Lightwave Logic Provides Third Quarter 2024 Corporate Update

ENGLEWOOD, Colo., Nov. 13, 2024 /PRNewswire/ -- Lightwave Logic, Inc. (NASDAQ: LWLG), a technology platform company leveraging its proprietary electro-optic (EO) polymers to transmit data at higher speeds with less power in a small form factor, today provided a corporate update in conjunction with the filing of its Quarterly Report on Form 10-Q for the third quarter ended September 30, 2024.

Third Quarter 2024 and Subsequent Company Highlights:

- Attended the 2024 European Conference on Optical Communications ("ECOC"), where management:
  - Jointly showcased packaged electro-optic polymer modulators with Polariton Technologies, demonstrating the combination of Polariton's High-Speed Plasmonic Modulators with Lightwave's Perkinamine™ Chromophores in a Packaged Device
  - Received the 2024 ECOC Industry Innovation Award for Hybrid PIC/Optical Integration Platform, recognizing the company's EO polymer material and technology as a leading innovation amongst the industry.
  - Presented in the Market Focus Session, which included a presentation by CEO Dr. Michael Lebby titled "World class performance for 200Gbps PAM4 and 400Gbps PAM4 lanes from electro-optic polymer modulators" to an audience of industry experts and other industry participants.
- Appointed former DuPont executive and CEO of the American Chemical Society (ACS) Thomas M. Connelly, Jr. as its newest Board member, deepening its optical polymer capabilities and commercial expertise to open new markets for its advanced materials.
- Appointed Yves LeMaitre to Board of Directors, bringing over 30 years of executive experience in technology, corporate strategy and marketing to the Board.
- Furthered active discussions with tier-1 companies for licensing, technology transfer, material sales and device evaluations. Management has focused on transceiver companies that need to update their silicon photonics platforms with Lightwave's polymer technology platform.
- Recently demonstrated drive levels below 0.5V which represents the highest performance commercially designed electro-optic polymer modulators to date.
  - The impact of driving optical modulators significantly below 1V is significant not only from the impact of directly driving modulators from electronic ICs to save driver costs, but more importantly, savings in power consumption for the module system, which is a key issue for datacenter operators today.
- As of September 30, 2024, the company had cash and cash equivalents of $27 million, enabling the company to finance operations through February 2026.

The full text of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 was filed with the SEC on November 12, 2024 and can be found here.

Management Commentary

"During the third quarter of 2024 we were once again privileged to participate in the European Conference on Optical Communications as we continue to focus on our near-term commercialization pathway," said Dr. Michael Lebby, Chairman and Chief Executive Officer of Lightwave Logic. "The conference was incredibly successful for us as we shared recent developments and partnerships as we continue to focus on near-term commercial prospects - which culminated in receiving the Innovation Award for Hybrid PIC/Optical Integration Platform. As we address the rapidly growing optical transceivers market - which is expected to grow to at least $100 billion by 2030 driven by data centers

and artificial intelligence - the visibility for our technology at such a prestigious event cannot be understated.

"At ECOC we showcased our collaboration with Polariton Technologies by demonstrating a packaged device with over 110 GHz super high bandwidth packaged electro-optic polymer modulators using Polariton's plasmonic modulator device design that contains our proprietary Perkanamine^{TM} chromophores. The packaged device contains a plasmonic modulator using electro-optic polymer material and platform chips have demonstrated performance up to 400 Gbps, which demonstrates that our polymers are positioned for the networks' next-generation data rate for transceiver equipment. This is an example of extending the performance of silicon photonics using both electro-optic polymers as well as plasmonics for the modulator device design. Further, this collaboration forms an important technology platform for scalability using large silicon foundries for mass commercialization with 200mm silicon wafers.

"This was the second year in a row of being granted the Innovation Award at ECOC, a tremendous honor from a committee of industry peers. The award demonstrates our leadership in the photonics industry, is reflective of the true market recognition of our technology and provided further market validation. ECOC is one of the leading global industry conferences on optical communications, adding to the recognition for this award.

"We appointed two new respected leaders to our Board in recent months. Industry veteran Yves LeMaitre has over 30 years of executive experience in technology, corporate strategy and marketing, and currently serves as a Strategic Board Advisor to Trumpf Photonic Components, a global technology company specializing in the development of lasers for optics, and as a strategic advisor to the Optical, RF & Micro-Electronics division of Sanmina AMT. Thomas M. Connelly Jr., has served as CEO of the American Chemical Society, one of the largest scientific societies with 170,000 members worldwide, and as Chief Innovation Officer of DuPont, where he was a member of its Office of the Chief Executive. Among his responsibilities in chemicals and materials over 35+ years at DuPont were its Performance Polymers and Packaging & Industrial Polymers businesses. His exceptional industry knowledge and deep experience in the polymers business will be an outstanding resource to Lightwave Logic.

"Looking ahead, we are well along the commercialization pathway with licensing our proprietary Perkinamine® materials and product sales of high-speed modulators. We are targeting a wide spectrum of Tier-1 companies and multinational corporations - currently having multiple ongoing engagements discussing materials supply, technology transfer and licensing agreements as well as chiplet device designs. While we understand it is our goal to sign an agreement with a tier-1 company in 2024, ongoing discussions are in progress, and have progressed well with companies based in USA, Europe, and the Far East, and our revised goal is now 2025. Chiplets are modulators that are encapsulated for direct insertion into transceiver modules. We have continued to demonstrate our leadership in the photonics industry with outstanding 200Gbps per lane performance for our technologies that aligns well with datacenter expectations today. We are confident in the implicit competitive advantage of our solution to support datacenters around the world, which are responding to the burgeoning demand for higher speed data transmission from artificial intelligence, machine learning, and other cloud-based services. We also believe we are well-positioned to expand our initial business focus from datacenters and AI clusters connectivity to include other high growth markets, such as materials, organics, quantum/optical computing, aerospace, defense, and storage," concluded Lebby.

Benzinga All-Access Interview

Dr. Michael Lebby, Chairman and Chief Executive Officer of Lightwave Logic, will host a fireside chat at 10:50 a.m. Eastern time on Thursday, November 14, 2024 with the hosts of the Benzinga All-Access show to discuss the Company's third quarter 2024 corporate updates. To watch the interview, please refer to the access information below.

Date: Thursday, November 14, 2024
Presentation Time: 10:50 a.m. Eastern time
Webcast: https://www.youtube.com/live/X6ukRWZ7UMY

An audio webcast and an archived replay will be available using the webcast link above.

About Lightwave Logic, Inc.

Lightwave Logic, Inc. (NASDAQ: LWLG) develops a platform leveraging its proprietary engineered electro-optic (EO) polymers to transmit data at higher speeds with less power in a small form factor. The company's high-activity and high-stability organic polymers allow Lightwave Logic to create next-generation photonic EO devices, which convert data from electrical signals into optical signals, for applications in data communications and telecommunications markets. For more information, please visit the company's website at www.lightwavelogic.com.

Safe Harbor Statement

The information posted in this release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You can identify these statements by use of the words "may," "will," "should," "plans," "explores," "expects," "anticipates," "continue," "estimate," "project," "intend," and similar expressions. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. These risks and uncertainties include, but are not limited to, 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 Form 10-K and 10-Q; other risks to which our company is subject; other factors beyond the company's control.

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