, and the loss of such personnel could have a material adverse effect on the financial condition, results of operations, and growth prospects of the combined company;

the success of the combined company will also depend upon relationships with third parties and ISP's or our pre-existing customers, which relationships may be affected by customer preferences or public attitudes about the Acquisition. Any adverse changes in these relationships could adversely affect the combined company's business, financial condition, and results of operations; and

if government agencies or regulatory bodies impose requirements, limitations, costs, divestitures or restrictions on the consummation of the Acquisition, the combined company's ability to realize the anticipated benefits of the Acquisition may be impaired.

The obligations and liabilities of ISP, some of which may be unanticipated or unknown, may be greater than we have anticipated, which may diminish the value of ISP to us. ISP's obligations and liabilities, some of which may not have been disclosed to us or may not be reflected or reserved for in ISP's historical financial statements, may be greater than we have anticipated. The obligations and liabilities of ISP could have a material adverse effect on ISP's business or ISP's value to us or on our business, financial condition, or results of operations. We have only limited indemnification from the ISP Stockholders under the Stock Purchase Agreement with respect to obligations or liabilities of ISP, whether known or unknown. In addition, even in cases where we are able to obtain indemnification, we may discover liabilities greater than the contractual limits or the financial resources of the indemnifying party. In the event that we are responsible for liabilities substantially in excess of any amounts recovered through rights to indemnification or alternative remedies that might be available to us, or any applicable insurance, we could suffer severe consequences that would substantially reduce our earnings and cash flows or otherwise materially and adversely affect our business, financial condition, or results of operations.

If the proposed Acquisition of ISP is consummated, the global nature of ISP Latvia's operations will subject us to political and economic risks that could adversely affect our business, results of operations, or financial condition. The risks inherent in global operations include:

• limitations on ownership or participation in local enterprises;

• price controls, exchange controls, and limitations on repatriation of earnings;

• transportation delays and interruptions;

• political, social, and economic instability and disruptions;

• acts of terrorism;

• government embargoes or foreign trade restrictions;

• imposition of duties and tariffs and other trade barriers;

• import and export controls;

• labor unrest and current and changing regulatory environments;

difficulties in staffing and managing multi-national operations; and

limitations on our ability to enforce legal rights and remedies.

If we are unable to successfully manage these and other risks associated with managing and expanding our international business to Latvia, the risks could have a material adverse effect on our business, results of operations, or financial condition.

If the proposed Acquisition of ISP is consummated, our expanded international operations would increase our exposure to potential liability under anti-corruption, trade protection, tax, and other laws and regulations. The Foreign Corrupt Practices Act and other anti-corruption laws and regulations (“Anti-Corruption Laws”) prohibit corrupt payments by our employees, vendors, or agents. From time to time, we receive inquiries from authorities in the U.S. and elsewhere about our business activities outside of the U.S. and our compliance with Anti-Corruption Laws. While we devote substantial resources to our global compliance programs and have implemented policies, training, and internal controls designed to reduce the risk of corrupt payments, our employees, vendors or agents may violate our policies and if the proposed Acquisition of ISP is consummated, our expanded international operations would significantly increase our exposure to potential liability. Our failure to comply with Anti-Corruption Laws could result in significant fines and penalties, criminal sanctions against us, our officers or our employees, prohibitions on the conduct of our business, and damage to our reputation. Operations outside of the U.S. may be affected by changes in trade production laws, policies, and measures, and other regulatory requirements affecting trade and investment.

If the proposed Acquisition of ISP is consummated, we would also become subject to Latvia and other foreign tax regulations. Such regulations may not be clear, not consistently applied and subject to sudden change, particularly with regard to international transfer pricing. Our earnings could be reduced by the uncertain and changing nature of such tax regulations.

Fluctuations in foreign currency exchange and interest rates could adversely affect our results of operations. Our business is generally conducted in U.S. dollars. However, the costs of operating in Latvia will be subject to the effects of currency exchange fluctuations of the Euro against the U.S. dollar. When the U.S. dollar weakens against the Euro, our operating costs in such currency will increase. This currency risk can be minimized by matching the timing of working capital borrowing needs against operating cost requirements in Euro. However, fluctuations in the value of the Euro will create greater uncertainty in our revenues and can significantly affect our operating results.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words “may,” “will,” “could,” “should,” “expect,” “anticipate,” “intend,” “estimate,” “believe,” “project,” “plan” or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained in this prospectus regarding our business strategy, future operations, projected financial position, potential strategic transactions, proposed distribution channels, projected sales growth, proposed new products, estimated future revenues, cash flows and profitability, projected costs, potential sources of additional capital, future prospects, future economic conditions, the future of our industry, and results that might be obtained by pursuing management’s current plans and objectives are forward-looking statements. You should not place undue reliance on our forward-looking statements because the matters they describe are subject to certain risks, uncertainties, and assumptions that are difficult to predict. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus. Over time, our actual results, performance, or achievements may differ from those expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. Except as required by law, we undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events, or otherwise. We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this prospectus under the captions “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and as well as in our most recent Annual Report on Form 10-K and in other documents that we may file with the SEC, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus.

USE OF PROCEEDS

Based on an assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016), we estimate that the net proceeds to us from the sale of the shares of Class A Common Stock offered by us in this offering will be approximately \$_____ million, after deducting the underwriting discount and estimated offering expenses payable by us. If the underwriters' option to purchase additional shares of Class A Common Stock is exercised in full, we estimate that our net proceeds will be approximately \$_____ million.

A \$0.50 increase or decrease in the assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016) would increase or decrease, respectively, the net proceeds to us by approximately \$_____ million. A 1,000,000 increase or decrease in the assumed number of shares sold in this offering would increase or decrease, respectively, the net proceeds to us by approximately \$_____ million.

We entered into the Stock Purchase Agreement, by and among ISP, the ISP Stockholders, and us, pursuant to which we will acquire all of the outstanding common stock of ISP for a Purchase Price of \$18 million. The Purchase Price will be paid in a combination of the Cash Amount and the Note. We intend to use the net proceeds from this offering, together with proceeds from a loan from a third party lender, to fund the Cash Amount of the Purchase Price. For additional information regarding the proposed ISP Acquisition and terms of the Stock Purchase Agreement, see "The Proposed Acquisition of ISP" below.

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition, which could change in the future as our plans and business conditions evolve. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the proceeds from this offering. Accordingly, we will retain broad discretion over the use of such proceeds.

PRICE RANGE OF CLASS A COMMON STOCK

Our Class A Common Stock is listed on the NCM under the ticker symbol “LPTH.” Our fiscal year ends on June 30 of each year. The following table sets forth, for the periods indicated, the actual high and low bid prices of our Class A Common Stock (rounded to the nearest penny) as reported by the NCM:

	Fiscal 2017		Fiscal 2016		Fiscal 2015	
	High	Low	High	Low	High	Low
First Quarter	\$ 2.05 (1)	\$1.60 (1)	\$2.03	\$1.45	\$1.54	\$1.15
Second Quarter	—	—	\$2.82	\$1.43	\$1.46	\$0.88
Third Quarter	—	—	\$3.43	\$1.80	\$1.32	\$0.87
Fourth Quarter	—	—	\$2.06	\$1.71	\$1.79	\$0.88

(1) Through September 22, 2016.

On September 22, 2016, the closing price as reported on the NCM of our Class A Common Stock was \$1.77 per share. As of September 8, 2016, we had 242 record and approximately 6,164 beneficial holders of our Class A Common Stock.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our Class A Common Stock. We currently intend to retain any future earnings to finance the operation, growth, and development of our business. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our Board and will depend on then existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects, and other factors our Board may deem relevant.

CAPITALIZATION

The following table sets forth our capitalization assumed as of June 30, 2016, on an actual basis and on, an as adjusted basis to reflect our sale of _____ (assuming no exercise of the underwriters' over-allotment option) in this offering at the assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016), after deducting estimated underwriters' discounts and commissions and offering expenses payable by us, and the application of the net proceeds from our sale of shares of Class A Common Stock in this offering.

You should read this information in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes appearing elsewhere in this prospectus.

	As of June 30, 2016	
	Actual	As adjusted
Cash and cash equivalents	\$2,908,024	\$ _____
Current Liabilities	\$3,212,767	\$3,212,767
Long-Term Liabilities	\$1,444,514	\$1,444,514
Total Liabilities	\$4,657,281	\$ _____
Stockholder's Equity		
Class A Common Stock, par value \$0.01 per share (40,000,000 shares authorized; 15,590,945 shares issued and outstanding, actual; _____ shares issued and outstanding, as adjusted)	\$155,909	\$ _____
Additional paid-in capital	\$214,661,617	\$ _____
Accumulated deficit	\$(204,011,722)	\$(204,011,722)
Total stockholders' equity	\$10,931,912	\$ _____
Total Capitalization	\$15,589,193	\$ _____

The number of shares of our Class A Common Stock outstanding used for existing stockholders is based on 15,590,945 shares of our Class A Common Stock outstanding as of June 30, 2016 and excludes: (i) 1,311,795 shares of Class A Common Stock underlying outstanding restricted stock units; (ii) 819,260 shares of Class A Common Stock underlying outstanding stock options; (iii) 1,139,429 shares of Class A Common Stock reserved for issuance under the Plan; (iv) 390,094 shares of Class A Common Stock reserved for issuance under our 2014 ESPP; and (v) 1,080,371 shares of Class A Common Stock issuable upon the exercise of the outstanding warrants.

A \$0.50 increase or decrease in the assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016) would increase or decrease, respectively, each of additional paid-in capital, total stockholder' equity, and total capitalization by approximately

\$_____ million, assuming that the assumed offering of _____ shares of Class A Common Stock remains the same and after deducting the underwriting discounts and commissions.

DILUTION

Our net tangible book value as of June 30, 2016 was \$10,931,912, or \$0.70 per share of Class A Common Stock. Net tangible book value per share represents the amount of our total tangible assets, less our total liabilities, divided by the number of shares of Class A Common Stock outstanding as of June 30, 2016. Net tangible book value dilution per share of Class A Common Stock to new investors represents the difference between the amount per share of Class A Common Stock paid by purchasers in this offering and the net tangible book value per share of Class A Common Stock immediately after completion of this offering.

After giving effect to this offering at an assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016), assuming _____ shares are issued in this offering (and no exercise of the underwriters' over-allotment option), and after deducting the underwriters' discount fees and estimated offering expenses, our pro forma net tangible book value as of June 30, 2016 would have been \$_____, or \$_____ per share. This represents an immediate increase in net tangible book value of \$_____ per share to existing stockholders and an immediate dilution in net tangible book value of \$_____ per share to purchasers in this offering, as illustrated in the following table:

Assumed offering price per share	\$_____
Pro forma net tangible book value per share as of June 30, 2016	\$_____
Increase per share attributable to new investors	\$_____
Pro forma net tangible book value per share after this offering	\$_____
Dilution per share to new investors	\$_____

A \$0.50 increase or decrease in the assumed offering price of \$_____ per share of Class A Common Stock (which was the closing price per share of our Class A Common Stock on _____, 2016) would increase or decrease, respectively, total consideration paid by new investors and total consideration paid by all stockholders, by approximately \$_____ million, assuming the sale of _____ number shares offered by us remains the same and after deducting the underwriting discounts and commissions.

If the underwriters' over-allotment option is exercised in full, and after deducting the underwriters' discount fees and estimated offering expenses, our pro forma net tangible book value as of June 30, 2016 would have been \$_____, or \$_____ per share. This represents an immediate increase in net tangible book value of \$_____ per share to existing stockholders and an immediate dilution in net tangible book value of \$_____ per share to purchasers in this offering.

The number of shares of our Class A Common Stock excludes:

4,311,795 shares of our Class A Common Stock underlying outstanding restricted stock units;

819,260 shares of our Class A Common Stock underlying outstanding stock options;

1,080,371 shares of our Class A Common Stock issuable upon the exercise of warrants outstanding as of June 30, 2016, with a weighted-average exercise price of \$1.26 per share;

4,139,429 shares of our Class A Common Stock reserved for future issuance as of June 30, 2016 under the Plan; and

390,094 shares of our Class A Common Stock reserved for future issuance as of June 30, 2016 under our 2014 ESPP.

To the extent that any of these outstanding options are exercised, warrants are exercised, or we issue additional shares of our Class A Common Stock pursuant to our Plan or 2014 ESPP, there will be further dilution to new investors. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operation plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

BUSINESS

General

We were incorporated under Delaware law in 1992 as the successor to LightPath Technologies Limited Partnership, a New Mexico limited partnership formed in 1989, and its predecessor, Integrated Solar Technologies Corporation, a New Mexico corporation formed in 1985. We manufacture optical components and higher level assemblies including precision molded glass aspheric optics, infrared aspheric lenses, 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, telecommunications, machine vision, and sensors, among others. Products that we produce enable lasers and imaging devices to function more effectively.

In November 2005, we formed LPOI, a wholly-owned subsidiary, located in Jiading, People's Republic of China. In December 2013, we formed LPOIZ, a wholly-owned subsidiary located in the New City district, of the Jiangsu province, of the People's Republic of China. LPOIZ's 26,000 square foot manufacturing facility serves as our primary manufacturing facility in China and provides a lower cost structure for production of larger volumes of optical components and assemblies. The LPOI facility is primarily used for sales and engineering functions.

Product Groups and Markets

In fiscal 2015, we organized our business based on five product groups: LVPMOs, HVPMOs, specialty products, infrared products, and NRE. Our LVPMO product group consists of precision molded optics with a sales price greater than \$10 per lens that are usually sold in smaller lot quantities. Our HVPMO product group consists of precision molded optics with a sales price of less than \$10 per lens that are usually sold in larger lot quantities. Our infrared product group is comprised of both molded lens and assemblies. Our specialty product group is comprised of value-added products such as optical subsystems, assemblies, GRADIUM lenses, and isolators. Our NRE product group consists of those products we develop pursuant to product development agreements we enter into with customers. Typically, customers approach us and request that we develop new products or applications for our existing products to fit their particular needs or specifications. The timing and extent of any such product development is outside of our control.

We currently serve the following major markets: industrial, laser, defense, medical, telecommunications, and instrumentation. Within our product groups, we have various applications that serve these major markets. For

example, our HVPMO lenses are typically used in industrial tools, especially in China. Our HVPMO and LVPMO lenses are also used in applications for the telecommunications market, such as data centers, digital video distribution, wireless broadband, and machine-to-machine interface, and, the laser market, such as laser tools, scientific and bench top lasers, and bar code scanners. Our infrared products can also be used in various applications within our major markets. Currently, sales of our infrared products are primarily for customers in the industrial market that use thermal imaging cameras. Our infrared products can be used for gas sensing devices, spectrometers, night vision systems, automotive driver systems, thermal weapon gun sights, and infrared counter measure systems, among others. Within the larger overall markets, which are estimated to be in the multi-billions of dollars, we believe there is a market of approximately \$800 million for our current products and capabilities. We continue to believe our products will provide significant growth opportunities over the next several years and, therefore, we will continue to target specific applications in each of these major markets. In addition to these major markets, a large percentage of our revenues is derived from sales to unaffiliated companies that purchase our products to fulfill their customers' orders, as well unaffiliated companies that offer our products for sale in their catalogs.

The following further discusses the various products we offer and certain growth opportunities we anticipate for each such product.

LVPMO and HVPMO Product Groups. Aspheric lenses are known for their optimal performance. Aspheric lenses simplify and shrink optical systems by replacing several conventional lenses. However, aspheric lenses are difficult and costly to machine. Our glass molding technology enables the production of both low and high volumes of aspheric optics while still maintaining the highest quality at an affordable price. Molding is the most consistent and economical way to produce aspheres and we have perfected this method to offer the most precise molded aspheric lenses available.

In recent years, sales of both our LVPMOs and HVPMOs have increased. We expect this growth to continue for the next several years with what we believe is the beginning of a multi-year growth cycle of the optical market. This multi-year growth cycle is driven by four major trends: data centers; digital video distribution; wireless broadband; and machine-to-machine interface. Cloud computing has caused a shift in enterprise technology with increased spending for software-as-a-service (“SAAS”) and infrastructure-as-a-service (“IAAS”) capital investments. Delivery of applications and technology using SAAS or IAAS requires larger and faster network bandwidth. The explosion of mobile devices, which includes smartphones and tablet devices, is also requiring the expansion of network bandwidth as users are receiving and transferring larger amounts of data via their mobile devices. The number of mobile devices exceeded the global population at the beginning of 2015 and is estimated to be 1.5 mobile devices per capita by 2019. Individuals are also streaming more video on their mobile devices or through their smart TVs. This type of video distribution, which is estimated to be 80% of all network traffic by 2019, is creating a huge demand for larger and faster bandwidth. Finally, machine-to-machine interface technology allows wireless and wired systems to communicate with other devices of the same type. This type of networking often requires bandwidth in order for the machines to communicate with each other. All of these trends require the expansion of bandwidth, and thus, the growth of optical communication networks. Our products, such as our precision molded optical lenses, can be used as a component in optical communication networks. We also anticipate growth in our precision molded aspheres product revenues as we add new product lenses and applications for a variety of markets and industries, including laser tools, telecom transceivers, micro-projectors, scientific and bench top lasers, range finders, medical devices, bar code scanners, and laser based spectrometers.

LVPMOs. The growth in our LVPMO business is driven by a variety of market applications such as medical endoscopes, medical flow cytometers, scientific and bench-top lasers, laser based spectrometers, military telecom, and telescopic weapon sights. These products have precision specifications and 100% testing to verify that our lenses conform to a higher level of performance than most of the competition in these markets.

HVPMOs. The continued growth in our HVPMO business is driven by market applications supporting mostly the laser diode applications for high volume markets in laser tools, range finders, laser gun sights, bar code scanners, and micro-projectors. The same basic tooling used for high precision in the LVPMO applications allows us to realize a competitive advantage for high volume production that benefits the end customer while maintaining low price targets. Markets for laser diode applications are expected to grow substantially in the next few years as applications such as Lidar, which uses light and radar for distance tracking and speed detection, headlights for automobiles and many other related disciplines begin to rely more and more on laser technology.

Infrared Product Group. Advances in chalcogenide materials have enabled compression molding for mid-wavelength infrared (“MWIR”) and long-wavelength infrared (“LWIR”) optics in a process similar to precision molded lenses. Our molded infrared optics technology enables high performance, cost-effective infrared aspheric lenses that do not rely on traditional diamond turning or lengthy polishing 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, as well as the size of the lens system. Traditional germanium or zinc selenide aspheres are manufactured by diamond turning, which is a time-consuming and expensive process. Diamond turned lenses are made one at a time and the lenses suffer from variations in the surface resulting in variations of performance from lens to lens. The infrared optics molding process allows lenses to be manufactured in high volume with a highly repeatable, consistent performance and allows for sophisticated beam shaping or achromatization over a range of wavelengths to be molded directly into the surfaces of the lens.

Overall, we anticipate growth for infrared optics and increased requirements for systems requiring molded aspheric optics over traditional ground and polished lenses. Infrared systems, which include thermal imaging cameras, gas sensing devices, spectrometers, night vision systems, automotive driver awareness systems such as blind spot detection, thermal weapon gun sights, and infrared counter measure systems, represent a market that is forecasted to grow to greater than \$5.6 billion at the complete systems level by 2020 at a compound annual growth rate of 10%. As infrared imaging systems become widely available, the cost of optical components needs to decrease before the market demand will increase. Our aspheric molding process is an enabling technology for the cost reduction and commercialization of infrared imaging systems because the aspheric shape of our lenses enables system designers to reduce the lens element in a system and provide similar performance at a lower cost.

Specialty Product Group. We have a rapidly growing group of specialty products and assemblies that take advantage of our unique technologies and capabilities. These products include custom optical designs, mounted lenses, optical assemblies, and GRADIUM lenses. We expect growth from defense communications programs and commercial optical sub-assemblies.

Our GRADIUM glass is 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.

We design, build, and sell optical assemblies into markets for test and measurement, medical devices, military, industrial, and communications based on our proprietary technologies. Many of our optical assemblies consist of several products that we manufacture.

Strategy

Our strategy is to leverage our technology, know-how, established low cost manufacturing capability and partnerships to grow our business. We plan to accomplish this growth through the implementation of the following objectives:

Leverage our Leadership to Drive Organic Growth. We plan to continue to capitalize on our global operations network, distribution infrastructure, and technology to pursue global growth. We will focus our efforts on existing and new geographic areas and end products that we believe offer the most attractive growth and long-term profit prospects.

Focus on Cash Flow Generation. Our goal is to focus on cash flow generation and return on invested capital through the continuing optimization of our cost structure, improvement in working capital and supply chain efficiencies, and a disciplined approach to capital expenditures. We have a proven track record of mitigating fixed cost inflation with cost saving actions and productivity improvements. We intend to continue to identify incremental cost saving opportunities based in large part on benchmarks of industry-leading performance and productivity improvements by utilizing our engineering and manufacturing technology expertise and partnerships with low cost producers. Our goal is to maintain a cost structure that positions us favorably to compete and grow. We intend to continue to upgrade our customer and product mix by adding products that move up the supply chain, such as by offering assemblies that use our lenses, thereby increasing our sales of value-added, differentiated products, and achieving premium pricing to improve margins and enhance cash flow.

Increase Customer Base and Continue to Develop New Products. A key component of our strategy is to produce innovative, high-performance products that offer enhanced value propositions to our customers at competitive prices. Our goal is to continually work closely with our customers to provide solutions and products that optimize their products. This market-driven product development enables us to offer a high-quality product portfolio to our customers and provides our business with the ability to respond quickly and efficiently to changes in market demands.

Deepen Our Presence in Emerging Markets. Emerging markets are a strategic priority for our business. We are well positioned not only to leverage our strong market positions in mature but highly sophisticated markets in North America and Europe, but also to participate in the expected growth of emerging markets in Asia and Eastern Europe. We believe that improving living standards and growth in GDP across emerging markets are combining to create increased demand for our products. We expect to capitalize on this growth opportunity by expanding our customer base and local capabilities in order to increase our market share across emerging markets, especially in China. To

accelerate our penetration of these markets and maintain our competitive cost position, we may develop relationships with leading local partners, especially in businesses where participation in the fast-growing Chinese market is particularly important for long-term sustainable growth. For example, we are well positioned to leverage our strong production technology in the Chinese market as a result of an increasing percentage of aerospace, automotive, semiconductor, electronics, and telecommunications manufacturing transitioning to China.

Continue to Drive Operational Excellence and Asset Efficiency. Operational excellence, which includes a commitment to safety, environmental stewardship, and improved reliability, is key to our future success. We continually evaluate our business to identify opportunities to increase operational efficiency throughout our production facilities with a focus on maintaining operational excellence, reducing costs, and maximizing asset efficiency. We intend to continue focusing on increasing manufacturing efficiencies through selected capital projects, process improvements, and best practices in order to lower unit costs. We will also carefully manage our portfolio and take appropriate actions to address product lines that face challenging market conditions and do not generate returns on invested capital that we believe are sufficient to create long-term shareholder value.

Drive Organizational Alignment. We believe that maintaining alignment of the efforts of our employees with our overall business strategy and operational excellence goals is critical to our success. We have outstanding people and assets and, with the commitment to values of safety, customer appreciation, simplicity, collective entrepreneurship, and integrity, we believe that we can maintain our competitiveness and help achieve our operational excellence and asset efficiency strategic objectives.

Sales and Marketing

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 (e.g., 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 research institutions worldwide.

Technical Sales Model. In February 2015, we transitioned to a technical sales process that leverages the success of our existing demand-creation model. To align the organization for specific goals and accountability, we created an executive structure with three direct reporting lines: Operations, China, and Finance. Technical and engineering staffs are now more fully integrated with our sales force, and two new sales positions were created: (i) Executive Sales Manager, which combined the responsibility for all sales and marketing, and (ii) Marketing Manager. We also combined the organizations supporting our aspheric visible lens products and our infrared products. Sales, marketing, engineering, and quality now report to the newly created position of Executive Vice President – Operations.

Sales Team & Channel. We have regional sales forces that market and sell our products directly to customers in North America and China. We also have a master distributor in Europe. We have formalized relationships with 14 industrial, laser, and optoelectronics distributors and channel partners located in the United States and various foreign countries to assist in the distribution of our products in highly specific target markets. We also have reseller arrangements with the top three product catalog companies in the optics and opto-electronics market. In addition, we also maintain our own product catalog and internet website (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 Society of Photographic Instrumentation Engineers (“SPIE”) Photonics West in January 2016 and SPIE Defense, Security and Sensing in May 2016. 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 Laser World of Photonics in Munich, Germany. This strategy underscores our strategic directive of broadening our base of innovative optical components and assemblies. These trade shows also 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.

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 our unique capabilities in optical design engineering, our low cost structure and our substantial presence in Asia, particularly in China, provides us with a competitive edge and assists us in securing business. Additionally, we believe that we offer value to some customers as a second or backup supply source in the United States should they be unwilling to commit to purchase their entire supply of a critical component from a foreign production source. We also have a broad product offering to satisfy a variety of applications and markets.

LVP MOs and HVP MOs Product Groups. Our LVP MO products compete with conventional lenses and optical components manufactured by companies such as Asia Optical, Anteryon, RPO, and Sunny Optics.

Aspheric lenses compete with lens systems comprised of multiple conventional lenses. Machined aspheric lenses compete with our molded glass aspheric lenses, which are part of our HVPMO product group. Aspheric lens system manufacturers include Panasonic, ALP's, Hoya Corporation, as well as newer competitors from China and Taiwan such as E-pin Optical Industry Co. and Kinik Company. 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. However, 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, 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 or weight as their measure of success over performance and durability. Our 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 Product Group. Our infrared molded aspheric optics competes with traditional infrared lenses manufactured from germanium, such as those produced by Janos Technologies, Ophir Optics or Elcan Optical Technologies. These traditional infrared lenses can either be polished spherical or are diamond turned aspherical. Our 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 to produce in high volumes and time consuming to manufacture. We believe our low cost, high volume lens business strategy enables us to compete with the manufacturers of traditional infrared lens.

Our molded infrared optics competes with products manufactured by Umicore, Kiro, and Free Form. We believe that our optical design expertise and our flexibility in providing custom, high performance infrared optical components are key advantages over the products manufactured by these competitors. 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 us.

Specialty Product Group. GRADIUM lenses are often used for products in the niche high power laser optics market. GRADIUM lenses are produced using a unique, well-established technology that no other manufacturer possesses, which provides us with a competitive advantage. 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.

Manufacturing

Facilities. Our manufacturing is largely performed in our 26,000 square foot production facility in Orlando, Florida and in LPOIZ's 26,000 square foot production facility in Zhenjiang, China. In October 2015, LPOI moved its sales and support functions to a 1,700 square foot facility in Shanghai, China. With space remaining in the Zhenjiang and Orlando facilities, we believe our facilities are adequate to accommodate our needs for the foreseeable future.

Our manufacturing facilities feature areas for each step of the manufacturing process, including coating work areas, preform manufacturing and a clean room for pressing and integrated assembly. Our Orlando and Zhenjiang facilities include new product development laboratories and space that includes development and metrology equipment. Our Zhenjiang facility has anti-reflective coating equipment to coat our lenses in-house.

Production and Equipment. Our Orlando facility contains a manufacturing area for our molded glass aspheres, a tooling and machine shop to support new product development, commercial production requirements for our machined parts, the fabrication of proprietary press work stations and mold equipment, and a clean room for our molding and assembly workstations. We also have glass coring equipment to meet our current needs of GRADIUM product sales worldwide. The Orlando facility is also International Traffic in Arms and Regulation (ITAR) compliant. LPOIZ's Zhenjiang facility features a molded glass aspheres manufacturing area, clean room, and an area for anti-reflective coating. Our Orlando and Zhenjiang facilities are ISO 9001:2008 certified. For more information regarding our facilities, please see the subheading "Properties" below.

Subcontractors and Strategic Alliances. We believe that low-cost manufacturing is crucial to our long-term success. In that regard, we generally use 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, polishing, and coating certain lenses as necessary. 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 glasses or equivalents are available from a large number of suppliers, including CDGM Glass Company, Ohara, and Sumita