

SECURITIES & EXCHANGE COMMISSION EDGAR FILING

LIGHTPATH TECHNOLOGIES INC

Form: 10-Q

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2019

OR

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

For the transition period from _____ to _____

Commission file number 000-27548

LIGHTPATH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

DELAWARE

(State or other jurisdiction of incorporation or organization)

86-0708398

(I.R.S. Employer Identification No.)

<http://www.lightpath.com>

2603 Challenger Tech Ct. Suite 100
Orlando, Florida 32826

(Address of principal executive offices)
(ZIP Code)

(407) 382-4003

(Registrant's telephone number, including area code)

N/A

(Former name, former address, and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value \$0.01	LPTH	The Nasdaq Stock Market, LLC

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or such shorter period that the registrant was required to submit such files). YES NO

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

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input checked="" type="checkbox"/>	Smaller reporting company <input checked="" type="checkbox"/>
	Emerging growth company <input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act

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

APPLICABLE ONLY TO CORPORATE ISSUERS:

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

25,840,362 shares of common stock, Class A, \$0.01 par value, outstanding as of November 4, 2019.

LIGHTPATH TECHNOLOGIES, INC.

Form 10-Q

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CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

Certain statements and information in this Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (the "Quarterly Report") may constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, which address activities, events, or developments that we expect or anticipate will or may occur in the future, including such things as future capital expenditures, growth, product development, sales, business strategy, and other similar matters are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," or "continue," or other comparable terminology. These forward-looking statements are based largely on our current expectations and assumptions and are subject to a number of risks and uncertainties, many of which are beyond our control. These statements are subject to many risks, uncertainties, and other important factors that could cause actual future results to differ materially from those expressed in the forward-looking statements. For a discussion of risks and uncertainties that could cause actual results to differ materially from those contained in our forward-looking statements, please refer to Item 1A, Risk Factors, in our Annual Report on Form 10-K for the year-ended June 30, 2019. In light of these risks and uncertainties, all of the forward-looking statements made herein are qualified by these cautionary statements and there can be no assurance that the actual results or developments anticipated by us will be realized. We undertake no obligation to update or revise any of the forward-looking statements contained herein.

Item 1. Financial Statements

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Balance Sheets
(unaudited)

Assets	September 30, 2019	June 30, 2019
Current assets:		
Cash and cash equivalents	\$ 4,665,170	\$ 4,604,701
Trade accounts receivable, net of allowance of \$29,350 and \$29,406	5,527,856	6,210,831
Inventories, net	8,016,688	7,684,527
Other receivables	-	353,695
Prepaid expenses and other assets	562,991	754,640
Total current assets	<u>18,772,705</u>	<u>19,608,394</u>
Property and equipment, net	11,379,106	11,731,084
Operating lease right-of-use assets	1,607,458	—
Intangible assets, net	7,553,785	7,837,306
Goodwill	5,854,905	5,854,905
Deferred tax assets, net	652,000	652,000
Other assets	290,200	289,491
Total assets	<u>\$ 46,110,159</u>	<u>\$ 45,973,180</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 2,662,522	\$ 2,227,768
Accrued liabilities	1,259,590	1,338,912
Accrued payroll and benefits	1,384,669	1,730,658
Operating lease liabilities, current	730,106	—
Deferred rent, current portion	—	72,151
Loans payable, current portion	581,350	581,350
Finance lease obligation, current portion	384,325	404,424
Total current liabilities	<u>7,002,562</u>	<u>6,355,263</u>
Finance lease obligation, less current portion	556,765	640,284
Operating lease liabilities, noncurrent	1,443,023	—
Deferred rent, noncurrent	—	518,364
Loans payable, less current portion	4,859,448	5,000,143
Total liabilities	<u>13,861,798</u>	<u>12,514,054</u>
Commitments and Contingencies		
Stockholders' equity:		
Preferred stock: Series D, \$.01 par value, voting; 500,000 shares authorized; none issued and outstanding	—	—
Common stock: Class A, \$.01 par value, voting; 44,500,000 shares authorized; 25,831,659 and 25,813,895 shares issued and outstanding	258,317	258,139
Additional paid-in capital	230,431,772	230,321,324
Accumulated other comprehensive income	862,284	808,518
Accumulated deficit	(199,304,012)	(197,928,855)
Total stockholders' equity	<u>32,248,361</u>	<u>33,459,126</u>
Total liabilities and stockholders' equity	<u>\$ 46,110,159</u>	<u>\$ 45,973,180</u>

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(unaudited)

	Three Months Ended September 30,	
	2019	2018
Revenue, net	\$ 7,551,930	\$ 8,549,721
Cost of sales	5,161,112	5,506,548
Gross margin	2,390,818	3,043,173
Operating expenses:		
Selling, general and administrative	2,341,778	2,463,878
New product development	428,411	469,983
Amortization of intangibles	283,521	329,271
(Gain) loss on disposal of property and equipment	(50,000)	58,757
Total operating costs and expenses	3,003,710	3,321,889
Operating loss	(612,892)	(278,716)
Other income (expense):		
Interest expense, net	(98,541)	(145,013)
Other expense, net	(515,406)	(338,122)
Total other expense, net	(613,947)	(483,135)
Loss before income taxes	(1,226,839)	(761,851)
Income tax provision (benefit)	148,318	(178,960)
Net loss	\$ (1,375,157)	\$ (582,891)
Foreign currency translation adjustment	53,766	173,047
Comprehensive loss	\$ (1,321,391)	\$ (409,844)
Loss per common share (basic)	\$ (0.05)	\$ (0.02)
Number of shares used in per share calculation (basic)	25,826,771	25,772,718
Loss per common share (diluted)	\$ (0.05)	\$ (0.02)
Number of shares used in per share calculation (diluted)	25,826,771	25,772,718

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Changes in Stockholders' Equity
(unaudited)

	Class A Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at June 30, 2019	25,813,895	\$ 258,139	\$ 230,321,324	\$ 808,518	\$ (197,928,855)	\$ 33,459,126
Issuance of common stock for:						
Employee Stock Purchase Plan	13,370	134	12,033	—	—	12,167
Exercise of RSUs, net	4,394	44	(44)	—	—	—
Stock-based compensation on stock options & RSUs	—	—	98,459	—	—	98,459
Foreign currency translation adjustment	—	—	—	53,766	—	53,766
Net loss	—	—	—	—	(1,375,157)	(1,375,157)
Balances at September 30, 2019	25,831,659	\$ 258,317	\$ 230,431,772	\$ 862,284	\$ (199,304,012)	\$ 32,248,361
Balances at June 30, 2018	25,764,544	\$ 257,645	\$ 229,874,823	\$ 473,508	\$ (195,248,532)	\$ 35,357,444
Issuance of common stock for:						
Employee Stock Purchase Plan	9,061	91	20,750	—	—	20,841
Stock-based compensation on stock options & RSUs	—	—	93,910	—	—	93,910
Foreign currency translation adjustment	—	—	—	173,047	—	173,047
Net loss	—	—	—	—	(582,891)	(582,891)
Balances at September 30, 2018	25,773,605	\$ 257,736	\$ 229,989,483	\$ 646,555	\$ (195,831,423)	\$ 35,062,351

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Cash Flows
(unaudited)

	Three Months Ended September 30,	
	2019	2018
Cash flows from operating activities:		
Net loss	\$ (1,375,157)	\$ (582,891)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	892,072	862,146
Interest from amortization of debt costs	4,643	5,981
(Gain) loss on disposal of property and equipment	(50,000)	58,757
Stock-based compensation on stock options & RSUs, net	98,459	93,910
Provision for doubtful accounts receivable	—	(828)
Change in operating lease liabilities	(24,844)	(22,828)
Deferred tax benefit	—	(298,000)
Changes in operating assets and liabilities:		
Trade accounts receivable	682,975	130,855
Other receivables	353,695	15,617
Inventories	(332,161)	(116,989)
Prepaid expenses and other assets	190,940	(111,059)
Accounts payable and accrued liabilities	9,443	(333,650)
Net cash provided by (used in) operating activities	<u>450,065</u>	<u>(298,979)</u>
Cash flows from investing activities:		
Purchase of property and equipment	(256,573)	(670,079)
Proceeds from sale of equipment	50,000	95,000
Net cash used in investing activities	<u>(206,573)</u>	<u>(575,079)</u>
Cash flows from financing activities:		
Proceeds from sale of common stock from Employee Stock Purchase Plan	12,167	20,841
Payments on loan payable	(145,338)	(364,699)
Repayment of finance lease obligations	(103,618)	—
Payments on capital lease obligations	—	(99,901)
Net cash used in financing activities	<u>(236,789)</u>	<u>(443,759)</u>
Effect of exchange rate on cash and cash equivalents	53,766	341,293
Change in cash and cash equivalents and restricted cash	60,469	(976,524)
Cash and cash equivalents and restricted cash, beginning of period	4,604,701	6,508,620
Cash and cash equivalents and restricted cash, end of period	<u>\$ 4,665,170</u>	<u>\$ 5,532,096</u>
Supplemental disclosure of cash flow information:		
Interest paid in cash	\$ 95,870	\$ 138,913
Income taxes paid	\$ 57,660	\$ 127,945

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

LIGHTPATH TECHNOLOGIES, INC.
Notes to Unaudited Condensed Consolidated Financial Statements

1. Basis of Presentation

References in this document to “the Company,” “LightPath,” “we,” “us,” or “our” are intended to mean LightPath Technologies, Inc., individually, or as the context requires, collectively with its subsidiaries on a consolidated basis.

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with the requirements of Article 8 of Regulation S-X promulgated under the Exchange Act and, therefore, do not include all information and footnotes necessary for a fair presentation of financial position, results of operations, and cash flows in conformity with accounting principles generally accepted in the United States of America. These unaudited Condensed Consolidated Financial Statements should be read in conjunction with our Consolidated Financial Statements and related notes, included in our Annual Report on Form 10-K for the fiscal year ended June 30, 2019, filed with the Securities and Exchange Commission (the “SEC”). Unless otherwise stated, references to particular years or quarters refer to our fiscal years ended June 30 and the associated quarters of those fiscal years.

These Condensed Consolidated Financial Statements are unaudited, but include all adjustments, including normal recurring adjustments, which, in the opinion of management, are necessary to present fairly our financial position, results of operations and cash flows for the interim periods presented. The Consolidated Balance Sheet as of June 30, 2019 has been derived from the audited financial statements at that date but does not include all of the information and notes required by generally accepted accounting principles for complete financial statements. Results of operations for interim periods are not necessarily indicative of the results that may be expected for the year as a whole. The unaudited Condensed Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

2. Significant Accounting Policies

Our significant accounting policies are provided in Note 2, *Summary of Significant Accounting Policies*, in the Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended June 30, 2019.

Use of Estimates

Management makes estimates and assumptions during the preparation of our unaudited Condensed Consolidated Financial Statements that affect amounts reported in the unaudited Condensed Consolidated Financial Statements and accompanying notes. Such estimates and assumptions could change in the future as more information becomes available, which, in turn, could impact the amounts reported and disclosed herein.

Recently Adopted Accounting Standards

In February 2016, the Financial Accounting Standards Board (“FASB” issued ASU No. 2016-02, *Leases (Topic 842)* (“ASC Topic 842”). This guidance requires an entity to recognize lease liabilities and a right-of-use asset for all leases on the balance sheet and to disclose key information about the entity’s leasing arrangements. The Company adopted this standard as of July 1, 2019, using the modified retrospective transition method by applying the new standard to all leases existing at the date of initial application and not restating comparative periods. The Company elected the package of practical expedients permitted under the transition guidance, which allowed the Company to carryforward historical lease classification, and not reassess (i) whether a contract was or contained a lease, and (ii) initial direct costs for any leases that existed prior to July 1, 2019. The Company also elected to combine lease and non-lease components and not to record leases with an initial term of 12 months or less on the unaudited Condensed Consolidated Balance Sheet. As a result of adopting ASC Topic 842 on July 1, 2019, the Company recognized operating lease right-of-use assets of \$1.7 million and corresponding operating lease liabilities of \$2.3 million from existing leases on the Company’s unaudited Condensed Consolidated Balance Sheet. Operating lease liabilities include amounts previously classified as “Deferred Rent” in the unaudited Condensed Consolidated Balance Sheet as of June 30, 2019. See Note 11, *Leases*, for further details. The adoption of ASC Topic 842 had no impact on the Company’s unaudited Condensed Consolidated Statement of Comprehensive Income or Condensed Consolidated Statement of Cash Flows.

There have been no other material changes to our significant accounting policies during the three months ended September 30, 2019, from those disclosed in our Annual Report on Form 10-K for the fiscal year ended June 30, 2019.

Reclassifications

The classification of certain prior-year amounts have been adjusted in our unaudited Condensed Consolidated Financial Statements to conform to current-year classifications. An accrual of \$467,000 related to the lease for ISP's Irvington, New York facility (the "Irvington Facility") was reclassified from "Deferred rent, current portion" to "Accrued liabilities" in the unaudited Condensed Consolidated Balance Sheet as of June 30, 2019. See Note 11, *Lease Commitments*, and Note 14, *Restructuring*, for further information. In addition, upon adoption of ASC Topic 842, amounts previously included in the line items "Capital lease obligation, current portion" and "Capital lease obligation, less current portion" are now included in the line items "Finance lease obligation, current portion" and "Finance lease obligation, less current portion", respectively, in the unaudited Condensed Consolidated Balance Sheet as of June 30, 2019.

3. Revenue

Product Revenue

We are a manufacturer of optical components and higher-level assemblies, including precision molded glass aspheric optics, molded and diamond-turned infrared aspheric 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. We also perform research and development for optical solutions for a wide range of optics markets. Revenue is derived primarily from the sale of optical components and assemblies.

Revenue Recognition

Revenue is generally recognized upon transfer of control, including the risks and rewards of ownership, of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We generally bear all costs, risk of loss, or damage and retain title to the goods up to the point of transfer of control of products to customers. Shipping and handling costs are included in the cost of goods sold. We present revenue net of sales taxes and any similar assessments.

Customary payment terms are granted to customers, based on credit evaluations. We currently do not have any contracts where revenue is recognized, but the customer payment is contingent on a future event. We record deferred revenue when cash payments are received or due in advance of our performance. Deferred revenue was immaterial as of June 30, 2019 and September 30, 2019.

Nature of Products

Revenue from the sale of optical components and assemblies is recognized upon transfer of control, including the risks and rewards of ownership, to the customer. The performance obligations for the sale of optical components and assemblies are satisfied at a point in time. Product development agreements are generally short term in nature, with revenue recognized upon satisfaction of the performance obligation, and transfer of control of the agreed-upon deliverable. We have organized our products in three groups: precision molded optics ("PMO"), infrared, and specialty products. Revenues from product development agreements are included in specialty products. Revenue by product group for the three months ended September 30, 2019 and 2018 was as follows:

	Three Months Ended	
	September 30,	
	2019	2018
PMO	\$ 3,184,458	\$ 3,112,104
Infrared Products	3,959,625	4,960,927
Specialty Products	407,847	476,690
Total revenue	<u>\$ 7,551,930</u>	<u>\$ 8,549,721</u>

4. Inventories

The components of inventories include the following:

	September 30, 2019	June 30, 2019
Raw materials	\$ 3,667,721	\$ 3,467,105
Work in process	2,267,563	2,288,226
Finished goods	2,899,810	2,704,471
Allowance for obsolescence	(818,406)	(775,275)
	<u>\$ 8,016,688</u>	<u>\$ 7,684,527</u>

The value of tooling in raw materials was approximately \$2.3 million and \$2.2 million at September 30, 2019 and June 30, 2019, respectively.

5. Property and Equipment

Property and equipment are summarized as follows:

	Estimated Lives (Years)	September 30, 2019	June 30, 2019
Manufacturing equipment	5 - 10	\$ 17,654,860	\$ 17,412,136
Computer equipment and software	3 - 5	742,979	706,840
Furniture and fixtures	5	304,063	293,582
Leasehold improvements	5 - 7	2,082,947	2,074,069
Construction in progress		480,068	697,126
Total property and equipment		21,264,917	21,183,753
Less accumulated depreciation and amortization		(9,885,811)	(9,452,669)
Total property and equipment, net		<u>\$ 11,379,106</u>	<u>\$ 11,731,084</u>

6. Goodwill and Intangible Assets

There were no changes in the net carrying value of goodwill during the three months ended September 30, 2019.

Identifiable intangible assets were comprised of:

	Useful Lives (Years)	September 30, 2019	June 30, 2019
Customer relationships	15	\$ 3,590,000	\$ 3,590,000
Backlog	2	366,000	366,000
Trade secrets	8	3,272,000	3,272,000
Trademarks	8	3,814,000	3,814,000
Non-compete agreement	3	27,000	27,000
Total intangible assets		11,069,000	11,069,000
Less accumulated amortization		(3,515,215)	(3,231,694)
Total intangible assets, net		<u>\$ 7,553,785</u>	<u>\$ 7,837,306</u>

Future amortization of identifiable intangibles is as follows:

Fiscal year ending:

June 30, 2020 (remaining nine months)	\$ 845,821
June 30, 2021	1,125,083
June 30, 2022	1,125,083
June 30, 2023	1,125,083
June 30, 2024 and later	3,332,715
	<u>\$ 7,553,785</u>

7. Accounts Payable

The accounts payable balance as of September 30, 2019 and June 30, 2019 both include approximately \$91,000 of earned but unpaid Board of Directors' fees.

8. Income Taxes

A summary of our total income tax expense and effective income tax rate for the three months ended September 30, 2019 and 2018 is as follows:

	Three Months Ended September 30,	
	2019	2018
Loss before income taxes	\$ (1,226,839)	\$ (761,851)
Income tax provision (benefit)	\$ 148,318	\$ (178,960)
Effective income tax rate	-12%	23%

The difference between our effective tax rates in the periods presented above and the federal statutory rate is due to the mix of taxable income and losses generated in our various tax jurisdictions, which include the United States (the "U.S."), the People's Republic of China, and the Republic of Latvia. Income tax expense for the three months ended September 30, 2019 was primarily related to income taxes from our operations in China, as we are not recording income tax benefits on losses in the U.S. jurisdiction based on our assessment of the valuation allowance position on our U.S. net deferred tax assets. For the three months ended September 30, 2018, we recorded a net income tax benefit, comprised of a tax benefit on losses in the U.S. jurisdiction, offset by tax expense on income generated in China.

We record net deferred tax assets to the extent we believe it is more likely than not that some portion or all of these assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. As of September 30 and June 30, 2019, we have provided for a valuation allowance against our net deferred tax assets to reduce the net deferred tax assets to the amount we estimate is more-likely-than-not to be realized. Our net deferred tax asset consists primarily of U.S. net operating loss ("NOL") carryforward benefits, and federal and state tax credits with indefinite carryover periods.

U.S. Federal and State Income Taxes

Our U.S. federal and state statutory income tax rate is estimated to be 25%. Based on our current assessment of the valuation allowance position on our net deferred tax assets, no tax benefit is expected to be recorded on pre-tax losses generated in the U.S.

Income Tax Law of the People's Republic of China

Our Chinese subsidiaries, LightPath Optical Instrumentation (Shanghai) Co., Ltd. ("LPOI") and LightPath Optical Instrumentation (Zhenjiang) Co., Ltd. ("LPOIZ"), are governed by the Income Tax Law of the People's Republic of China. As of September 30, 2019, LPOI and LPOIZ were subject to statutory income tax rates of 25% and 15%, respectively.

We currently intend to permanently invest earnings generated from our foreign Chinese operations, and, therefore, have not previously provided for future Chinese withholding taxes on such related earnings. However, if in the future we change such intention, the Company would provide for and pay additional foreign taxes, if any, at that time.

Law of Corporate Income Tax of Latvia

Our Latvian subsidiary, ISP Optics Latvia, SIA ("ISP Latvia"), is governed by the Law of Corporate Income Tax of Latvia. Effective January 1, 2018, the Republic of Latvia enacted tax reform with the following key provisions: (i) corporations are no longer subject to income tax, but are instead subject to a distribution tax on distributed profits (or deemed distributions, as defined) and (ii) the rate of tax was changed to 20%; however, distribution amounts are first divided by 0.8 to arrive at the profit before tax amount, resulting in an effective tax rate of 25%. As a transitional measure, distributions made from earnings prior to January 1, 2018, distributed prior to December 31, 2019, are not subject to tax. As such, any distributions of profits from ISP Latvia to ISP Optics Corporation ("ISP"), its U.S. parent company, will be from earnings prior to January 1, 2018 and, therefore, will not be subject to tax. We currently do not intend to distribute any current earnings generated after January 1, 2018. If, in the future, we change such intention, we will accrue distribution taxes, if any, as profits are generated.

9. Stock-Based Compensation

Our directors, officers, and key employees are granted stock-based compensation through our Amended and Restated Omnibus Incentive Plan, as amended (the "Omnibus Plan"), through October 2018 and after that date, the 2018 Stock and Incentive Compensation Plan (the "SICP"), including incentive stock options, non-qualified stock options, and restricted stock unit ("RSU") awards. The stock-based compensation expense is based primarily on the fair value of the award as of the grant date, and is recognized as an expense over the requisite service period.

The following table shows total stock-based compensation expense for the three months ended September 30, 2019 and 2018 included in the accompanying unaudited Condensed Consolidated Statements of Comprehensive Income:

	Three Months Ended September 30,	
	2019	2018
Stock options	\$ 3,495	\$ 8,910
RSUs	94,964	85,000
Total	<u>\$ 98,459</u>	<u>\$ 93,910</u>
The amounts above were included in:		
Selling, general & administrative	\$ 98,459	\$ 92,730
Cost of sales	-	1,518
New product development	-	(338)
	<u>\$ 98,459</u>	<u>\$ 93,910</u>

We also adopted the LightPath Technologies, Inc. Employee Stock Purchase Plan (the "2014 ESPP"). The 2014 ESPP permits employees to purchase Class A common stock through payroll deductions, subject to certain limitations. A discount of \$384 and \$2,084 for the three months ended September 30, 2019 and 2018, respectively, is included in the selling, general and administrative expense in the accompanying unaudited Condensed Consolidated Statements of Comprehensive Income, which represents the value of the 10% discount given to the employees purchasing stock under the 2014 ESPP.

Grant Date Fair Values and Underlying Assumptions; Contractual Terms

We estimate the fair value of each stock option as of the date of grant, using the Black-Scholes-Merton pricing model. The fair value of 2014 ESPP shares is the amount of the discount the employee obtains at the date of the purchase transaction.

Most stock options granted vest ratably over two to four years and are generally exercisable for ten years. The assumed forfeiture rates used in calculating the fair value of RSU grants was 0%, and the assumed forfeiture rates used in calculating the fair value of options for performance and service conditions were 20% for each of the three months ended September 30, 2019 and 2018. The volatility rate and expected term are based on seven-year historical trends in Class A common stock closing prices and actual forfeitures. The interest rate used is the U.S. Treasury interest rate for constant maturities.

No stock options were granted in the three-month periods ended September 30, 2019 and 2018.

Information Regarding Current Share-Based Compensation Awards

A summary of the activity for share-based compensation awards in the three months ended September 30, 2019 is presented below:

	Shares	Stock Options Weighted- Average Exercise Price	Weighted- Average Remaining Contract	Restricted Stock Units (RSUs)	
				Shares	Weighted- Average Remaining Contract
June 30, 2019	979,925	\$ 1.80	5.5	1,864,526	0.9
Granted	—			—	
Exercised	—			(5,735)	
Cancelled/Forfeited	—			—	
September 30, 2019	<u>979,925</u>	\$ 1.80	5.2	<u>1,858,791</u>	0.9
Awards exercisable/ vested as of					
September 30, 2019	869,230	\$ 1.70	4.9	1,464,382	—
Awards unexercisable/ unvested as of					
September 30, 2019	<u>110,695</u>	\$ 2.56	7.4	<u>394,409</u>	0.9
	<u>979,925</u>			<u>1,858,791</u>	

RSU awards vest immediately or from two to four years from the date of grant.

As of September 30, 2019, there was approximately \$425,000 of total unrecognized compensation cost related to non-vested share-based compensation arrangements (including stock options and RSUs) granted. We expect to recognize the compensation cost as follows:

Fiscal Year Ending:	Stock Options	RSUs	Total
June 30, 2020 (nine months remaining)	\$ 5,430	\$ 194,981	\$ 200,411
June 30, 2021	5,939	169,978	175,917
June 30, 2022	2,021	46,654	48,675
	<u>\$ 13,390</u>	<u>\$ 411,613</u>	<u>\$ 425,003</u>

10. Earnings (Loss) Per Share

Basic earnings per share is computed by dividing net income or loss by the weighted-average number of shares of Class A common stock outstanding, during each period presented. Diluted earnings per share is computed similarly to basic earnings per share, except that it reflects the potential dilution that could occur if dilutive securities or other obligations to issue shares of Class A common stock were exercised or converted into shares of Class A common stock. The computations for basic and diluted earnings per share of Class A common stock are described in the following table:

	Three Months Ended September 30,	
	2019	2018
Net loss	\$ (1,375,157)	\$ (582,891)
Weighted-average common shares outstanding:		
Basic number of shares	25,826,771	25,772,718
Effect of dilutive securities:		
Options to purchase common stock	-	-
RSUs	-	-
Diluted number of shares	25,826,771	25,772,718
Earnings (loss) per common share:		
Basic	\$ (0.05)	\$ (0.02)
Diluted	\$ (0.05)	\$ (0.02)

The following potential dilutive shares were not included in the computation of diluted earnings per share of Class A common stock, as their effects would be anti-dilutive:

	Three Months Ended September 30,	
	2019	2018
Options to purchase common stock	979,925	1,004,140
RSUs	1,863,591	1,649,353
	2,843,516	2,653,493

11. Leases

As discussed in Note 2, *Significant Accounting Policies*, the Company adopted ASC Topic 842 effective July 1, 2019. Our leases primarily consist of operating leases related to our facilities located in Orlando, Florida; Irvington, New York; Riga, Latvia; Shanghai, China; and Zhenjiang, China, and finance leases related to certain equipment located in Orlando, Florida. The operating leases for facilities are non-cancelable operating leases, expiring through 2022. We include options to renew (or terminate) in our lease term, and as part of our right-of-use ("ROU") assets and lease liabilities, when it is reasonably certain that we will exercise that option. We currently have obligations under five finance lease agreements, entered into during fiscal years 2016 to 2019, with terms ranging from three to five years. The leases are for computer and manufacturing equipment.

Our operating lease ROU assets and the related lease liabilities are initially measured at the present value of future lease payments over the lease term. Two of our operating leases include renewal options, which were not included in the measurement of the operating lease ROU assets and related lease liabilities. As most of our leases do not provide an implicit rate, we use our collateralized incremental borrowing rate based on the information available at the commencement date in determining the present value of future payments. Currently none of our leases include variable lease payments that are dependent on an index or rate. We are responsible for payment of certain real estate taxes, insurance and other expenses on certain of our leases. These amounts are generally considered to be variable and are not included in the measurement of the ROU asset and lease liability. We generally account for non-lease components, such as maintenance, separately from lease components. Our lease agreements do not contain any material residual value guarantees or material restricted covenants. Leases with a term of 12 months or less are not recorded on the balance sheet; we recognize lease expense for these leases on a straight-line basis over the lease term.

We received tenant improvement allowances for each of our two leases with respect to our facility located in Orlando, Florida (the "Orlando Facility"). These allowances were used to construct improvements and are included in leasehold improvements and operating lease liabilities. The balances are being amortized over the corresponding lease terms.

The components of lease expense were as follows:

	Three Months Ended September 30, 2019
Operating lease cost	\$ 164,871
Finance lease cost:	
Depreciation of lease assets	\$ 86,063
Interest on lease liabilities	\$ 22,532
Total finance lease cost	\$ 108,595
Total lease cost	<u>\$ 273,466</u>

Supplemental balance sheet information related to leases was as follows:

	Classification	As of September 30, 2019
Assets:		
Operating lease assets	Operating lease assets	\$ 1,607,458
Finance lease assets	Property and equipment, net ⁽¹⁾	999,297
Total lease assets		\$ 2,606,755
Liabilities:		
Current:		
Operating leases	Operating lease liabilities, current	\$ 730,106
Short-term leases	Accrued liabilities ⁽²⁾	375,347
Finance leases	Finance lease liabilities, current	384,325
Noncurrent:		
Operating leases	Operating lease liabilities, less current portion	1,443,023
Finance leases	Finance lease liabilities, less current portion	556,765
Total lease liabilities		\$ 3,489,566

(1) Finance lease assets are recorded net of accumulated depreciation of approximately \$986,000 as of September 30, 2019.

(2) Represents accrual related to the lease of the Irvington Facility, which we ceased use of as of June 30, 2019. All remaining lease payments were accrued as of that date, through the lease expiration in September 2020. See Note 14, *Restructuring*, to these unaudited Condensed Consolidated Financial Statements for additional information.

Lease term and discount rate information related to leases was as follows:

Lease Term and Discount Rate	As of September 30, 2019
Weighted Average Remaining Lease Term (in years)	
Operating leases	2.9
Finance leases	2.9
Weighted Average Discount Rate	
Operating leases	4.9%
Finance leases	8.0%

Supplemental cash flow information:

Cash paid for amounts included in the measurement of lease liabilities:

Operating cash used for operating leases	\$ 189,715
Operating cash used for finance leases	\$ 22,545
Financing cash used for finance leases	\$ 103,618

Future maturities of lease liabilities, excluding amounts accrued for the Irvington Facility lease, were as follows as of September 30, 2019:

Fiscal year ending	Finance Leases	Operating Leases
June 30, 2020 (nine months remaining)	\$ 356,228	\$ 603,002
June 30, 2021	407,954	825,431
June 30, 2022	231,783	767,296
June 30, 2023	59,647	156,587
Total future minimum payments	\$ 1,055,612	\$ 2,352,316
Less imputed interest	(114,522)	(179,187)
Present value of lease liabilities	<u>\$ 941,090</u>	<u>\$ 2,173,129</u>

12. Loans Payable

During the three months ended September 30, 2019, loans payable consisted of the BankUnited Term Loan (as defined below) payable to BankUnited N.A. ("BankUnited"). On February 26, 2019, we entered into a Loan Agreement (the "Loan Agreement") with BankUnited for (i) a revolving line of credit up to maximum amount of \$2,000,000 (the "BankUnited Revolving Line"), (ii) a term loan in the amount of up to \$5,813,500 ("BankUnited Term Loan"), and (iii) a non-revolving guidance line of credit up to a maximum amount of \$10,000,000 (the "Guidance Line" and, together with the BankUnited Revolving Line and BankUnited Term Loan, the "BankUnited Loans"). Each of the BankUnited Loans is evidenced by a promissory note in favor of BankUnited (the "BankUnited Notes"). Simultaneously with the execution of the Loan Agreement, we used the proceeds from the BankUnited Term Loan to pay in full, all outstanding amounts owed to Avidbank Corporate Finance, a division of Avidbank ("Avidbank") pursuant to an acquisition term loan. For additional information related to the Avidbank loans, please see Note 18, *Loans Payable*, to our audited Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended June 30, 2019.

On May 6, 2019, we entered into that certain First Amendment to Loan Agreement, effective February 26, 2019, with BankUnited (the "Amendment" and, together with the Loan Agreement, the "Amended Loan Agreement"). The Amendment amended the definition of the fixed charge coverage ratio to more accurately reflect the parties' understandings at the time the Loan Agreement was executed.

BankUnited Revolving Line

Pursuant to the Amended Loan Agreement, BankUnited will make loan advances under the BankUnited Revolving Line to us up to a maximum aggregate principal amount outstanding not to exceed \$2,000,000, which proceeds will be used for working capital and general corporate purposes. Amounts borrowed under the BankUnited Revolving Line may be repaid and re-borrowed at any time prior to February 26, 2022, at which time all amounts will be immediately due and payable. The advances under the BankUnited Revolving Line bear interest, on the outstanding daily balance, at a per annum rate equal to 2.75% above the 30-day LIBOR. Interest payments are due and payable, in arrears, on the first day of each month. There were no borrowings under the BankUnited Revolving Line as of September 30, 2019.

BankUnited Term Loan

Pursuant to the Amended Loan Agreement, BankUnited advanced us \$5,813,500 to satisfy in full the amounts owed to Avidbank, including the outstanding principal amount and all accrued interest under the acquisition term loan and to pay the fees and expenses incurred in connection with closing of the BankUnited Loans. The BankUnited Term Loan is for a 5-year term, but co-terminus with the BankUnited Revolving Line. The BankUnited Term Loan bears interest at a per annum rate equal to 2.75% above the 30-day LIBOR. Equal monthly principal payments of \$48,445.83, plus accrued interest, are due and payable, in arrears, on the first day of each month during the term. Upon maturity, all principal and interest shall be immediately due and payable. As of September 30, 2019, the applicable interest rate was 4.85%.

Guidance Line

Pursuant to the Amended Loan Agreement, BankUnited, in its sole discretion, may make loan advances to us under the Guidance Line up to a maximum aggregate principal amount outstanding not to exceed \$10,000,000, which proceeds will be used for capital expenditures and approved business acquisitions. Such advances must be in minimum amounts of \$1,000,000 for acquisitions and \$500,000 for capital expenditures, and will be limited to 80% of cost or as otherwise determined by BankUnited. Amounts borrowed under the Guidance Line may not re-borrowed. The advances under the Guidance Line bear interest, on the outstanding daily balance, at a per annum rate equal to 2.75% above the 30-day LIBOR. Interest payments are due and payable, in arrears, on the first day of each month. On each anniversary of the Amended Loan Agreement, monthly principal payments become payable, amortized based on a ten-year term. There were no borrowings under the Guidance Line as of September 30, 2019.

Security and Guarantees

Our obligations under the Amended Loan Agreement are collateralized by a first priority security interest (subject to permitted liens) in all of our assets and the assets of our U.S. subsidiaries, GelTech, Inc. ("GelTech"), and ISP, pursuant to a Security Agreement granted by GelTech, ISP, and us in favor of BankUnited. Our equity interests in, and the assets of, our foreign subsidiaries are excluded from the security interest. In addition, all of our subsidiaries have guaranteed our obligations under the Amended Loan Agreement and related documents, pursuant to Guaranty Agreements executed by us and our subsidiaries in favor of BankUnited.

General Terms

The Amended Loan Agreement contains customary covenants, including, but not limited to: (i) limitations on the disposition of property; (ii) limitations on changing our business or permitting a change in control; (iii) limitations on additional indebtedness or encumbrances; (iv) restrictions on distributions; and (v) limitations on certain investments. The Amended Loan Agreement also contains certain financial covenants, including obligations to maintain a fixed charge coverage ratio of 1.25 to 1.00 and a total leverage ratio of 4.00 to 1.00. As of September 30, 2019, the Company was in compliance with all required covenants.

We may prepay any or all of the BankUnited Loans in whole or in part at any time, without penalty or premium. Late payments are subject to a late fee equal to five percent (5%) of the unpaid amount. Amounts outstanding during an event of default accrue interest at a rate of five percent (5%) above the 30-day LIBOR applicable immediately prior to the occurrence of the event of default. The Amended Loan Agreement contains other customary provisions with respect to events of default, expense reimbursement, and confidentiality.

Financing costs incurred were recorded as a discount on debt and will be amortized over the term. Amortization of approximately \$4,600 and \$6,000 is included in interest expense for the three months ended September 30, 2019 and 2018, respectively. For the three months ended September 30, 2018, the amortization of financing costs was related to the previous term loan payable to Avidbank.

Future maturities of loans payable are as follows:

	<u>BankUnited Term Loan</u>	<u>Unamortized Debt Costs</u>	<u>Total</u>
Fiscal year ending:			
June 30, 2020 (remaining nine months)	\$ 436,013	\$ (13,001)	\$ 423,012
June 30, 2021	581,350	(17,334)	564,016
June 30, 2022	581,350	(17,334)	564,016
June 30, 2023	581,350	(17,334)	564,016
June 30, 2024	<u>3,342,762</u>	<u>(17,024)</u>	<u>3,325,738</u>
Total payments	\$ 5,522,825	\$ (82,027)	\$ 5,440,798
Less current portion			<u>(581,350)</u>
Non-current portion			<u>\$ 4,859,448</u>

13. Foreign Operations

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the period. Gains or losses on the translation of the financial statements of a non-U.S. operation, where the functional currency is other than the U.S. dollar, are reflected as a separate component of equity, which was a cumulative gain of approximately \$862,000 and \$647,000 as of September 30, 2019 and 2018, respectively. During the three months ended September 30, 2019 and 2018, we also recognized net foreign currency transaction losses of approximately \$497,000 and \$338,000, respectively, included in the unaudited Condensed Consolidated Statements of Comprehensive Income (Loss) in the line item entitled "Other income (expense), net."

Our cash and cash equivalents totaled \$4.7 million at September 30, 2019. Of this amount, greater than 50% was held by our foreign subsidiaries in China and Latvia. These foreign funds were generated in China and Latvia as a result of foreign earnings. With respect to the funds generated by our foreign subsidiaries in China, the retained earnings of the respective subsidiary must equal at least 50% of its registered capital before any funds can be repatriated through dividends. As of September 30, 2019, LPOIZ had approximately \$3.5 million available for repatriation and LPOI did not have any earnings available for repatriation, based on retained earnings as of the end of the prior statutory tax year ended December 31, 2018.

Assets and net assets in foreign countries are as follows:

	China		Latvia	
	September 30, 2019	June 30, 2019	September 30, 2019	June 30, 2019
Assets	\$17.4 million	\$16.9 million	\$9.1 million	\$8.2 million
Net assets	\$14.9 million	\$14.5 million	\$8.0 million	\$7.8 million

14. Restructuring

In July 2018, we announced the relocation and consolidation of ISP's Irvington Facility into our existing Orlando Facility and our existing facility in Riga, Latvia (the "Riga Facility"). We recorded charges for restructuring and other exit activities related to the closure or relocation of business activities at fair value, when incurred. Such charges include termination benefits, contract termination costs, and costs to consolidate facilities or relocate employees. For the year ended June 30, 2019, we recorded approximately \$1.2 million in expenses related to the relocation of the Irvington Facility, of which approximately \$91,000 were recorded during the three months ended September 30, 2018. These charges are included as a component of the "Selling, general and administrative" expenses line item in our Consolidated Statement of Comprehensive Income (Loss). These charges included approximately \$467,000 for our remaining obligation under the lease agreement for the Irvington Facility until the lease expires in September 2020 because we ceased use of this facility as of June 30, 2019. Amounts accrued and included in our unaudited Condensed Consolidated Balance Sheet as of June 30, 2019 related to this activity were comprised of the remaining lease obligation of approximately \$467,000, included in "Accrued liabilities", and approximately \$246,000 of termination benefits and other costs, included in "Accrued payroll and benefits." As of September 30, 2019, the remaining amounts accrued in our unaudited Condensed Consolidated Balance sheet included approximately \$375,000 related to the lease obligation, and approximately \$93,000 of termination benefits.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Management's Discussion and Analysis of Financial Condition and Results of Operations is designed to provide a reader of the financial statements with a narrative report on our financial condition, results of operations, and liquidity. This discussion and analysis should be read in conjunction with the attached unaudited Condensed Consolidated Financial Statements and notes thereto and our Annual Report on Form 10-K for the year ended June 30, 2019, including the audited Consolidated Financial Statements and notes thereto. The following discussion contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations, and intentions. Our actual results could differ materially from those discussed in the forward-looking statements. Please also see the cautionary language at the beginning of this Quarterly Report regarding forward-looking statements.

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

Introduction

We were incorporated in Delaware 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. Today, LightPath is a global company with major facilities in the United States, the People's Republic of China, and the Republic of Latvia.

Our capabilities include precision molded optics, thermal imaging optics and custom designed optics. These capabilities allow us to manufacture optical components and higher-level assemblies, including precision molded glass aspheric optics, molded and diamond-turned infrared aspheric 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. We serve a wide and diverse number of industries including defense and security, optical systems and components, datacom/telecom, information technology, life sciences, machine vision and production technology. Our products are incorporated into a variety of applications by our broad and diverse customer base. These applications include defense products, medical devices, laser aided industrial tools, automotive safety applications, barcode scanners, optical data storage, hybrid fiber coax datacom, telecommunication optical networks, machine vision and sensors, among others. All the products we produce enable lasers and imaging devices to function more effectively.

Subsidiaries

In November 2005, we formed LPOI, a wholly-owned subsidiary, located in Jiading, People's Republic of China. LPOI provides sales and support functions. 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 55,000 square foot manufacturing facility (the "Zhenjiang 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. Late in fiscal 2019, this facility was expanded from 39,000 to 55,000 square feet to add capacity for polishing to support our growing infrared business.

In December 2016, we acquired ISP, and its wholly-owned subsidiary, ISP Latvia. ISP is a vertically integrated manufacturer offering a full range of infrared products from custom infrared optical elements to catalog and high-performance lens assemblies. Historically, ISP's Irvington Facility functioned as its global headquarters for operations, while also providing manufacturing capabilities, optical coatings, and optical and mechanical design, assembly, and testing. In June 2019, we completed the relocation of the Irvington Facility to our existing Orlando Facility and Riga Facility. ISP Latvia is a manufacturer of high precision optics and offers a full range of infrared products, including catalog and custom infrared optics. ISP Latvia's Riga Facility functions as its manufacturing facility.

For additional information, please refer to our Annual Report on Form 10-K for the year ended June 30, 2019.

Recent Organizational and Strategic Initiatives

To ensure we fully leverage the expanded capabilities and manage the broader product portfolio that we now have, we began introducing organizational changes in July 2019. We created and filled the position of Chief Operating Officer. This position combines all operations, engineering, sales and marketing functions under one leader to ensure the closest possible ties between demand and supply of our products. We believe this will ensure the best coordination between technical and operational requirements. The position is responsible for managing annual plan objectives, *i.e.*, revenues, gross margin, controllable operating income and return on asset objectives. We have also implemented a product management function, with a product manager for each of our major product capabilities: molded optics, thermal imaging optics and custom designed optics. Product management is principally a portfolio management process that analyzes products within the product capability areas as defined above. This function will facilitate choosing investment priorities and ensuring successful product life cycle management. We have also defined, but not filled, the position of Senior Vice President, Strategic Business Assessment. This person will be responsible for strategically aligning LighPath's competencies with strategic industry revenue opportunities, and will manage the product management function.

Product Groups and Markets

In fiscal 2019, we reorganized our business into three product groups: precision molded optics ("PMO"), infrared products and specialty products. These product groups are supported by our major product capabilities: molded optics, thermal imaging optics, and custom designed optics.

Our PMO product group consists of visible precision molded optics with varying applications. Our infrared product group is comprised of infrared optics, both molded and diamond-turned, and thermal imaging assemblies. This product group also includes both conventional and CNC ground and polished lenses. Between these two product groups, we have the capability to manufacture lenses from very small (with diameters of sub-millimeter) to over 300 millimeters, and with focal lengths from approximately 0.4mm to over 2000mm. In addition, both product groups offer both catalog and custom designed optics.

Our specialty product group is comprised of value-added products, such as optical subsystems, assemblies, and collimators, and non-recurring engineering ("NRE") products, consisting of those products we develop pursuant to product development agreements that 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 have also aligned our marketing efforts by our capabilities (*i.e.*, molded optics, thermal imaging optics, and custom optics), and then by industry. We currently serve the following major markets: defense and security, optical systems and components, datacom/telecom, information technology, life sciences, machine vision and production technology. Customers in each of these markets may select the best optical technologies that suit their needs from our entire suite of products, availing us to cross-selling opportunities, particularly where we can leverage our knowledge base against our expanding design library. Within our product groups, we have various applications that serve our major markets. For example, our infrared products can be used for gas sensing devices, spectrometers, night vision systems, advanced driver-assistance systems ("ADAS"), thermal weapon gun sights, and infrared counter measure systems, among others.

The photonics market drives our growth and is comprised of eight application areas: information and communication technology, display, lighting, photovoltaic, production technology, life sciences, and measurement and automated vision. In 2018, the market size for these applications at the system level was \$556.4 billion. LightPath has product applications in six of the eight application areas, all except for displays and photovoltaic. According to the latest Markets and Markets survey, these six application areas had an estimated market value of \$401 billion and are growing at a 7% compound annual growth rate. Within the larger overall markets, we believe there is a market of approximately \$2.0 billion 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 are derived from sales to unaffiliated companies that purchase our products to fulfill their customers' orders, as well as 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. Our product managers focus on pursuing customer growth opportunities where our differential advantages coincide with key customer needs.

Results of Operations

Fiscal First Quarter: Three months ended September 30, 2019, compared to three months ended September 30, 2018

Revenues:

Revenue for the first quarter of fiscal 2020 was approximately \$7.6 million, a decrease of approximately \$1 million, or 12%, as compared to the same period of the prior fiscal year. Revenue generated by infrared products was approximately \$4.0 million in the first quarter of fiscal 2020, a decrease of approximately \$1.0 million, or 20%, compared to approximately \$5.0 million in the same period of the prior fiscal year. This decrease was primarily driven by a delay in orders against a large annual contract, where the customer experienced delays for other components in the supply chain. According to the terms of the contract, these orders cannot be delayed beyond March 31, 2020 and, therefore, the orders must ship over the next two quarters. Revenue generated by PMO products was approximately \$3.2 million for the first quarter of fiscal 2020, as compared to \$3.1 million in the same period of the prior fiscal year, an increase of approximately \$72,000, or 2%. This increase is attributed to increases in sales to customers in the telecommunications and industrial markets. Revenue generated by our specialty products was approximately \$408,000 in the first quarter of fiscal 2020, a decrease of approximately \$69,000, or 14%, compared to \$477,000 in the same period of the prior fiscal year. This decrease is related to the timing of orders from a repeat customer in the defense market.

Cost of Sales and Gross Margin:

Gross margin in the first quarter of fiscal 2020 was approximately \$2.4 million, a decrease of 21%, as compared to approximately \$3.0 million in same quarter of the prior fiscal year. Total cost of sales was approximately \$5.2 million for the first quarter of fiscal 2020, compared to \$5.5 million for the same period of the prior fiscal year. The decreases in gross margin and cost of sales are primarily driven by the decrease in sales. Gross margin as a percentage of revenue was 32% for the first quarter of fiscal 2020, compared to 36% for the first quarter of fiscal 2019. The decrease in gross margin as a percentage of revenue is due to several factors. Gross margins for our PMO products were negatively impacted by higher duties and freight charges resulting from increased tariffs beginning in June 2019. We are evaluating and implementing a number of strategies to mitigate the current and anticipated future impact of tariffs. We expect to begin realizing the savings from these mitigation efforts over the coming quarters.

Gross margins for infrared products were impacted by the lower volume of shipments against the aforementioned annual contract, as well as yield issues on our BD6 products. Volumes continue to increase for our BD6-based infrared molded products, and we continue to work toward converting germanium-based diamond-turned infrared products to BD6, which we expect will continue to improve our infrared margins over time.

Selling, General and Administrative:

Selling, general and administrative ("SG&A") costs were approximately \$2.3 million for the first quarter of fiscal 2020, a decrease of approximately 5%, as compared to approximately \$2.5 million in the same quarter of the prior fiscal year. SG&A for the first quarter of fiscal 2019 included approximately \$91,000 of non-recurring expenses related to the relocation of the Irvington Facility to our existing Orlando Facility and Riga Facility. The first quarter of fiscal 2020 reflects savings from the absence of these non-recurring costs, as well as reduced personnel and overhead costs resulting from the restructuring associated with the relocation. We expect future SG&A costs to continue to reflect reduced operating and overhead costs as a result of the consolidation of our manufacturing facilities.

New Product Development:

New product development costs were approximately \$428,000 in the first quarter of fiscal 2020, a decrease of approximately \$42,000, or 9%, as compared to the same period of the prior fiscal year. This decrease was primarily due to the restructuring of personnel from product development to our newly created product management function, which is included in SG&A. We anticipate that new product development expenses will remain at current levels for the remainder of fiscal 2020; however, actual expenses will depend on the demand for product development.

Other Income (Expense):

In the first quarter of fiscal 2020, interest expense was approximately \$98,000, compared to approximately \$145,000 in the same period of the prior fiscal year. The decrease in interest expense is primarily due to more favorable terms associated with the BankUnited Term Loan entered into during the third quarter of fiscal 2019. We expect that interest expense will remain near current levels for the remainder of fiscal 2020.

Other expense, net, was approximately \$515,000 in the first quarter of fiscal 2020, compared to approximately \$338,000 in the first quarter of fiscal 2019, primarily resulting from net losses on foreign exchange transactions. We execute all foreign sales from our U.S. facilities and inter-company transactions in U.S. dollars, partially mitigating the impact of foreign currency fluctuations. Assets and liabilities denominated in non-United States currencies, primarily the Chinese Yuan and Euro, are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the year. During the first quarter of fiscal 2019, we incurred a net foreign currency transaction loss of approximately \$497,000 for the first quarter of fiscal 2019, compared to \$338,000 for the same period of the prior fiscal year.

Income Taxes:

During the first quarter of fiscal 2020, we recorded income tax expense of \$148,000, primarily related to income taxes from our operations in China. This compares to a net income tax benefit of approximately \$179,000 recorded for the first quarter of fiscal 2019, which was comprised of a tax benefit on losses in the U.S. jurisdiction, offset by tax expense on income generated in China. Please refer to Note 8, *Income Taxes*, in the unaudited Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information.

Net Income (Loss):

Net loss for the first quarter of fiscal 2020 was approximately \$1.4 million, or \$0.05 basic and diluted loss per share, compared to a net loss of \$583,000, or \$0.02 basic and diluted loss per share, for the first quarter of fiscal 2019. The decrease in net income for the first quarter of fiscal 2020, as compared to the first quarter of fiscal 2019, is primarily attributable to the decrease in sales, resulting in lower gross margin, partially offset by a decrease in expenses for SG&A, new product development, and amortization of intangibles. These differences increased operating loss by \$334,000 for the first quarter of fiscal 2020, as compared to the same period of the prior fiscal year. In addition, there was an unfavorable difference of \$327,000 in the provision for income taxes.

Weighted-average common shares outstanding were to 25,826,771, for both basic and diluted, in the first quarter of fiscal 2020, compared to 25,772,718, for both basic and diluted, in the first quarter of fiscal 2019. The increase in the weighted-average basic common shares was due the issuance of shares of Class A common stock under the 2014 ESPP and upon the exercises of stock options.

Liquidity and Capital Resources

At September 30, 2019, we had working capital of approximately \$11.8 million and total cash and cash equivalents of approximately \$4.7 million, of which, greater than 50% of our cash and cash equivalents was held by our foreign subsidiaries.

Cash and cash equivalents held by our foreign subsidiaries were generated in China and Latvia as a result of foreign earnings. Before any funds can be repatriated from China through dividends, the retained earnings of the legal entity must equal at least 50% of its registered capital. As of September 30, 2019, LPOIZ had approximately \$3.5 million available for repatriation and LPOI did not have any earnings available for repatriation, based on retained earnings as of the end of the prior statutory tax year ended December 31, 2018. Currently, we intend to permanently invest earnings from our foreign Chinese operations; therefore, we have not previously provided for future Chinese withholding taxes on the related earnings. However, if, in the future, we change such intention, we would provide for and pay additional foreign taxes, if any, at that time.

Loans payable consists of the BankUnited Term Loan pursuant to the Amended Loan Agreement. The Amended Loan Agreement also provides for a BankUnited Revolving Line and a Guidance Line. As of September 30, 2019, the outstanding balance on the BankUnited Term Loan was approximately \$5.4 million, and we had no borrowings outstanding on the BankUnited Revolving Line or Guidance Line.

The Amended Loan Agreement includes certain customary covenants. As of September 30, 2019, we were in compliance with all covenants. For additional information, see Note 12, *Loans Payable*, to the unaudited Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

We generally rely on cash from operations and equity and debt offerings, to the extent available, to satisfy our liquidity needs and to maintain our ability to repay the BankUnited Term Loan. There are a number of factors that could result in the need to raise additional funds, including a decline in revenue or a lack of anticipated sales growth, increased material costs, increased labor costs, planned production efficiency improvements not being realized, increases in property, casualty, benefit and liability insurance premiums, and increases in other costs. We will also continue efforts to keep costs under control as we seek renewed sales growth. Our efforts are directed toward generating positive cash flow and profitability. If these efforts are not successful, we may need to raise additional capital. Should capital not be available to us at reasonable terms, other actions may become necessary in addition to cost control measures and continued efforts to increase sales. These actions may include exploring strategic options for the sale of the Company, the sale of certain product lines, the creation of joint ventures or strategic alliances under which we will pursue business opportunities, the creation of licensing arrangements with respect to our technology, or other alternatives.

Cash Flows – Financings:

Net cash used in financing activities was approximately \$237,000 in the first three months of fiscal 2020, compared to approximately \$444,000 used in the first three months of fiscal 2019. Cash used in financing activities for the first three months of fiscal 2020 reflects approximately \$249,000 in principal payments on our loans and finance leases, net of approximately \$12,000 in proceeds from the sale of Class A common stock under the 2014 ESPP. Cash used in financing activities for the first three months of fiscal 2019 reflects approximately \$465,000 in principal payments on our loans and capital leases, net of approximately \$21,000 in proceeds from the sale of Class A common stock under the 2014 ESPP.

Cash Flows – Operating:

Cash flow provided by operations was approximately \$450,000 for the first quarter of fiscal 2020, compared to cash used in operations of approximately \$299,000 for the first quarter of fiscal 2019. The increase in cash flow from operations for the first quarter of fiscal 2020 is primarily due to collections on trade accounts receivable and other receivables during the quarter. We anticipate improvement in our cash flows provided by operations in future years, based on our forecasted sales growth and anticipated margin improvements based on production efficiencies, including the relocation of our Irvington Facility, partially offset by marginal increases in sales and marketing, and new product development expenditures.

Cash Flows – Investing:

During the first quarter of fiscal 2020, we expended approximately \$257,000 in investments in capital equipment, compared to approximately \$670,000 in the first quarter of fiscal 2019. The majority of our capital expenditures during the first quarter of fiscal 2020 was related to expansion of our BD6 material production and our infrared coating capacity. Overall, we anticipate that the level of capital expenditures during fiscal 2020 will be lower than in fiscal 2019, however, the total amount expended will depend on opportunities and circumstances.

Contractual Obligations and Commitments

As of September 30, 2019, our principal commitments consisted of obligations under operating and finance leases, and debt agreements. No material changes occurred during the first quarter of fiscal 2019 in our contractual cash obligations to repay debt or to make payments under operating and finance leases, or in our contingent liabilities as disclosed in our Annual Report on Form 10-K for the year ended June 30, 2019.

Off Balance Sheet Arrangements

We do not engage in any activities involving variable interest entities or off-balance sheet arrangements.

Critical Accounting Policies and Estimates

Other than the policy changes disclosed in Note 2, *Significant Accounting Policies*, to the unaudited Condensed Consolidated Financial Statements in Item 1, Part I of this Quarterly Report, there have been no material changes to our critical accounting policies and estimates during the three months ended September 30, 2019 from those disclosed in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, of our Annual Report on Form 10-K for the year ended June 30, 2019.

Recent Accounting Pronouncements

See Note 2, *Significant Accounting Policies*, to the unaudited Condensed Consolidated Financial Statements in Item 1 of Part I of this Quarterly Report for a description of recent accounting pronouncements and accounting changes.

How We Operate

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

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

Despite these challenges to winning more “annuity” business, we nevertheless believe we can be successful in procuring this business because of our unique capabilities in optical design engineering that we make available on the merchant market, a market that we believe is underserved in this area of service offering. Additionally, we believe that we offer value to some customers as a source of supply in the U.S. should they be unwilling to commit to purchase their supply of a critical component from foreign merchant production sources. For information regarding revenue recognition related to our various revenue streams, refer to *Critical Accounting Policies and Estimates* in our Annual Report on Form 10-K dated June 30, 2019.

Our Key Performance Indicators:

Usually on a weekly basis, management reviews a number of performance indicators, both qualitative and quantitative. These indicators change from time to time as the opportunities and challenges in the business change. These indicators are used to determine tactical operating actions and changes. We believe that our non-financial production indicators, such as those noted, are proprietary information.

Financial indicators that are considered key and reviewed regularly are as follows:

- sales backlog;
- revenue dollars and units by product group; and
- other key indicators.

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

Sales Backlog

We believe our sales growth has been and continues to be our best indicator of success. Our best view into the efficacy of our sales efforts is in our “order book.” Our order book equates to sales “backlog.” It has a quantitative and a qualitative aspect: quantitatively, our backlog’s prospective dollar value and qualitatively, what percent of the backlog is scheduled by the customer for date-certain delivery. We define our “12-month backlog” as that which is requested by the customer for delivery within one year and which is reasonably likely to remain in the backlog and be converted into revenues. This includes customer purchase orders and may include amounts under supply contracts if they meet the aforementioned criteria. Generally, a higher 12-month backlog is better for us.

Our 12-month backlog at September 30, 2019 was approximately \$15.4 million, an increase of 10%, as compared to \$14.0 million as of September 30, 2018. Compared to the end of fiscal 2019, however, our 12-month backlog decreased by 10% during the first quarter of fiscal 2020. Backlog growth rates for the last five fiscal quarters are:

<u>Quarter</u>	<u>Backlog (\$ 000)</u>	<u>Change From Prior Year End</u>	<u>Change From Prior Quarter End</u>
Q1 2019	\$ 13,994	9%	9%
Q2 2019	\$ 18,145	41%	30%
Q3 2019	\$ 17,137	34%	-6%
Q4 2019	\$ 17,121	33%	0%
Q1 2020	\$ 15,390	-10%	-10%

The increase in our 12-month backlog from the first quarter to the second quarter of fiscal 2019 was largely due to the renewal of a large annual contract for diamond-turned infrared products during the second quarter, which we began shipping against in the third quarter of fiscal 2019. During the fourth quarter of fiscal 2019, we booked new annual contracts for molded infrared products. The majority of the decrease in our 12-month backlog from the fourth quarter of fiscal 2019 to the first quarter of fiscal 2020 was due to the timing of shipments against annual contracts. These annual contracts are expected to renew during the balance of this fiscal year, which may substantially increase backlog levels at the time the orders are received, and backlog will subsequently be drawn down as shipments are made against these orders

We have experienced strong demand for infrared products used in the industrial, defense and first responder sectors. Demand for infrared products is being further fueled by interest in lenses made with our new BD6 material. We expect to maintain moderate growth in our visible PMO product group by continuing to diversify and offer new applications, with a cost competitive structure. Over the past several years, we have broadened our capabilities to include additional glass types and the ability to make much larger lenses, providing long-term opportunities for our technology roadmap and market share expansion. Based on our backlog and recent quote activity, we expect increases in revenue from sales of both molded and turned infrared products for the remainder of fiscal 2020.

Revenue Dollars and Units by Product Group

The following table sets forth revenue dollars and units for our three product groups for the three-month periods ended September 30, 2019 and 2018:

	(unaudited)		Quarter % Change
	Three Months Ended		
	September 30,		
	2019	2018	
Revenue			
PMO	\$ 3,184,458	\$ 3,112,104	2%
Infrared Products	3,959,625	4,960,927	-20%
Specialty Products	407,847	476,690	-14%
Total revenue	<u>\$ 7,551,930</u>	<u>\$ 8,549,721</u>	-12%
Units			
PMO	568,730	430,778	32%
Infrared Products	65,057	48,924	33%
Specialty Products	8,917	13,673	-35%
Total units	<u>642,704</u>	<u>493,375</u>	30%

Our revenue decreased by approximately \$1 million for the first quarter of fiscal 2020, as compared to the same period of the prior fiscal year, primarily driven by a decrease in infrared product sales, partially offset by an increase in PMO product sales.

Revenue from the PMO product group increased approximately \$72,000, or 2%, for the first quarter of fiscal 2020, as compared to the same period of the prior fiscal year. The increase in revenue is attributed to increases in sales to customers in the telecommunications market, as well as the industrial market. Sales of PMO units increased by 32%, as compared to the same period of the prior fiscal year, however, average selling prices decreased 22%, due to a significant increase in telecommunications products sales, which typically have higher volumes and lower average selling prices. The unit volume for telecommunications products for the first quarter of fiscal 2020 more than doubled, as compared to the same period of the prior fiscal year.

Revenue generated by the infrared product group during the first quarter of fiscal 2020 was \$4.0 million, a decrease of approximately \$1.0 million, or 20%, as compared to the same period of the prior fiscal year. The decrease in infrared product revenue is primarily due to a slowdown in orders against a large-volume annual contract for diamond-turned infrared products, where the customer experienced delays for other components in the supply chain. In accordance with the terms of the contract, these orders must ship within the next two quarters. During the first quarter of fiscal 2020, sales of infrared units increased by 33%, as compared to the prior year period, and average selling prices decreased 40%. The increase in units and decrease in average selling prices are driven by an increase in sales of molded infrared products, including products made with our new BD6 material, which are higher in volume and lower in prices than diamond-turned infrared products. Industrial applications, firefighting cameras and other public safety applications continue to be the primary drivers of the increased demand for infrared products, particularly our thermal imaging assemblies.

In the first quarter of fiscal 2020, our specialty products revenue decreased by \$69,000, or 14%, as compared to the same period of the prior fiscal year. This decrease is primarily related to the timing of orders from a customer in the defense market.

Other Key Indicators

Other key indicators include various operating metrics, some of which are qualitative and others are quantitative. These indicators change from time to time as the opportunities and challenges in the business change. They are mostly non-financial indicators, such as on time delivery trends, units of shippable output by major product line, production yield rates by major product line, and the output and yield data from significant intermediary manufacturing processes that support the production of the finished shippable product. These indicators can be used to calculate such other related indicators as fully-yielded unit production per-shift, which varies by the particular product and our state of automation in production of that product at any given time. Higher unit production per shift means lower unit cost and, therefore, improved margins or improved ability to compete, where desirable, for price sensitive customer applications. The data from these reports is used to determine tactical operating actions and changes. Management also assesses business performance and makes business decisions regarding our operations using certain non-GAAP measures. These non-GAAP measures are described in more detail below under the heading "Non-GAAP Financial Measures."

Non-GAAP Financial Measures

We report our historical results in accordance with GAAP; however, our management also assesses business performance and makes business decisions regarding our operations using certain non-GAAP financial measures. We believe these non-GAAP financial measures provide useful information to management and investors that is supplementary to our financial condition and results of operations computed in accordance with GAAP; however, we acknowledge that our non-GAAP financial measures have a number of limitations. As such, you should not view these disclosures as a substitute for results determined in accordance with GAAP, and they are not necessarily comparable to non-GAAP financial measures that other companies use.

EBITDA

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

We believe EBITDA is helpful for investors to better understand our underlying business operations. The following table adjusts net income (loss) to EBITDA for the three months ended September 30, 2019 and 2018:

	(unaudited) Quarter Ended:	
	September 30, 2019	September 30, 2018
Net loss	\$ (1,375,157)	\$ (582,891)
Depreciation and amortization	892,072	862,146
Income tax provision (benefit)	148,318	(178,960)
Interest expense	98,541	145,013
EBITDA	\$ (236,226)	\$ 245,308
% of revenue	-3%	3%

Our EBITDA for the three months ended September 30, 2019 was a loss of approximately \$236,000, compared to income of approximately \$245,000 for the three months ended September 30, 2018. The decrease in EBITDA in the first quarter of fiscal 2020 was primarily due to lower revenue and gross margin, partially offset by lower operating costs and expenses.

Item 4. Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of September 30, 2019, the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2019 in reporting on a timely basis information required to be disclosed by us in the reports we file or submit under the Exchange Act.

During the fiscal quarter ended September 30, 2019, there was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

None

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None

Item 3. Defaults Upon Senior Securities

None

Item 4. Mine Safety Disclosures

None

Item 5. Other Information

None.

Item 6. Exhibits

The following exhibits are filed herewith as a part of this report.

Exhibit Number	Description
3.1.1	Certificate of Incorporation of LightPath Technologies, Inc., filed June 15, 1992 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.
3.1.2	Certificate of Amendment to Certificate of Incorporation of LightPath Technologies, Inc., filed October 2, 1995 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.
3.1.3	Certificate of Designations of Class A common stock and Class E-1 common stock, Class E-2 common stock, and Class E-3 common stock of LightPath Technologies, Inc., filed November 9, 1995 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.

- [3.1.4](#) Certificate of Designation of Series A Preferred Stock of LightPath Technologies, Inc., filed July 9, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.4 to our Annual Report on Form 10-KSB40 filed with the Securities and Exchange Commission on September 11, 1997, and is incorporated herein by reference thereto.
- [3.1.5](#) Certificate of Designation of Series B Stock of LightPath Technologies, Inc., filed October 2, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Quarterly Report on Form 10-QSB (File No. 000-27548) filed with the Securities and Exchange Commission on November 14, 1997, and is incorporated herein by reference thereto.
- [3.1.6](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed November 12, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Quarterly Report on Form 10-QSB (File No. 000-27548) filed with the Securities and Exchange Commission on November 14, 1997, and is incorporated herein by reference thereto.
- [3.1.7](#) Certificate of Designation of Series C Preferred Stock of LightPath Technologies, Inc., filed February 6, 1998 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Registration Statement on Form S-3 (File No. 333-47905) filed with the Securities and Exchange Commission on March 13, 1998, and is incorporated herein by reference thereto.
- [3.1.8](#) Certificate of Designation, Preferences and Rights of Series D Participating Preferred Stock of LightPath Technologies, Inc. filed April 29, 1998 with the Secretary of State of Delaware, which was filed as Exhibit 1 to our Registration Statement on Form 8-A (File No. 000-27548) filed with the Securities and Exchange Commission on April 28, 1998, and is incorporated herein by reference thereto.
- [3.1.9](#) Certificate of Designation of Series F Preferred Stock of LightPath Technologies, Inc., filed November 2, 1999 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Registration Statement on Form S-3 (File No: 333-94303) filed with the Securities and Exchange Commission on January 10, 2000, and is incorporated herein by reference thereto.
- [3.1.10](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed February 28, 2003 with the Secretary of State of Delaware, which was filed as Appendix A to our Proxy Statement (File No. 000-27548) filed with the Securities and Exchange Commission on January 24, 2003, and is incorporated herein by reference thereto.
- [3.1.11](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed March 1, 2016 with the Secretary of State of Delaware, which was filed as Exhibit 3.1.11 to our Quarterly Report on Form 10-Q (File No: 000-27548) filed with the Securities and Exchange Commission on November 14, 2016, and is incorporated herein by reference thereto.
- [3.1.12](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed October 30, 2017 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on October 31, 2017, and is incorporated herein by reference thereto.
- [3.1.13](#) Certificate of Amendment of Certificate of Designations of Class A Common Stock and Class E-1 Common Stock, Class E-2 Common Stock, and Class E-3 Common Stock of LightPath Technologies, Inc., filed October 30, 2017 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on October 31, 2017, and is incorporated herein by reference thereto.

- [3.1.14](#) Certificate of Amendment of Certificate of Designation, Preferences and Rights of Series D Participating Preferred Stock of LightPath Technologies, Inc., filed January 30, 2018 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on February 1, 2018, and is incorporated herein by references thereto.
- [3.2.1](#) Amended and Restated Bylaws of LightPath Technologies, Inc., which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on February 3, 2015, and is incorporated herein by reference thereto.
- [3.2.2](#) First Amendment to Amended and Restated Bylaws of LightPath Technologies, Inc., which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on September 21, 2017, and is incorporated herein by reference thereto.
- [10.1](#) Separation Agreement between LightPath Technologies, Inc. and Dorothy M. Cipolla, effective July 27, 2019, which was filed as Exhibit 10.1 to our Amendment No. 1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on August 26, 2019, and is incorporated herein by reference thereto.
- [31.1](#) Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*
- [31.2](#) Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*
- [32.1](#) Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 of Chapter 63 of Title 18 of the United States Code*
- [32.2](#) Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 of Chapter 63 of Title 18 of the United States Code*
- 101.INS XBRL Instance Document*
- 101.SCH XBRL Taxonomy Extension Schema Document*
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document*
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document*
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document*
- 101.PRE XBRL Taxonomy Presentation Linkbase Document*

*filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

LIGHTPATH TECHNOLOGIES, INC.

Date: November 7, 2019

By: /s/ J. James Gaynor
J. James Gaynor
President and Chief Executive Officer

Company Name

Date: November 7, 2019

By: /s/ Donald O. Retreage, Jr.
Donald O. Retreage, Jr.
Chief Financial Officer

Certification of Chief Executive Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934

I, J. James Gaynor, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of LightPath Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2019

/s/ J. James Gaynor
J. James Gaynor
President and Chief Executive Officer

Certification of Chief Financial Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934

I, Donald O. Retreage, Jr., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of LightPath Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2019

/s/ Donald O. Retreage, Jr.
Donald O. Retreage, Jr.
Chief Financial Officer

**Certification of Chief Executive Officer
Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code**

Pursuant to U.S.C. Section 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned Chief Executive Officer of LightPath Technologies, Inc. (the "Company") does hereby certify, to the best of such officer's knowledge, that:

1. The Quarterly Report on Form 10-Q of the Company for the quarterly period ended September 30, 2019 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 7, 2019

/s/ J. James Gaynor

J. James Gaynor,
President and Chief Executive Officer

The certifications set forth above are being furnished as an exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to LightPath Technologies, Inc. and will be retained by LightPath Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

**Certification of Chief Financial Officer
Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code**

Pursuant to U.S.C. Section 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned Chief Financial Officer of LightPath Technologies, Inc. (the "Company") does hereby certify, to the best of such officer's knowledge, that:

1. The Quarterly Report on Form 10-Q of the Company for the quarterly period ended September 30, 2019 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 7, 2019

/s/ Donald O. Retreage, Jr.
Donald O. Retreage, Jr.,
Chief Financial Officer

The certifications set forth above are being furnished as an exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to LightPath Technologies, Inc. and will be retained by LightPath Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.
