

Lightwave Logic, Inc.  
Form 10-Q  
August 15, 2016

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

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**FORM 10-Q**

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**(Mark One)**

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

For the quarterly period ended June 30, 2016

**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 0-52567

**Lightwave Logic, Inc.**

(Exact name of registrant as specified in its charter)

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**Nevada**

**82-049-7368**

(State or other jurisdiction of  
Incorporation or Organization)

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

**1831 Lefthand Circle, Suite C**

**Longmont, CO**

**80501**

(Address of principal executive offices)

(Zip Code)

**(720) 340-4949**

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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

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

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

The number of shares of the registrant's Common Stock outstanding as of August 12, 2016 was 66,122,783.



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### Forward-Looking Statements

This report on Form 10-Q contains, and our officers and representatives may from time to time make, "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," continuing, ongoing, "strategy," "future," "likely," "may," "should," could, "will" and similar references to future periods. Examples of forward-looking statements include, among others, statements we make regarding expected operating results, such as anticipated revenue; anticipated levels of capital expenditures for our current fiscal year; our belief that we have sufficient liquidity to fund our business operations during the next 12 months; strategy for gaining customers, growth, product development, market position, financial results and reserves.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following: lack of available funding; general economic and business conditions; competition from third parties; intellectual property rights of third parties; regulatory constraints; changes in technology and methods of marketing; delays in completing various engineering and manufacturing programs; changes in customer order patterns; changes in product mix; success in technological advances and delivering technological innovations; shortages in components; production delays due to performance quality issues with outsourced components; those events and factors described by us in Item 1.A Risk Factors in our most recent Annual Report on Form 10-K; other risks to which our Company is subject; other factors beyond the Company's control.

Any forward-looking statement made by us in this report on Form 10-Q is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.



**PART I FINANCIAL INFORMATION**

**Item 1**

**Financial Statements**

**LIGHTWAVE LOGIC, INC.**

**FINANCIAL STATEMENTS**

**JUNE 30, 2016**

**(UNAUDITED)**

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**LIGHTWAVE LOGIC, INC.****BALANCE SHEETS**

	<b>June 30,</b>	<b>December 31,</b>
	<b>2016</b>	<b>2015</b>
	<b>(Unaudited)</b>	<b>(Audited)</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 2,103,903	\$ 3,730,705
Prepaid expenses and other current assets	204,995	264,491
	2,308,898	3,995,196
<b>PROPERTY AND EQUIPMENT - NET</b>	<b>410,484</b>	<b>495,062</b>
<b>OTHER ASSETS</b>		
Intangible assets - net	627,386	619,767
<b>TOTAL ASSETS</b>	<b>\$ 3,346,768</b>	<b>\$ 5,110,025</b>
 <b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 34,731	\$ 32,852
Accounts payable and accrued expenses- related parties	23,344	5,069
Accrued expenses	56,824	65,036
<b>TOTAL LIABILITIES</b>	<b>114,899</b>	<b>102,957</b>
 <b>STOCKHOLDERS' EQUITY</b>		
Preferred stock, \$0.001 par value, 1,000,000 authorized No shares issued or outstanding		
Common stock \$0.001 par value, 250,000,000 authorized 65,608,306 and 65,237,879 issued and outstanding at June 30, 2016 and December 31, 2015	65,608	65,238
Additional paid-in-capital	47,102,159	46,541,251
Accumulated deficit	(43,935,898)	(41,599,421)
<b>TOTAL STOCKHOLDERS' EQUITY</b>	<b>3,231,869</b>	<b>5,007,068</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>	<b>\$ 3,346,768</b>	<b>\$ 5,110,025</b>

See accompanying notes to these financial statements.



**LIGHTWAVE LOGIC, INC.****STATEMENTS OF OPERATIONS****FOR THE THREE MONTHS AND SIX MONTHS ENDING JUNE 30, 2016 AND 2015****(UNAUDITED)**

	<b>For the Three Months Ending June 30,</b>		<b>For the Six Months Ending June 30,</b>	
	<b>2016</b>	<b>2015</b>	<b>2016</b>	<b>2015</b>
NET SALES	\$	\$	\$	\$
COST AND EXPENSE				
Research and development	592,570	619,492	1,195,833	1,264,698
General and administrative	446,760	432,846	902,808	853,092
	1,039,330	1,052,338	2,098,641	2,117,790
LOSS FROM OPERATIONS	(1,039,330)	(1,052,338)	(2,098,641)	(2,117,790)
OTHER INCOME (EXPENSE)				
Interest income	62	62	129	123
Commitment fee			(237,965)	
NET LOSS	\$ (1,039,268)	\$ (1,052,276)	\$ (2,336,477)	\$ (2,117,667)
Basic and Diluted Loss per Share	\$ (0.02)	\$ (0.02)	\$ (0.04)	\$ (0.04)
Basic and Diluted Weighted Average Number of Shares	65,601,676	58,949,676	65,542,773	58,968,556

See accompanying notes to these financial statements.



**LIGHTWAVE LOGIC, INC.****STATEMENT OF STOCKHOLDERS EQUITY****JUNE 30, 2016****(UNAUDITED)**

	<b>Number of Shares</b>	<b>Common Stock</b>	<b>Paid-in Capital</b>	<b>Accumulated Deficit</b>	<b>Total</b>
BALANCE AT DECEMBER 31, 2015 (AUDITED)	65,237,879	\$ 65,238	\$ 46,541,251	\$ (41,599,421)	\$ 5,007,068
Common stock issued for services	370,427	370	249,595		249,965
Options issued for services			264,575		264,575
Warrants issued for services			46,738		46,738
Net loss for the six months ending June 30, 2016				(2,336,477)	(2,336,477)
BALANCE AT JUNE 30, 2016 (UNAUDITED)	65,608,306	\$ 65,608	\$ 47,102,159	\$ (43,935,898)	\$ 3,231,869

See accompanying notes to these financial statements.

**LIGHTWAVE LOGIC, INC.****STATEMENTS OF CASH FLOW****(UNAUDITED)**

	<b>For the Six Months Ending June 30,</b>	
	<b>2016</b>	<b>2015</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (2,336,477)	\$ (2,117,667)
Adjustment to reconcile net loss to net cash used in operating activities		
Warrants issued for services	46,738	55,654
Stock options issued for services	264,575	221,511
Common stock issued for services and fees	249,965	40,576
Depreciation and amortization	97,573	81,584
Gain on disposal of property and equipment	(644)	
(Increase) decrease in assets		
Prepaid expenses and other current assets	59,496	(138,827)
Increase (decrease) in liabilities		
Accounts payable	1,879	(99,978)
Accounts payable and accrued expenses- related parties	18,275	5,349
Accrued expenses	(8,212)	22,557
Net cash used in operating activities	(1,606,832)	(1,929,241)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Cost of intangibles	(15,565)	(10,250)
Purchase of property and equipment	(23,905)	(221,097)
Sale of property and equipment	19,500	
Net cash used in investing activities	(19,970)	(231,347)
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Issuance of common stock, private placement		1,915,000
Net cash provided by financing activities		1,915,000
<b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(1,626,802)</b>	<b>(245,588)</b>
<b>CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD</b>	<b>3,730,705</b>	<b>3,165,940</b>
<b>CASH AND CASH EQUIVALENTS - END OF PERIOD</b>	<b>\$ 2,103,903</b>	<b>\$ 2,920,352</b>

See accompanying notes to these financial statements.



**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 1- NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Financial Statements**

The accompanying unaudited financial statements have been prepared by Lightwave Logic, Inc. (the Company). These statements include all adjustments (consisting only of its normal recurring adjustments) which management believes necessary for a fair presentation of the statements and have been prepared on a consistent basis using the accounting policies described in the Summary of Accounting Policies included in the 2015 Annual Report. Certain financial information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States have been condensed or omitted pursuant to the rules and regulations of the Securities and Exchange Commission, although the Company firmly believes that the accompanying disclosures are adequate to make the information presented not misleading. The financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the Securities and Exchange Commission. The interim operating results for the three and six months ending June 30, 2016 may not be indicative of operating results expected for the full year.

**Nature of Business**

Lightwave Logic, Inc. is a technology Company focused on the development of next generation photonic devices and non-linear optical polymer materials systems for applications in high speed fiber-optic data communications and optical computing markets. Currently the Company is in various stages of photonic device and materials development and evaluation with potential customers and strategic partners. The Company expects the next revenue stream to be in sales of non-linear optical polymers, prototype devices and product development agreements prior to moving into production.

The Company's current development activities are subject to significant risks and uncertainties, including failing to secure additional funding to operationalize the Company's technology now under development.



## Stock-based Payments

The Company accounts for stock-based compensation under the provisions of FASB ASC 718, "Compensation - Stock Compensation" which requires the measurement and recognition of compensation expense for all stock-based awards made to employees and directors based on estimated fair values on the grant date. The Company estimates the fair value of stock-based awards on the date of grant using the Black-Scholes model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods using the straightline method. The Company accounts for stock-based compensation awards to nonemployees in accordance with FASB ASC 505-50, "Equity-Based Payments to Non-Employees ( ASC 505-50 ). Under ASC 505-50, the Company determines the fair value of the warrants or stock-based compensation awards granted as either the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable. All issuances of stock options or other equity instruments to non-employees as consideration for goods or services received by the Company are accounted for based on the fair value of the equity instruments issued. Any stock options issued to non-employees are recorded as an expense and additional paid in capital in stockholders' equity over the applicable service periods. Non-employee equity based payments are recorded as an expense over the service period, as if the Company had paid cash for the services. At the end of each financial reporting period, prior to vesting or prior to the completion of the services, the fair value of the equity based payments will be re-measured and the non-cash expense recognized during the period will be adjusted accordingly. Since the fair value of equity based payments granted to non-employees is subject to change in the future, the amount of the future expense will include fair value re-measurements until the equity based payments are fully vested or the service completed.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 1- NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES  
(CONTINUED)**

**Loss per Share**

The Company follows Financial Accounting Standards Board Accounting Standards Codification ( FASB ASC ) 260, Earnings per Share , resulting in the presentation of basic and diluted earnings per share. Because the Company reported a net loss in 2016 and 2015, common stock equivalents, including stock options and warrants were anti-dilutive; therefore, the amounts reported for basic and dilutive loss per share were the same.

**Comprehensive Income**

The Company follows FASB ASC 220.10, Reporting Comprehensive Income. Comprehensive income is a more inclusive financial reporting methodology that includes disclosure of certain financial information that historically has not been recognized in the calculation of net income. Since the Company has no items of other comprehensive income, comprehensive income (loss) is equal to net income (loss).

**Recently Adopted Accounting Pronouncements**

As of June 30, 2016 and for the period then ended, there were no recently adopted accounting pronouncements that had a material effect on the Company's financial statements.

**Recently Issued Accounting Pronouncements Not Yet Adopted**

As of June 30, 2016, there are no recently issued accounting standards not yet adopted which would have a material effect on the Company's financial statements through 2017.

**NOTE 2 MANAGEMENT'S PLANS**

As a technology company focusing on the development of the next generation photonic devices and non-linear optical polymer materials systems, substantial net losses have been incurred since inception. The Company has satisfied capital requirements since inception primarily through the issuance and sale of its common stock. The Company currently has a cash position of approximately \$2,150,000. Based upon the current cash position and expenditures of approximately \$300,000 per month and no debt service, management believes the Company has sufficient funds currently to finance its operations through February 2017. In January 2016, the Company signed a Purchase Agreement with an institutional investor to sell up to \$20,000,000 of common stock. A Registration Statement related to the transaction with the U.S. Securities and Exchange Commission registering 5,000,000 shares of the Company's common stock went effective on April 7, 2016. Under the Purchase Agreement and at Company's sole discretion, the institutional investor has committed to invest up to \$20,000,000 in common stock over a 36-month period.

**LIGHTWAVE LOGIC, INC.****NOTES TO FINANCIAL STATEMENTS****JUNE 30, 2016 AND 2015****NOTE 3 PROPERTY AND EQUIPMENT**

Property and equipment consists of the following:

	<b>June 30,</b>		<b>December 31</b>
	<b>2016</b>		<b>2015</b>
Office equipment	\$ 52,488	\$	51,323
Lab equipment	693,869		722,555
Furniture	26,028		26,028
Leasehold Improvements	231,859		231,859
	1,004,244		1,031,765
Less: Accumulated depreciation	593,760		536,703
	\$ 410,484	\$	495,062

Depreciation expense for the six months ending June 30, 2016 and 2015 was \$89,627 and \$74,153. Depreciation expense for the three months ending June 30, 2016 and 2015 was \$44,169 and \$37,407. During the second quarter of 2016, the company sold equipment for proceeds of \$19,500 and a gain of \$644.

**NOTE 4 INTANGIBLE ASSETS**

This represents legal fees and patent fees associated with the prosecution of patent applications. The Company has recorded amortization expenses on the Spacer and Chromophore patents granted by the United States Patent and Trademark Office in February 2011, April 2011 and September 2012, which are amortized over the remaining legal life and Chromophore patent granted by the Australian Patent Office in November 2012 which is amortized over the remaining legal life. Certain patent applications are abandoned by the Company when the claims are covered by patents already granted to the Company. Patent applications abandoned have been written off at full capitalized cost. No amortization expense has been recorded on the remaining patent applications since patents have yet to be granted.

Patents consists of the following:

	<b>June 30,</b>	<b>December 31,</b>
	<b>2016</b>	<b>2015</b>
Patents	\$ 705,727	\$ 690,162
Less: Accumulated amortization	78,341	70,395
	\$ 627,386	\$ 619,767

Amortization expense for the six months ending June 30, 2016 and 2015 was \$7,946 and \$7,431. Amortization expense for the three months ending June 30, 2016 and 2015 was \$3,973 and \$3,716. Expense for abandoned patents for claims covered by patents already granted to the Company are recorded in research and development expenses and for the three months and six months ending June 30, 2016 and 2015 were \$0 and \$0.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 5 INCOME TAXES**

There is no income tax benefit for the losses for the three and six months ended June 30, 2016 and 2015 since management has determined that the realization of the net deferred tax asset is not assured and has created a valuation allowance for the entire amount of such benefits.

The Company's policy is to record interest and penalties associated with unrecognized tax benefits as additional income taxes in the statement of operations. As of January 1, 2016, the Company had no unrecognized tax benefits, or any tax related interest or penalties. There were no changes in the Company's unrecognized tax benefits during the period ended June 30, 2016. The Company did not recognize any interest or penalties during 2016 related to unrecognized tax benefits. With few exceptions, the U.S. and state income tax returns filed for the tax years ending on December 31, 2012 and thereafter are subject to examination by the relevant taxing authorities.

**NOTE 6 STOCKHOLDERS EQUITY**

**Preferred Stock**

Pursuant to the Company's Articles of Incorporation, the Company's board of directors is empowered, without stockholder approval, to issue series of preferred stock with any designations, rights and preferences as they may from time to time determine. The rights and preferences of this preferred stock may be superior to the rights and preferences of the Company's common stock; consequently, preferred stock, if issued could have dividend, liquidation, conversion, voting or other rights that could adversely affect the voting power or other rights of the common stock. Additionally, preferred stock, if issued, could be utilized, under special circumstances, as a method of discouraging, delaying or preventing a change in control of the Company's business or a takeover from a third party.

**Common Stock Options and Warrants**

In October 2013, the Company issued an option to a new director to purchase 200,000 shares of common stock at a purchase price of \$0.93 per share for a directorship commencing November 1, 2013. The option was valued at \$174,106 using the Black-Scholes option pricing model. The option expires in 10 years with 50,000 vesting in annual installments commencing November 1, 2013. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$21,704 of expense. For the three months ending June 30, 2016, the Company recognized \$10,852 of expense. As of June 30, 2016, the option to purchase 200,000 shares of common stock is still outstanding.

In March 2014, the Company issued options to a new employee to purchase 30,000 shares of common stock at a purchase price of \$0.92 per share. The options were valued at \$23,304, fair value, using the Black-Scholes Option Pricing Formula. The options expire in 10 years vesting in quarterly equal installments of 3,750 from date of employment. The options are expensed over the vesting terms. For the three and six months ending June 30, 2016, the Company recognized \$0 and \$1,552 of expense. As of June 30, 2016, the options to purchase 30,000 shares of common stock are still outstanding.

In March 2014, the Company issued options to a new employee to purchase 75,000 shares of common stock at a purchase price of \$0.92 per share. The options were valued at \$58,384, fair value, using the Black-Scholes Option Pricing Formula. The options expire in 10 years vesting in quarterly equal installments of 9,375 from date of employment. The options are expensed over the vesting terms. For the three and six months ending June 30, 2016, the Company recognized \$0 and \$4,363 of expense. As of June 30, 2016, the options to purchase 75,000 shares of common stock are still outstanding.

In March 2014, the Company issued options to a new employee to purchase 50,000 shares of common stock at a purchase price of \$0.92 per share. The options were valued at \$38,922, fair value, using the Black-Scholes Option Pricing Formula. The options expire in 10 years vesting in quarterly equal installments of 6,250 from date of employment. The options are expensed over the vesting terms. For the three and six month ending June 30, 2016, the Company recognized \$0 and \$3,331 of expense. As of June 30, 2016, the options to purchase 50,000 shares of common stock are still outstanding.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)**

**Common Stock Options and Warrants (Continued)**

In May 2014, the Company issued options to a new director to purchase 200,000 shares of common stock at a purchase price of \$0.763 per share. The options were valued at \$122,515 using the Black-Scholes Option Pricing Formula. The options expire in 10 years with 50,000 vesting immediately and the remainder vesting in annual equal installments of 50,000 commencing on the one year anniversary of the date of grant. The options are expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$15,272 of expense. For the three months ending June 30, 2016, the Company recognized \$7,636 of expense. As of June 30, 2016, the options to purchase 200,000 shares of common stock are still outstanding.

During July 2015, the Company issued a warrant to purchase 125,000 shares of common stock at a purchase price of \$0.70 per share for accounting services to be rendered over a twelve month period commencing July 1, 2015. The warrant was valued at \$46,897, fair value at December 31, 2015, using the Black-Scholes Option Pricing Formula, vesting over the next twelve months with 10,416 vesting immediately, 10,416 vesting per month on the first day of the next ten months and 10,424 vesting on the first day of the twelfth month of the corresponding service agreement. The warrant expires in five years. The expense is being recognized based on service terms of the agreement over a twelve month period. For the six months ending June 30, 2016, the Company recognized \$23,452 of expense. For the three months ending June 30, 2016, the Company recognized \$11,336 of expense. As of June 30, 2016, the warrants to purchase 125,000 shares of common stock are still outstanding.

During August 2015, under the 2007 Employee Stock Option Plan, the Company issued an option to an employee to purchase 50,000 shares of common stock at a purchase price of \$0.67 per share. The option was valued at \$19,930, fair value, using the Black-Scholes Option Pricing Formula. The option expires in 10 years and vests 12,500 immediately and the remaining in equal quarterly installments of 12,500 over the next three quarters. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$7,203 of expense. For the three months ending June 30, 2016, the Company recognized \$2,213 of expense. As of June 30, 2016, the options to purchase 50,000 shares of common stock are still outstanding.



During August 2015, under the 2007 Employee Stock Option Plan, the Company issued an option to three employees to purchase 75,000 shares of common stock at a purchase price of \$0.69 per share. The option was valued at \$32,734, fair value, using the Black-Scholes Option Pricing Formula. The option expires in 10 years and vests 15,000 immediately and the remaining in equal quarterly installments of 15,000 over the next four quarters. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$13,089 of expense. For the three months ending June 30, 2016, the Company recognized \$6,561 of expense. As of June 30, 2016, the options to purchase 75,000 shares of common stock are still outstanding.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)**

**Common Stock Options and Warrants (Continued)**

During August 2015, under the 2007 Employee Stock Option Plan, the Company issued an option to a new director to purchase 200,000 shares of common stock at a purchase price of \$0.69 per share. The option was valued at \$90,615, fair value, using the Black-Scholes Option Pricing Formula. The option expires in 10 years and vests 50,000 immediately and the remaining in equal annual installments of 50,000 over the next three years. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$11,296 of expense. For the three months ending June 30, 2016, the Company recognized \$5,648 of expense. As of June 30, 2016, the options to purchase 200,000 shares of common stock are still outstanding.

During October 2015, under the 2007 Employee Stock Option Plan, the Company issued options to a new employee to purchase 35,000 shares of common stock at a purchase price of \$0.74 per share. The option was valued at \$16,393, fair value, using the Black-Scholes Option Pricing Formula. The options expire October 12, 2025 with 4,375 shares vesting on the anniversary date of the third month of employment and the remaining vesting in seven equal installments of 4,375 at the end of every three month period thereafter. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$4,095 of expense. For the three month ending June 30, 2016, the Company recognized \$2,049 of expense. As of June 30, 2016, the options to purchase 35,000 shares of common stock are still outstanding.

During November 2015, under the 2007 Employee Stock Option Plan, the Company granted options effective January 1, 2016 to the Chief Executive Officer to purchase 100,000 shares of common stock at a purchase price of \$0.86 per share. The options expire November 9, 2025 with 12,500 shares vesting on January 1, 2016 and the remaining vesting quarterly in equal installments of 12,500 options commencing April 1, 2016. The options were valued at \$33,108, fair value, using the Black-Scholes Option Pricing Formula. The option is expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$12,371 of expense. For the three month ending June 30, 2016, the Company recognized \$4,139 of expense. As of June 30, 2016, the options to purchase 100,000 shares of common stock are still outstanding.

In December 2015, the board of directors approved a grant to a senior advisor effective January 1, 2016 of a warrant to purchase up to 125,000 shares of common stock at a purchase price of \$0.60 per share. Using the Black-Scholes Option Pricing Formula, the warrant was valued at \$44,868, fair value. The warrant expires in 5 years and vests 31,250 immediately and the remaining in equal monthly installments of 9,375 over the next 10 months. The warrant is expensed over the vesting terms. For the six months ending June 30, 2016, the Company recognized \$23,286 of expense. For the three months ending June 30, 2016, the Company recognized \$11,687 of expense. As of June 30, 2016, the warrant to purchase 125,000 shares of common stock is still outstanding.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)**

**Common Stock Options and Warrants (Continued)**

In January 2016, the Company signed a Purchase Agreement with an institutional investor to sell up to \$20,000,000 of common stock. The Company also entered into a Registration Rights Agreement with the institutional investor whereby the Company agreed to file a registration statement related to the transaction with the U.S. Securities and Exchange Commission registering 5,000,000 shares of the Company's common stock. The registration statement was filed on March 25, 2016. The registration became effective April 7, 2016. Under the Purchase Agreement and at Company's sole discretion, the institutional investor has committed to invest up to \$20,000,000 in common stock over a 36-month period. The Company issued 350,000 shares of restricted common stock to the institutional investor as an initial commitment fee valued at \$237,965, fair value and 650,000 shares of common stock are reserved for additional commitment fees to the institutional investor in accordance with the terms of the agreement. During August 2016, the institutional investor purchased 500,000 shares of common stock for proceeds of \$361,960 and the Company issued 11,763 shares of common stock as additional commitment fee, valued at \$8,699, fair value.

In February 2016, the Company issued options to the Company's six independent directors to each purchase 50,000 shares of common stock at a purchase price of \$0.68 per share. The options were each valued at \$21,475, fair value, using the Black-Scholes Option Pricing Formula. The options expire in 10 years with 20,000 vesting immediately and the remainder vesting in quarterly equal installments of 10,000 commencing April 1, 2016. The options are expensed over the vesting terms. For the six month ending June 30, 2016, the Company recognized \$102,792 of expense. For the three months ending June 30, 2016, the Company recognized \$25,914 of expense. As of June 30, 2016, the options to purchase 300,000 shares of common stock are still outstanding.

For the three months ending June 30, 2016 the Company issued 10,145 shares, with a fair value of \$6,000, to a director serving as a member of the Company's Operations Committee commencing August 2015. For the three months ending June 30, 2016, the Company recognized \$6,000 of expense. For the six months ending June 30, 2016 the Company issued 20,427 shares, with a fair value of \$12,000. For the six months ending June 30, 2016, the Company recognized \$12,000 of expense. During July 2016, the Company issued 3,273 additional shares of common stock valued at \$2,000.

In May 2016, the Company issued an option to a director to purchase 200,000 shares of common stock at a purchase price of \$0.60 per share. The option was valued at \$67,376, fair value, using the Black-Scholes Option Pricing Formula. The option expires in 10 years and vests immediately. The option is expensed over the vesting terms. For the three and six month ending June 30, 2016, the Company recognized \$67,376 of expense. As of June 30, 2016, the option to purchase 200,000 shares of common stock is still outstanding.

In May 2016, the Company issued an option to an employee to purchase 5,000 shares of common stock at a purchase price of \$0.60 per share. The option was valued at \$1,738, fair value, using the Black-Scholes Option Pricing Formula. The option expires in 10 years and vesting in quarterly equal installments of 625 commencing August 4, 2016. The option is expensed over the vesting terms. For the three and six month ending June 30, 2016, the Company recognized \$131 of expense. As of June 30, 2016, the option to purchase 5,000 shares of common stock is still outstanding.

**LIGHTWAVE LOGIC, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2016 AND 2015**

**NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)**

**Common Stock Options and Warrants (Continued)**

During the three month period ending June 30, 2016, an option issued in May 2011 to purchase 200,000 shares of common stock at an exercise price of \$1.12 expired and warrants issued in April 2011 to purchase 150,000 shares of common stock at an exercise price of \$1.18 expired.

**NOTE 7 STOCK BASED COMPENSATION**

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award, with the following assumptions for 2016: no dividend yield, expected volatility, based on the Company's historical volatility, 66% to 78%, risk-free interest rate 1.20 to 1.80% and expected option life of 5 to 5.6 years.

As of June 30, 2016, there was \$175,952 of unrecognized compensation expense related to non-vested market-based share awards that is expected to be recognized through August 2018.

The following tables summarize all stock option and warrant activity of the Company during the six months ended June 30, 2016:

	<b>Non-Qualified Stock Options and Warrants Outstanding and Exercisable</b>		
	<b>Number of Shares</b>	<b>Exercise Price</b>	<b>Weighted Average Exercise Price</b>
Outstanding, December 31, 2015	18,528,367	\$	\$ 0.92

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			0.63 - \$1.69		
Granted	730,000	\$	0.60 - \$0.86	\$	0.67
Expired	(385,000)	\$	1.00 - \$1.18	\$	1.13
Forfeited Exercised					
Outstanding, June 30, 2016	18,873,367	\$	0.60 - \$1.69	\$	0.91
Exercisable, June 30, 2016	18,335,242	\$	0.60 - \$1.69	\$	0.91

**LIGHTWAVE LOGIC, INC.****NOTES TO FINANCIAL STATEMENTS****JUNE 30, 2016 AND 2015****NOTE 7 STOCK BASED COMPENSATION (Continued)**

The aggregate intrinsic value of options and warrants outstanding and exercisable as of June 30, 2016 was \$8,344. The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and warrants and the closing stock price of \$.63 for the Company's common stock on June 30, 2016. No options or warrants were exercised during the three and six month periods ending June 30, 2016.

Range of Exercise Prices	Non-Qualified Stock Options and Warrants Outstanding		Weighted Average Exercise Price of Options and Warrants Currently Exercisable
	Number Outstanding Currently Exercisable at June 30, 2016	Weighted Average Remaining Contractual Life	
\$0.60 - \$1.69	18,335,242	4.62 Years	\$0.91

**NOTE 8 RELATED PARTY**

At June 30, 2016 the Company had a legal accrual to related party of \$23,344. At December 31, 2015 the Company had a legal accrual to related party of \$1,420 and travel and office expense accruals of officers in the amount of \$3,649.

**NOTE 9 RETIREMENT PLAN**

The Company established a 401(k) retirement plan covering all eligible employees beginning November 15, 2013. A contribution of \$10,000 was charged to expense and accrued for the six months ending June 30, 2016 to all eligible non-executive participants. A contribution of \$5,000 was charged to expense and accrued for the three months ending June 30, 2016 to all eligible non-executive participants. There were no contributions charged to expense in 2015.



**NOTE 10 SUBSEQUENT EVENTS**

In July 2016, the board of directors approved a grant to a new employee of an option to purchase up to 15,000 shares of common stock at a purchase price of \$0.63 per share. Using the Black-Scholes Option Pricing Formula, the option was valued at \$6,216, fair value. The option expires in 10 years and vests 1,875 on September 27, 2016 and the remaining in equal quarterly installments of 1,875 over the next 21 months. The option is expensed over the vesting terms.

During July 2016, the Company issued a warrant to purchase 150,000 shares of common stock at a purchase price of \$0.63 per share for accounting services to be rendered over a twelve month period commencing July 1, 2016. The warrant was valued at \$60,272, fair value, using the Black-Scholes Option Pricing Formula, vesting over the next twelve months with 12,500 vesting immediately, 12,500 vesting per month on the first day of the next ten months and 12,500 vesting on the first day of the twelfth month of the corresponding service agreement. The warrant expires in five years. The expense is being recognized based on service terms of the agreement over a twelve month period.



## Item 2

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

#### Overview

Lightwave Logic, Inc. (the **Company**) is a development stage, electro-optical device and organic nonlinear materials company. Our primary area of expertise is the chemical synthesis of chromophore dyes used in the development of organic Application Specific Electro-Optic Polymers (ASEOP) and organic Non-Linear All-Optical Polymers (NLAOP) that have high electro-optic and optical activity. Our family of materials are thermally and photo-chemically stable, which we believe could have utility across a broad range of applications in devices that address markets such as telecommunication, data communications, high-speed computing and photovoltaic cells. Secondly, our Company is developing proprietary electro-optical and all-optical devices utilizing the advanced capabilities of our materials for applications in the fields mentioned above.

Electro-optic devices convert data from electric signals into optical signals for use in communications systems and in optical interconnects for high-speed data transfer. We expect our patented and patent-pending optical materials (chromophores), when combined with selected polymers to make ASEOP and NLAOP material systems and when completed and tested, to be the core of the future generations of optical devices, modules, sub-systems and systems that we will develop or be licensed by electro-optic device manufacturers, such as telecommunications component and systems manufacturers, networking and switching suppliers, semiconductor companies, aerospace companies and government agencies.

Our ASEOP material systems are property-engineered at the molecular level (nanotechnology level) to meet the exacting thermal, environmental and performance specifications demanded by electro-optic devices. We believe that our patented and patent pending technologies will enable us to design polymer based material systems that are free from the numerous diverse and inherent flaws that plague competitive polymer technologies employed by other companies and research groups. We engineer our polymer based material systems with the intent to have temporal, thermal, chemical and photochemical stability within our patented and patent pending molecular chromophore architectures.

Our non-linear all optical NLAOP material systems have demonstrated resonantly enhanced third-order properties approximately 2,630 times larger than fused silica, which means that they are highly photo-optically active in the absence of an RF circuit. In this way they differ from other polymer technologies and are considered more advanced next-generation materials.

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Our revenue model relies substantially on the assumption that we will be able to successfully develop our polymer based material systems and photonic device products, which will use our polymer based material systems, for applications within the industries named below. When appropriate, we intend to create specific materials for each of these applications and use our proprietary knowledge base to continue to enhance its discoveries.

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cloud computing and data centers

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telecommunications/data communications

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backplane optical interconnects

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photovoltaic cells

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medical applications

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satellite reconnaissance

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navigation systems

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radar applications

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optical filters

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spatial light modulators

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all-optical switches

To be successful, we must, among other things:

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Develop and maintain collaborative relationships with strategic partners;

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Continue to expand our research and development efforts for our products;

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Develop and continue to improve on our manufacturing processes and maintain stringent quality controls;

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Produce commercial quantities of our products at commercially acceptable prices;

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Rapidly respond to technological advancements;

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Attract, retain and motivate qualified personnel; and

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Obtain and retain effective intellectual property protection for our products and technology.

We believe that Moore's Law (a principle which states the number of transistors on a silicon chip doubles approximately every eighteen months) will create markets for our high-performance electro-optic materials and photonic device products.

### **Plan of Operation**

Since inception, we have been engaged primarily in the research and development of our polymer based material systems and photonic device products. We are devoting significant resources to engineer next-generation polymer based material systems for future applications to be utilized by electro-optic device manufacturers, such as telecommunications component and systems manufacturers, networking and switching suppliers, semiconductor companies, aerospace companies, government agencies and internal device development. We expect to continue to develop products that we intend to introduce to these rapidly changing markets and to seek to identify new markets. We expect to continue to make significant operating and capital expenditures for research and development activities.

As we move from a development stage company to a product supplier, we expect that our financial condition and results of operations will undergo substantial change. In particular, we expect to record both revenue and expense from product sales, to incur increased costs for sales and marketing and to increase general and administrative expense. Accordingly, the financial condition and results of operations reflected in our historical financial statements are not expected to be indicative of our future financial condition and results of operations.

Some of our more significant milestones that we achieved during 2014-2016 include:

In January 2014 we created a new methodology to combine multiple chromophores into a single polymer host that significantly improves their ability to generate more powerful organic, nonlinear electro-optical polymer systems. The new synthetic chemistry process can enable multiple chromophores (dyes) to work in concert with each other within a single polymer host. This proprietary process has created two new material systems, which have demonstrated outstanding electro-optic values. In addition, we now have a significant amount of data on the thermal aging of our materials. We have demonstrated that our materials can withstand more than 2,000 hours at 110 degrees C with little to no change in electro-optic activity in our materials, which is a significant milestone. To our knowledge, this is something that has not been achieved before in any polymer. We are also concurrently coating prototype waveguides with our proprietary material system.

In February 2014 we received our first purchase order for our advanced organic nonlinear electro-optic polymer from Boulder Nonlinear Systems (BNS) of Boulder, Colorado in connection with the development of a next generation LADAR system. A LADAR system is a radar system that utilizes a pulse laser to calculate the distance to a target, but

is also capable of rendering a 3-D image. In the event BNS continues to move forward with the development of this LADAR system, we expect to receive additional purchase orders from BNS.

In March 2014 we began the process of manufacturing an advanced design Silicon Organic Hybrid Transceiver prototype and we released the completed chip design to the OpSIS Center at the University of Delaware who contracted with a third party to produce the initial silicon chips, which were delivered to us in December 2014 and January 2015. We will qualify and test these chips for utilization in our Silicon Organic Transceiver as our device development program continues. The initial application will target inter-data center interconnections of more than 10 kilometers. Our next design will utilize a different frequency and address the current bottleneck in the rack-to-server layer at distances greater than 500 meters.

In April 2014 we entered into a sole worldwide license agreement with Corning Incorporated enabling us to integrate Corning's organic electro-optical chromophores into our portfolio of electro-optic polymer materials. The agreement allows us to use the licensed patents within a defined license field that includes communications, computing, power, and power storage applications utilizing the nonlinear optical properties of their materials.

In August 2014 the University of Colorado successfully fabricated and tested a bleached electro-optic waveguide modulator designed and fabricated through a sponsored collaborative research agreement. The results of this initial bleached waveguide modulator correlated well with previous electro-optic thin film properties. These initial results of our first in-house device were significant to our entire device program and were an important starting point for our current modulators being developed for target markets.

In October 2014 we submitted an order with Reynard Corporation to produce gold-layered fused silica substrates for our bleached waveguide modulators to be coated with several of our organic electro-optical polymers, which we received in early November 2014 and performance tested throughout December 2014. In May, 2015, we subsequently decided to eliminate this product from our commercial development plans due to its limited commercial value, low speed characteristics, difficulty to mass-produce and limited ability to integrate with existing architectures. In lieu of this development program, a commercially viable prototype ridge waveguide modulator program was started to replace the bleached waveguide development. We believe that the ridge waveguide modulator represents a viable telecom device opportunity for the Company that does not have the inherent limitations seen in bleached waveguide structures.

In May 2015 we achieved operating capability of our in-house Class 100 Clean Room where we do thin film processing and expect to complete the development of prototype photonic devices enabled by our advanced organic electro-optic polymer material systems in a timelier manner. Additionally, the Joint Institute for Laboratory Astrophysics (JILA) certified three of our employees, which allows us access to JILA's world-class semiconductor facility located at the University of Colorado, Boulder. Access to this facility provides us with better control over the quality of our development work and the speed at which it progresses.

In August 2015 we completed 2,000+ hours of thermal aging tests on several blends of materials created by our multi-chromophore process, which included lengthy exposure to high temperatures (85°C and 110°C). The data collected indicated minimal loss of electro-optical activity ( $R_{33}$ ) of our materials, which means that our organic polymers are expected to provide decades of operational performance. These results exceed previously published efforts for other organic polymers and are an important part of our commercialization effort as we begin to implement these material systems into advanced photonic devices for the telecom and datacom markets.

Additionally, in August 2015, we completed 500+ hours of photochemical stability testing of our material candidates by exposing them to the visible light spectrum. The data collected indicated no discernible change in the chemical structures in an oxygen free environment. An accepted industry standard is 2,000 hours. This stability testing was begun to help us understand more clearly the processing and manufacturing requirements of our future commercial products, and provide initial assurances to expect the same results as we move these materials into actual photonic device structures.

In October 2015, we successfully surpassed 2,000 hours of photochemical stability testing of our material candidates with little to no change in the electro-optic characteristics ( $R_{33}$ ) of our material; and, in January 2016, we successfully surpassed 4,000 hours of photochemical stability testing of our material candidates with little to no change in the optical density of our material. These photochemical stability test results, along with the thermal stability at 110°C, should enable the Company to demonstrate that organic polymers can compete head-to-head with inorganic crystalline legacy telecom and datacom devices which currently provide the backbone for the entire infrastructure that converts almost incalculable amounts of electronic (binary) data into pulses of light and back on a daily basis.



In November of 2015, we successfully fabricated ridge waveguide structures from our core polymer material system. At the same time we successfully developed a proprietary methodology to segment individual chips from our silicon wafers that contain our ridge waveguide devices. These critical steps in our process provide us with a clear path towards a commercial telecommunication device. These same processes can be used for the fabrication of modulators to be used in data centers. The individual chips are being analyzed and passively tested in our Longmont, CO optical test facility. We continue to move towards completion of an operating organic polymer-enabled ridge waveguide modulator prototype using our new multi-chromophore material systems.

In February 2016, we successfully guided laser single-mode light through 16 of our passive single-mode ridge waveguides made entirely out of our advanced organic polymer systems, which are the building block of waveguide modulators that achieve high modulator performance. As a result, our commercialization effort has entered the next phases of development: passive-waveguide loss measurements, followed by the development and active testing of electro-optic modulators. Utilizing continuous-wave input laser light, electro-optic modulators convert digital (binary) electrical data into output pulses of light that can be transported across fiber optical communication networks. Active testing is accomplished by applying an electrical signal to a modulator and evaluating the resulting output optical signal.

In April 2016, we successfully achieved modulation of light in our first in-house all-polymer ridge waveguide modulator prototype. This important step towards commercialization proved that our proprietary organic polymer systems could modulate light in an in-house designed and produced polymer ridge waveguide modulator. We expect this significant achievement to eventually lead to high-speed, low input voltage modulators capable of penetrating the current market. We are still testing and modifying the poling profiles in prototype devices to duplicate the results seen in previous Teng Mann R<sub>33</sub> material testing.

In May 2016, we broadened our photonic device development to include our new P<sup>2</sup>IC (Polymer Photonics Integrated Circuit) design platform. The P<sup>2</sup>IC design platform utilizes high-speed ridge waveguide and slot waveguide modulator designs that scale up in performance as well as down in cost structure. Furthermore, the Lightwave Logic P<sup>2</sup>IC design platform combines the best of Polymer Photonics with the best of Silicon Photonics (SiP) to create a powerful, yet scalable platform that addresses the desires of both the telecom and datacom industries.

Presently, we are continuing to move towards completion of our operating organic polymer-enabled ridge waveguide modulator prototype using our new multi-chromophore material systems.

We ultimately intend to use our next-generation electro-optic polymer material systems and non-linear all-optical polymer material systems for future applications vital to the following industries. We expect to create specific materials for each of these applications as appropriate:

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Cloud computing and data centers

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Telecommunications/data communications

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Backplane optical interconnects

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Photovoltaic cells

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Medical applications

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Satellite reconnaissance

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Navigation systems

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Radar applications

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Optical filters

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Spatial light modulators

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All-optical switches

In an effort to maximize our future revenue stream from our electro-optic polymer material systems and non-linear all-optical polymer material systems, our business model anticipates that our revenue stream will be derived from one or some combination of the following: (i) technology licensing for specific product applications; (ii) joint venture relationships with significant industry leaders; (iii) the production and direct sale of our own photonic device components; or (iv) the vertical integration of our modulator into a transceiver device. Our objective is to be a leading provider of proprietary technology and know-how in the photonic device markets. In order to meet this objective, subject to successful testing of our technology and having available financial resources, we intend to:

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Develop electro-optic polymer material systems and non-linear all-optical polymer material systems and photonic devices;

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Continue to develop proprietary intellectual property;

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Streamline our product development process;

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Develop a comprehensive marketing plan;

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Maintain/develop strategic relationships with government agencies, private firms, and academic institutions; and

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Continue to attract and retain high level science and technology personnel to our Company

### **Our Proprietary Products in Development**

As part of a two-pronged marketing strategy, our Company is developing several devices, which are in various stages of development that utilize our organic nonlinear optical materials. They include:

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Ridge waveguide modulator

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Slot waveguide modulator

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Spatial light modulator

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100 Gbps telecommunications modulator

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200 Gbps datacomm/telecomm photonic transceiver

.

Integrated photonic system

Additionally, we must continue to create and maintain an infrastructure, including operational and financial systems, and related internal controls, and recruit qualified personnel. Failure to do so could adversely affect our ability to support our operations.

## Capital Requirements

As a development stage company, we do not generate revenues. We have incurred substantial net losses since inception. We have satisfied our capital requirements since inception primarily through the issuance and sale of our common stock.

## Results of Operations

### Comparison of three months ended June 30, 2016 to three months ended June 30, 2015

#### Revenues

As a development stage company, we had no revenues during the three months ended June 30, 2016 and June 30, 2015. The Company is in various stages of material and photonic device development and evaluation. We expect the next revenue stream to be in sales of non-linear optical polymers, prototype devices and product development agreements prior to moving into production.

#### Operating Expenses

Our operating expenses were \$1,039,330 and \$1,052,338 for the three months ended June 30, 2016 and 2015, respectively, for a decrease of \$13,008. This decrease in operating expenses is primarily due to decreases in outsourced testing and product development expenses, investor relations expenses, laboratory materials and supplies and travel expenses offset by increases in research and development consulting fees, legal expenses, research and development non-cash stock option and warrant amortization and general and administrative salaries and wages.

Included in our operating expenses for the three months ended June 30, 2016 was \$592,570 for research and development expenses compared to \$619,492 for the three months ended June 30, 2015, for a decrease of \$26,922. Outsourced testing and prototype development were brought in-house with the completion of the Company's clean room and optical testing operations. The decrease in research and development expenses is primarily due to decreases in outsourced testing and product development expenses, laboratory materials and supplies and travel expenses offset by increases in non-cash stock option and warrant amortization and consulting fees.

Research and development expenses currently consist primarily of compensation for employees engaged in internal research, product development activities; laboratory operations, internal material and device testing and prototype electro-optic device design, development and prototype device processing; costs; and related operating expenses.

We expect to continue to incur substantial research and development expense to develop and commercialize our photonic devices and electro-optic materials platform. These expenses will increase as a result of accelerated development effort to support commercialization of our non-linear optical polymer materials technology; to build photonic device prototypes in our in-house laboratories; hiring additional technical and support personnel; engaging a senior technical advisor; pursuing other potential business opportunities and collaborations; customer testing and evaluation; and incurring related operating expenses.

Laboratory material testing expense and electro-optic device development decreased \$60,256 from \$83,229 for the three months ended June 30, 2015 to \$22,973 for the three months ended June 30, 2016.

Laboratory materials and supplies decreased \$40,947 from \$70,044 for the three months ended June 30, 2015 to \$29,097 for the three months ended June 30, 2016.

Travel expenses decreased \$9,387 from \$24,824 for the three months ended June 30, 2015 to \$15,437 for the three months ended June 30, 2016.

Research and development non-cash stock option amortization increased \$43,893 from \$69,735 for the three months ended June 30, 2015 to \$113,628 for the three months ended June 30, 2016.

Consulting expenses increased \$39,299 from \$22,973 for the three months ended June 30, 2015 to \$62,272 for the three months ended June 30, 2016.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, sales and marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses increased \$13,914 to \$446,760 for the three months ended June 30, 2016 compared to \$432,846 for the three months ended June 30, 2015. The increase is due primarily to increases in legal expenses and salaries and wages offset by a decrease in investor relations expenses.

Legal fees increased \$39,687 to \$91,601 for the three months ending June 30, 2016 from \$51,914 for the three months ended June 30, 2015.

Salary and wages increased \$8,126 to \$156,560 for the three months ending June 30, 2016 from \$148,434 for the three months ended June 30, 2015.

Investor relations expenses decreased by \$38,044 from \$41,947 for the three months ended June 30, 2015 to \$3,903 for the three months ended June 30, 2016.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly increase expenditures related to the future production and sales of our products.

#### Net Loss

Net loss was \$1,039,268 and \$1,052,276 for the three months ended June 30, 2016 and 2015, respectively, for a decrease of \$13,008, due primarily to decreases in outsourced testing and product development expenses, investor relations expenses, laboratory materials and supplies and travel expenses offset by increases in research and development consulting fees, legal expenses, research and development non-cash stock option and warrant amortization and general and administrative salaries and wages.

#### **Comparison of six months ended June 30, 2016 to six months ended June 30, 2015**

## Revenues

As a development stage company, we had no revenues during the six months ended June 30, 2016 and June 30, 2015. The Company is in various stages of material and photonic device development and evaluation. We expect the next revenue stream to be in product development agreements, prototype devices and sale of nonlinear optical polymer materials prior to moving into production.

## Operating Expenses

Our operating expenses were \$2,098,641 and \$2,117,790 for the six months ended June 30, 2016 and 2015, respectively, for a decrease of \$19,149. The decrease in operating expenses is primarily due to decreases in outsourced testing and product development expenses, investor relations expenses, laboratory materials and supplies and travel expenses offset by increases in research and development consulting fees, legal expenses, non-cash stock option and warrant amortization, salaries and wages and depreciation.

Included in our operating expenses for the six months ended June 30, 2016 was \$1,195,833 for research and development expenses compared to \$1,264,698 for the six months ended June 30, 2015, for a decrease of \$68,865. Outsourced testing and prototype development were brought in-house with the completion of the Company's clean room and optical testing operations. The decrease in research and development expenses is primarily due to decreases in outsourced testing and product development expenses, laboratory materials and supplies and travel expenses offset by increases in consulting fees, non-cash stock option and warrant amortization, salaries and wages and depreciation.

Research and development expenses currently consist primarily of compensation for employees engaged in internal research, product development activities; laboratory operations, internal material and device testing and prototype electro-optic device design, development and prototype device processing; costs; and related operating expenses.



We expect to continue to incur substantial research and development expense to develop and commercialize our photonic devices and electro-optic materials platform. These expenses will increase as a result of accelerated development effort to support commercialization of our non-linear optical polymer materials technology; to build photonic device prototypes in our in-house laboratories; hiring additional technical and support personnel; engaging a senior technical advisor; pursuing other potential business opportunities and collaborations; customer testing and evaluation; and incurring related operating expenses.

Laboratory material testing expense and electro-optic device development decreased \$149,189 from \$196,879 for the year ended June 30, 2015 to \$47,690 for the six months ended June 30, 2016.

Laboratory materials and supplies decreased \$34,182 from \$110,966 for the six months ended June 30, 2015 to \$76,784 for the six months ended June 30, 2016.

Travel expenses decreased \$15,506 from \$44,379 for the six months ended June 30, 2015 to \$28,873 for the six months ended June 30, 2016.

Consulting expenses increased \$72,058 from \$45,567 for the six months ended June 30, 2015 to \$117,625 for the six months ended June 30, 2016.

Non-cash stock option and warrant amortization increased \$27,861 from \$173,303 for the six months ended June 30, 2015 to \$201,164 for the six months ended June 30, 2016.

Wages and salaries increased \$23,253 from \$485,339 for the six months ended June 30, 2015 to \$508,592 for the six months ended June 30, 2016.

Depreciation increased \$15,587 from \$70,612 for the six months ended June 30, 2015 to \$86,199 for the six months ended June 30, 2016.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, sales and marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses increased \$49,716 to \$902,808 for the six months ended June 30, 2016 compared to \$853,092 for the six months ended June 30, 2015. The increase is due primarily to increases in legal expenses, salaries and wages and non-cash stock option and warrant amortization offset by a decrease in investor relations expenses.

Legal fees increased \$51,203 to \$146,411 for the six months ended June 30, 2016 compared to \$95,208 for the six months ended June 30, 2015.

Salary and wages increased \$27,107 from \$296,550 for the six months ended June 30, 2015 to \$323,657 for the six months ended June 30, 2016.

Non-cash stock option and warrant amortization increased \$6,287 from \$103,862 for the six months ended June 30, 2015 to \$110,149 for the six months ended June 30, 2016.

Investor relations expenses decreased by \$41,396 from \$69,945 for the six months ended June 30, 2015 to \$28,549 for the six months ended June 30, 2016.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly increase expenditures related to the future production and sales of our products.

#### Other Income (Expense)

Other income (expense) increased (\$237,959) to (\$237,836) for the six months ended June 30, 2016 from \$123 for the six months June 30, 2015, relating primarily to the initial commitment fee associated with the 2016 Purchase Agreement with an institutional investor.



## Net Loss

Net loss was \$2,336,477 and \$2,117,667 for the six months ended June 30, 2016 and 2015, respectively, for an increase of \$218,810, due primarily to increases in commitment fee associated with the 2016 Purchase Agreement with an institutional investor, research and development consulting fees, legal expenses, non-cash stock option and warrant amortization, salaries and wages and depreciation offset by decreases in outsourced testing and product development expenses, investor relations expenses, laboratory materials and supplies and travel expenses.

## Significant Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates based upon historical experience and various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ materially from these estimates.

We believe our significant accounting policies affect our more significant estimates and judgments used in the preparation of our financial statements. Our Annual Report on Form 10-K for the year ended December 31, 2015 contains a discussion of these significant accounting policies. There have been no significant changes in our significant accounting policies since December 31, 2015. See our Note 1 in our unaudited financial statements for the six months ended June 30, 2016 as set forth herein for a complete discussion of our Company's accounting policies.

## Liquidity and Capital Resources

During the six months ended June 30, 2016, net cash used in operating activities was \$1,606,832 and net cash used in investing activities was \$19,970, which was due primarily to the Company's research and development activities and general and administrative expenditures. Net cash provided by financing activities for the six months ended June 30, 2016 was \$0. At June 30, 2016, our cash and cash equivalents totaled \$2,103,903, our assets totaled \$3,346,768, our liabilities totaled \$114,899, and we had stockholders' equity of \$3,231,869.

## Sources and Uses of Cash

Our future expenditures and capital requirements will depend on numerous factors, including: the progress of our research and development efforts; the rate at which we can, directly or through arrangements with original equipment manufacturers, introduce and sell products incorporating our polymer materials technology; the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; market acceptance of our products and competing technological developments; and our ability to establish cooperative development, joint venture and licensing arrangements. We expect that we will incur approximately \$3,600,000 of expenditures over the next 12 months. Our cash requirements are expected to increase at a rate consistent with the Company's path to revenue growth as we expand our activities and operations with the objective of commercializing our electro-optic polymer technology during 2016.

Our business does not presently generate the cash needed to finance our current and anticipated operations. We believe we have raised sufficient capital to finance our operations through February 2017; however, we will need to obtain additional future financing after that time to finance our operations until such time that we can conduct profitable revenue-generating activities. Such future sources of financing may include cash from equity offerings, exercise of stock options, warrants and proceeds from debt instruments; but we cannot assure you that such equity or borrowings will be available or, if available, will be at rates or prices acceptable to us.

On January 29, 2016, we signed a purchase agreement with Lincoln Park Capital Fund, LLC ( Lincoln Park ) to sell up to \$20,000,000 of common stock whereby subject to certain conditions and at our sole discretion, Lincoln Park has committed to purchase up to \$20,000,000 of our common stock over a 36-month period. In April 2016 our registration statement became effective, which registered for resale by Lincoln Park under the purchase agreement 5,000,000 shares of our common stock, 350,000 of which have already been issued as a commitment fee and 4,650,000 of which may be sold by us to Lincoln Park during the term of the purchase agreement. Pursuant to the purchase agreement, Lincoln Park is obligated to make purchases as the Company directs in accordance with the purchase agreement, which may be terminated by the Company at any time, without cost or penalty. Sales of shares will be made in specified amounts and at prices that are based upon the market prices of our common stock immediately preceding the sales to Lincoln Park. We expect this financing to provide us with sufficient funds to maintain our operations for the foreseeable future. With the additional capital, we expect to achieve a level of revenues attractive enough to fulfill our development activities and adequate enough to support our business model for the foreseeable future. We cannot assure you that we will meet the conditions of the purchase agreement with Lincoln Park in order to obligate Lincoln Park to purchase our shares of common stock. In the event we fail to do so, and other adequate funds are not available to satisfy long-term capital requirements, or if planned revenues are not generated, we may be required to substantially limit our operations. This limitation of operations may include reductions in capital expenditures and reductions in staff and discretionary costs.

There are no trading volume requirements or restrictions under the purchase agreement and we will control the timing and amount of any sales of our common stock to Lincoln Park. Lincoln Park has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the purchase agreement. We can also accelerate the amount of common stock to be purchased under certain circumstances. There are no limitations on use of proceeds, financial or business covenants, restrictions on future funding, rights of first refusal, participation rights, penalties or liquidated damages in the purchase agreement. Lincoln Park may not assign or transfer its rights and obligations under stock the purchase agreement.

We expect that our cash used in operations will increase during 2016 and beyond as a result of the following planned activities:

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The addition of management, sales, marketing, technical and other staff to our workforce;

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Increased spending for the expansion of our research and development efforts, including purchases of additional laboratory and production equipment;

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Increased spending in marketing as our products are introduced into the marketplace;

Developing and maintaining collaborative relationships with strategic partners;

Developing and improving our manufacturing processes and quality controls; and

Increases in our general and administrative activities related to our operations as a reporting public company and related corporate compliance requirements.

### **Analysis of Cash Flows**

For the six months ended June 30, 2016

Net cash used in operating activities was \$1,606,832 for the six months ended June 30, 2016, primarily attributable to the net loss of \$2,336,477 adjusted by \$46,738 in warrants issued for services, \$264,575 in options issued for services, \$249,965 in common stock issued for services, \$97,573 in depreciation expenses and patent amortization expenses, \$59,496 in prepaid expenses, \$11,942 in accounts payable and accrued expenses and \$644 gain on disposal of property and equipment. Net cash used in operating activities consisted of payments for research and development, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure.

Net cash used by investing activities was \$19,970 for the six months ended June 30, 2016, consisting of \$15,565 in cost for intangibles, \$23,905 in asset additions primarily for the new lab facility and \$19,500 in proceeds from sale of equipment.

Net cash provided by financing activities was \$0 for the six months ended June 30, 2016.

### **Inflation and Seasonality**

We do not believe that our operations are significantly impacted by inflation. Our business is not seasonal in nature.





**Item 4**

**Controls and Procedures**

*Evaluation of Disclosure Controls and Procedures.* The Company's management, with the participation of the Company's Principal Executive Officer and Principal Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of June 30, 2016. Based on this evaluation, the Company's Principal Executive Officer and Principal Financial Officer concluded that, as of June 30, 2016 the Company's disclosure controls and procedures were effective, in that they provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and is accumulated and communicated to the Company's management, including the Company's Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

*Changes in Internal Control Over Financial Reporting.* There were no changes in our internal control over financial reporting during the quarter ended June 30, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**PART II OTHER INFORMATION**

**Item 2**

**Unregistered Sales of Equity Securities and Use of Proceeds**

<b>Date</b>	<b>Security/Value</b>
May 2016	Options right to buy 205,000 shares of common stock at \$0.60 per share issued for services.
April June 2016	Common Stock 10,145 shares of common stock at average price of \$.59 per share issued for services.

No underwriters were utilized and no commissions or fees were paid with respect to any of the above transactions. We relied on Section 4(a)(2) and/or Regulation D of the Securities Act of 1933, as amended, since the transactions did not involve any public offering.

**Item 6**

**Exhibits**

The following exhibits are included herein:

<b>Exhibit No.</b>	<b>Description of Exhibit</b>	<b>Location</b>
10.1	2016 Equity Incentive Plan	Incorporated by reference to Appendix A to the Company's Definitive Schedule 14A filed with the SEC on April 20, 2016
10.2	Operations Committee Charter August 2016	Filed herewith
31.1	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Executive Officer of the Company.	Filed herewith
31.2	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Financial Officer of the Company.	Filed herewith

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32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Executive Officer of the Company.	Filed herewith
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Financial Officer of the Company.	Filed herewith
101	XBRL	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.

**LIGHTWAVE LOGIC, INC.**

Registrant

By: /s/ Thomas E. Zelibor  
Thomas E. Zelibor,  
Chief Executive Officer  
(Principal Executive Officer)

Date: August 15, 2016

By: /s/ James S. Marcelli  
James S. Marcelli,  
President, Chief Operating Officer  
(Principal Financial Officer)

Date: August 15, 2016

