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

FORM 10-K

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

For the fiscal year ended December 31, 2025

☐ **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: **001-40766**

Lightwave Logic, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**82-0497368**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
369 Inverness Parkway, Suite 350, Englewood, CO	**80112**
(Address of principal executive offices)	(Zip Code)

(Registrant's Telephone Number, including Area Code): **720-340-4949**

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 par value per share	LWLG	The NASDAQ Stock Market

Securities registered pursuant to section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

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

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

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

Large accelerated filer ☐
Non-accelerated filer ☒

Accelerated filer ☐
Smaller reporting company ☒
Emerging growth company ☐

If an emerging growth company, indicate by checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐
Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☒

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act of 1934).
Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately $155,272,461 as of June 30, 2025.

As of March 20, 2026, there were 148,831,122 shares outstanding of the registrant's common stock, $.001 par value.

Documents incorporated by reference. Portions of the registrant's Proxy Statement for the registrant's 2026 Annual Meeting of Shareholders are incorporated by reference in Part III of this report.

		Page
PART I		
Item 1.	Business	1
Item 1A.	Risk Factors	14
Item 1B.	Unresolved Staff Comments	25
Item 1C.	Cybersecurity	25
Item 2.	Properties	26
Item 3.	Legal Proceedings	26
Item 4.	Mine Safety Disclosures	26
PART II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	27
Item 6.	Reserved	27
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	28
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	34
Item 8.	Financial Statements and Supplementary Data	34
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	34
Item 9A.	Controls and Procedures	34
Item 9B.	Other Information	35
Item 9C.	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	35
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	36
Item 11.	Executive Compensation	36
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	36
Item 13.	Certain Relationships and Related Transactions, and Director Independence	36
Item 14.	Principal Accountant Fees and Services	36
PART IV		
Item 15.	Exhibits and Financial Statement Schedules	37
Item 16.	Form 10-K Summary	38
Signature		

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements. Forward-looking statements involve risks and uncertainties, such as statements about our plans, objectives, expectations, assumptions or future events. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “estimate,” “plan,” “project,” “continuing,” “ongoing,” “expect,” “we believe,” “we intend,” “may,” “should,” “will,” “could” and similar expressions denoting uncertainty or an action that may, will or is expected to occur in the future. These statements involve estimates, assumptions, known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from any future results, performances or achievements expressed or implied by the forward-looking statements. You should not place undue reliance on these forward-looking statements.

Factors that are known to us that could cause a different result than projected by the forward-looking statement, include, but are not limited to:

- inability to generate significant revenue or to manage growth;
- lack of available funding;
- lack of a market for or market acceptance of our products;
- competition from third parties;
- general economic and business conditions;
- intellectual property rights of third parties;
- changes in the price of our stock and dilution;
- regulatory constraints and potential legal liability;
- ability to maintain effective internal controls;
- security breaches, cybersecurity attacks and other significant disruptions in our information technology systems;
- changes in technology and methods of marketing;
- delays in completing various engineering and manufacturing programs;
- changes in customer order patterns and qualification of new customers;
- 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”;
- other risks to which our Company is subject; and
- other factors beyond the Company’s control.

Any forward-looking statement made by us in this Annual Report on Form 10-K 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

Item 1. Business.

Overview

Lightwave Logic, Inc. is a specialty materials and intellectual property company focused on the development and commercialization of proprietary electro-optic ("EO") polymer materials designed to enable high-speed optical modulators for data communications and other photonic applications.

Our Perkinamine® family of EO polymer materials is engineered for integration into silicon photonics ("SiPh") and other photonic integrated circuit ("PIC") platforms. When incorporated into device architectures, these materials are designed to support high-speed, high-bandwidth optical modulation with lower drive voltage requirements relative to certain conventional silicon-based approaches and certain other traditional photonic material systems, including III-V–based compound semiconductor technologies. The electro-optic properties of these materials can allow shorter interaction lengths in modulator designs, which can contribute to more compact device footprints and increased integration density. In addition, our materials are intended to be compatible with complementary metal-oxide-semiconductor ("CMOS") fabrication processes, which may facilitate integration into established semiconductor foundry workflows. Reduced drive voltage operation may enable lower system-level power consumption and simplified driver electronics in specific implementations.

We do not manufacture optical transceivers, photonic devices, or complete optical modules. Instead, our strategy is to commercialize our technology through a combination of material sales, intellectual property licensing, process design kit ("PDK") enablement, and royalty or other fee-based arrangements tied to customer production.

Our customers and prospective customers include semiconductor foundries, silicon photonics device designers, optical module manufacturers, and system integrators serving artificial intelligence ("AI"), cloud computing, data center, and telecommunications markets. We pursue customer adoption through a structured commercialization process designed to support evaluation, integration, qualification, and production readiness within established semiconductor manufacturing ecosystems.

As of January 2026, multiple customer programs are progressing through defined development stages under our commercialization framework. The timing and scale of potential production revenue depend on customer product qualification and adoption cycles, technical validation, manufacturing readiness, end-market demand, and broader industry conditions.

Our Electro-Optic Polymer Technology

Our technology platform is based on the design, synthesis, and integration of proprietary electro-optic polymer materials engineered to exhibit strong electro-optic ("EO") activity, optical transparency in relevant wavelength bands, and compatibility with semiconductor fabrication processes.

Electro-optic polymers utilize engineered chromophore molecules embedded within a polymer matrix. When an electric field is applied, the optical properties of the material change in a manner that can be used to modulate light propagating through a waveguide structure. The strength of this electro-optic response, combined with the material's processability, is central to device performance and manufacturability.

Our Perkinamine® materials are designed to:

- Support high-speed optical modulation suitable for advanced data rate standards,
- Enable high-bandwidth performance through strong electro-optic coefficients,
- Operate at relatively low drive voltages,
- Be deposited and patterned using processes compatible with semiconductor manufacturing environments,
- Maintain stability under operational and environmental stress conditions required by customer applications.

Because electro-optic polymers can be applied directly within waveguide structures, they may allow modulator architectures with shorter interaction lengths compared to certain alternative material systems. Shorter interaction lengths can contribute to more compact device geometries and increased integration density within photonic integrated circuits.

The compatibility of our materials with complementary metal oxide semiconductor ("CMOS") fabrication processes, including back-end-of-line integration flows, is designed to facilitate incorporation into silicon photonics platforms using established foundry infrastructure rather than requiring dedicated fabrication facilities.

We continue to invest in material optimization, including improvements in electro-optic efficiency, thermal stability, wavelengths expansion, environmental robustness, and process integration parameters. Material formulation, device architecture, and integration techniques are developed in parallel to support customer-specific performance and reliability requirements.

Commercial deployment of devices incorporating our materials depends on successful integration within customer and foundry process flows, achievement of reliability standards, and attainment of yield and cost targets.

Unless the context otherwise requires, all references to the "Company," "we," "our" or "us" and other similar terms means Lightwave Logic, Inc. Also, this Form 10-K Annual Report may include the names of various government agencies and the trade names of other companies. Unless specifically stated otherwise, the use or display by us of such other parties' names and trade names in this report is not intended to and does not imply a relationship with, or endorsement or sponsorship of us by, any of these other parties.

Business Model - Material + IP Licensing

Our business model is centered on the commercialization of proprietary electro-optic polymer materials and related intellectual property through material supply and licensing arrangements.

We do not currently intend to manufacture finished optical transceivers, discrete photonic devices, or complete optical modules. Our strategy is to enable customers to incorporate our materials into their own device platforms and manufacturing ecosystems, leveraging established semiconductor foundry infrastructure.

Our revenue model may include one or more of the following components:

Material Sales

We supply EO polymer materials to customers for evaluation, prototyping, and potential commercial production. Material sales may occur during development phases as well as during volume manufacturing, subject to customer qualification and demand.

If customer programs transition to commercial production incorporating our materials, material revenue would be expected to scale with device volumes.

Intellectual Property Licensing

We may enter into licensing agreements covering aspects of our polymer compositions, device designs, integration processes, and related intellectual property. Licensing arrangements may include: upfront license fees, development or milestone-based payments, and field-of-use or application-specific licenses.

The structure and economics of such agreements vary depending on customer requirements and the scope of intellectual property granted.

Royalty or Production-Based Fees

In certain arrangements, we may receive royalties or other production-based payments tied to the manufacture or sale of devices incorporating our materials or licensed technology. The structure, rate, and duration of such payments depend on negotiated terms and customer product lifecycles.

There can be no assurance that any given customer program will result in royalty-bearing production.

Revenue Timing Considerations

Customer engagements typically progress through multi-stage development cycles. During early stages, revenue may consist primarily of material sales, non-recurring engineering ("NRE") fees, prototype-related activities, or development support.

Based on the current status of customer programs, we anticipate that revenues, if any, recognized during 2026 would primarily relate to material supply, NRE arrangements, or prototype and development activities. We do not currently expect significant revenue from volume commercial production of customer products until 2027 at the earliest. The timing and magnitude of any production-related revenue depend on successful product qualification, yield validation, customer adoption decisions, end-market demand, and broader industry conditions.

There can be no assurance that development-stage programs will transition to volume production, that anticipated timelines will be achieved, or that commercial revenues will occur as expected.

Strategic Flexibility

While our current strategy is focused on materials supply and intellectual property licensing, we may evaluate selective opportunities to participate more directly in device-level development in limited circumstances. Such participation, if pursued, would likely be application-specific and would depend on market conditions, partnership opportunities, capital requirements, and strategic considerations.

We have not committed to entering device manufacturing as a core component of our business model, and any such activity would be evaluated in the context of our overall capital allocation priorities and commercialization strategy.

Operating Leverage

Our model is designed to leverage existing semiconductor fabrication infrastructure rather than require capital-intensive wafer fabrication facilities. By integrating into established foundry process flows, we seek to enable scalable production through customer and foundry manufacturing capacity.

If customer programs advance to high-volume production, incremental material demand and royalty streams may provide operating leverage due to the intellectual property-driven nature of our model. However, realization of such leverage depends on successful qualification, customer adoption, competitive dynamics, and end-market demand.

Commercialization Process (Design Win Cycle)

We pursue customer adoption through a structured, multi-stage engagement framework that we refer to as our Design Win Cycle. This process is designed to guide customer programs from initial technology evaluation through potential production ramp within established semiconductor manufacturing ecosystems.

While program timelines vary based on customer requirements, foundry schedules, application complexity, and market conditions, the Design Win Cycle typically spans approximately 18 to 24 months.

Progression between stages depends on the achievement of defined technical and commercial milestones. Advancement to later stages does not assure commercial production.

Stage 1 – Technology Selection
(Typically 3–6 Months)

During the Technology Selection stage, customers evaluate the suitability of our electro-optic polymer materials for their intended applications.

Activities may include:

- Demonstration of modulator performance characteristics,
- Assessment of material reliability and environmental stability, or
- Comparative evaluation against alternative technologies, including performance, power consumption, footprint, and cost considerations.

This stage is focused on determining whether our materials are appropriate for incorporation into the customer's development roadmap.

Revenue during this stage, if any, may consist of material samples, evaluation kits, or limited technical support.

Stage 2 – Product Design
(Typically 3–6 Months)

If a customer elects to proceed, engagement advances to Product Design. During this stage, we support integration of our materials into the customer's device architecture and semiconductor foundry process flow.

Activities may include:

- Provision of process design kit ("PDK") elements,
- Support for modulator design and simulation activities,
- Coordination with semiconductor foundries to enable material integration, or
- Participation in product reliability planning and test definition.

Progression from Stage 2 to Stage 3 typically requires successful completion of prototype design objectives and confirmation that fabrication resources are available. In certain cases, advancement may be gated by the availability of, and access to, a customer's preferred semiconductor foundry, including allocation of wafer runs, process integration readiness, and foundry scheduling considerations.

Revenue during this stage may include material sales or non-recurring engineering ("NRE") fees associated with development activities.

Stage 3 – Prototype to Final Product
(Typically 12–18 Months)

In this stage, customers fabricate and refine prototype devices incorporating our materials.

Activities may include:

- Support for product design iterations (alpha, beta, and final versions),
- Participation in end-user qualification activities, including performance and reliability validation,
- Process refinement efforts intended to improve manufacturing yield and cost metrics.

As of January 2026, three customer programs were engaged in this stage, with one customer requiring customization of our material platform to meet their specific application needs. Approximately fifteen additional customer engagements were in Stages 1 and 2.

Revenue during Stage 3, if any, may consist of material supply, NRE arrangements, or development-related activities. Entry into this stage does not guarantee transition to commercial production.

Stage 4 – Production Ramp to High Volume

If technical qualification, yield targets, and cost alignment objectives are achieved, programs may advance to production ramp.

Activities during this phase may include:

- Ongoing support for process control and yield improvement,
- Participation in cost reduction and manufacturing efficiency initiatives,
- Support for design of product variants, or
- Preparation for next-generation product platforms.

Commercial production typically requires achievement of customer-defined qualification milestones, acceptable manufacturing yields, cost targets, and confirmed end-market demand.

Based on the current status of customer programs, we anticipate that revenues, if any, recognized during 2026 would primarily relate to material supply, NRE arrangements, or prototype and development activities. We do not currently expect significant revenue from high-volume commercial production of customer products until 2027 at the earliest.

There can be no assurance that programs currently in development will successfully transition to commercial production, that foundry capacity will be available as anticipated, or that projected timelines will be achieved.

Market Opportunity (AI Networking, Hyperscale Data Centers and Telecommunications)

AI Networking and Hyperscale Data Centers

The rapid expansion of artificial intelligence ("AI"), machine learning workloads, and cloud computing applications is driving structural changes in data center architecture and networking design. AI training and inference systems require

increasingly higher bandwidth, lower latency, and improved energy efficiency across dense computing environments. As AI clusters scale, networking performance has become a critical factor influencing system throughput, power consumption, and total cost of ownership.

Industry analysts project continued growth in the optical interconnect market serving hyperscale data centers. According to LightCounting and other industry research sources, the total addressable market ("TAM") for optical transceivers supporting AI networking, data center, and related applications could reach approximately $24 billion annually by 2028, driven by transitions to 800G, 1.6T, and higher-speed architectures.

Within this broader market, the serviceable addressable market ("SAM") for high-speed optical modulators represents a subset of overall optical engine and transceiver content. Based on internal company estimates informed by LightCounting research, we believe the SAM associated with high-speed modulators used in advanced data center interconnects could range from approximately $1 billion to $2.5 billion annually by 2028, depending on architecture mix, lane speeds, and adoption rates.

These estimates are based on published industry data and internal modeling assumptions. Actual market size, growth rates, and our potential participation in these markets depend on technology adoption, competitive dynamics, customer qualification cycles, and broader industry conditions.

Scale-Up, Scale-Out and Scale-Across Architectures

AI networking expansion occurs across three primary dimensions:

Scale-Up (Within the Rack)

Scale-up refers to high-bandwidth connectivity among processors, accelerators, and memory within a single server or rack. These connections require short-reach, ultra-high-speed interconnects operating within strict power and thermal envelopes.

In scale-up environments, electrical interconnect limitations are increasingly addressed through optical solutions. Modulators capable of high bandwidth, low drive voltage, and compact footprints may enable greater port density and reduced power consumption within rack-level architectures.

Scale-Out (Across Racks Within a Data Center)

Scale-out refers to connectivity between racks within a hyperscale data center. These links require higher aggregate bandwidth and reliable performance over longer distances relative to intra-rack connections.

As AI clusters expand, the number of deployed optical transceivers and modulator lanes increases significantly. Technologies that support higher per-lane data rates while managing power consumption and integration complexity are central to enabling scalable cluster growth.

Scale-Across (Between Data Centers)

Scale-across connectivity supports communication between geographically distributed data centers. These links typically rely on coherent optical systems and must support high aggregate throughput across longer distances.

Electro-optic polymer-based modulators may be relevant across all three scaling dimensions, subject to application-specific performance requirements and qualification standards.

Optical Transceivers and Co-Packaged Optics Architectures

Most data center optical interconnects today are implemented using pluggable optical transceivers. In this architecture, optical modules are inserted into network switches or servers through standardized electrical interfaces. The optical engine, including modulators, lasers, drivers, and receivers, is contained within a discrete pluggable module.

Pluggable transceivers offer flexibility and interoperability. However, as data rates increase, electrical trace lengths between the switch silicon and the pluggable module can introduce signal integrity challenges, increased power consumption, and thermal constraints.

Co-packaged optics ("CPO") represents an alternative architectural approach in which optical engines are integrated more closely with switching silicon within the same package or substrate. By reducing electrical trace lengths, CPO architectures seek to improve signal integrity and power efficiency at higher data rates.

Both pluggable transceiver and CPO architectures rely on high-performance optical modulators as core functional components. Our electro-optic polymer materials are designed to support high-speed, high-bandwidth modulation with compact device geometries and CMOS-compatible integration, characteristics that may be relevant to both architectures, subject to customer qualification and system-level requirements.

The pace and extent of adoption of CPO relative to pluggable architectures remain dependent on ecosystem coordination, packaging technology readiness, cost considerations, and deployment strategies.

Transceiver Data Rates and Per-Lane Bandwidth

Optical transceiver performance is typically described using aggregate data rate designations, such as 400G, 800G, or 1.6T. These figures represent the total data throughput of the module. In practice, transceivers achieve these aggregate speeds by combining multiple parallel optical lanes, each operating at a defined per-lane data rate.

For example, a 1.6 terabit ("1.6T") optical transceiver may be implemented using eight optical lanes operating at 200 gigabits per second ("200G") per lane. Increasing per-lane bandwidth reduces the need to proportionally increase lane count, which can otherwise add complexity, footprint, power consumption, and packaging challenges.

Higher per-lane data rates require modulators capable of operating at increased bandwidth while maintaining signal integrity and acceptable power consumption. Our electro-optic polymer materials are designed to support high-speed, high-bandwidth optical modulation, which may be relevant as customers transition to higher per-lane data rates in next-generation transceiver and co-packaged optical architectures, subject to qualification and system-level integration requirements.

Telecommunications and Coherent Optical Systems

In addition to hyperscale AI data centers, optical modulators are used in coherent dense wavelength division multiplexing ("DWDM") systems for long-haul, metro, and access networks. LightCounting has estimated that the market for coherent optical transceivers represents several billion dollars annually, including an estimated approximately $7 billion TAM for coherent DWDM applications referenced in our investor materials.

Electro-optic polymer materials may be applicable in certain coherent optical architectures, subject to performance validation and qualification requirements.

Emerging and Specialty Applications

Beyond data center and telecommunications markets, electro-optic materials may have potential applications in additional photonic domains, including quantum technologies, sensing, defense systems, and space communications. Published industry research has projected long-term growth in certain quantum computing, quantum communications, and quantum sensing markets, although adoption timelines and commercial maturity remain uncertain.

While our current commercialization efforts are primarily concentrated on AI-driven data center and telecommunications applications, we are also evaluating opportunities to participate selectively in emerging vertical markets. For example, we have publicly announced collaborative activities related to quantum photonic applications, including recent engagement with QPICs. These efforts are intended to explore the applicability of our materials in specialized photonic platforms and to position the Company for potential participation in evolving quantum ecosystems.

We expect that any participation in emerging or specialty applications would develop gradually and remain subject to technical validation, partnership development, capital allocation priorities, and overall strategic considerations.

Manufacturing and Foundry Integration Strategy

Our commercialization approach is designed to leverage established semiconductor fabrication infrastructure rather than require construction of proprietary wafer fabrication facilities. We do not operate semiconductor wafer fabrication plants. Instead, our electro-optic polymer materials are intended to be integrated into silicon photonics ("SiPh") and related photonic integrated circuit ("PIC") platforms at third-party semiconductor foundries.

This fabless materials model allows us to focus on material innovation, integration support, and intellectual property development while utilizing the manufacturing scale, process controls, and capacity of established semiconductor ecosystems.

Foundry Integration

Successful commercialization of devices incorporating our materials requires compatibility with customer-selected semiconductor foundries. Integration typically involves:

- Alignment with foundry thermal budgets and process flows,
- Back-end-of-line ("BEOL") material deposition compatibility,
- Process design kit ("PDK") enablement and validation,
- Device layout and waveguide integration support, and
- Reliability and environmental qualification testing.

At present, certain BEOL polymer deposition and integration processes are performed at our facility in Englewood, Colorado to support development programs, prototyping activities, and early-stage customer engagements. As customer programs advance toward volume production, we expect to work with foundry partners to progressively transfer and qualify these BEOL integration steps within customer-preferred semiconductor fabrication environments, subject to technical validation and foundry readiness.

In certain cases, progression of customer programs may depend on availability of fabrication slots at customer-preferred foundries, allocation of wafer runs, process integration readiness, and foundry scheduling considerations. Because we do not control third-party foundry capacity or scheduling priorities, program timelines may be affected by semiconductor capacity constraints, customer allocation decisions, or shifts in foundry resource priorities.

Perkinamine Manufacturing and Supply

Our electro-optic polymer materials are synthesized and processed at our facility in Englewood, Colorado. Current operations support research, development, customer sampling, BEOL integration activities, and early-stage commercial supply.

As customer programs advance toward production ramp, material volume requirements may increase. Scaling production beyond current capacity could require additional capital investment, equipment procurement, workforce expansion, process automation, supplemental third-party manufacturing arrangements, and expanded foundry-based BEOL integration.

We maintain procurement relationships with suppliers of specialty chemical precursors and seek to manage supply chain risk through inventory planning and supplier diversification where feasible. While our materials are not dependent on rare-earth elements, our supply chain remains subject to general risks affecting specialty chemical sourcing, including geopolitical developments, transportation disruptions, regulatory changes, and supplier concentration.

Yield, Reliability, and Production Ramp

Transition to high-volume production requires achievement of customer-defined qualification milestones, acceptable manufacturing yields, and cost targets. In later stages of the Design Win Cycle, we support:

- Process window characterization,
- Yield improvement initiatives,
- Statistical process control refinement,
- Cost modeling and reduction efforts, and
- Validation of repeatability at scale.

Production ramp may occur gradually as customers validate reliability under environmental and operational stress conditions and confirm end-market demand.

Based on the current status of customer programs, we anticipate that revenues, if any, recognized during 2026 would primarily relate to material supply, non-recurring engineering ("NRE") arrangements, or prototype and development activities. We do not currently expect significant revenue from high-volume commercial production of customer products until 2027 at the earliest.

There can be no assurance that production ramp will occur on anticipated timelines, that foundry capacity will be available as required, or that customer qualification and yield targets will be achieved.

Scalability Across Deployment Architectures

As AI networking architectures expand across scale-up, scale-out, and scale-across applications, the number of deployed optical transceivers and modulator lanes may increase significantly. Our manufacturing model is intended to support scalability across these deployment dimensions by enabling customers to utilize established semiconductor fabrication capacity rather than relying on vertically integrated or specialized production facilities.

If customers transition to volume production incorporating our materials, incremental material demand may scale with transceiver volumes and per-lane deployment density, subject to architecture selection, foundry integration success, and customer design decisions.

Intellectual Property

Our Intellectual Property

Our research and development efforts over the past 10+ years have yielded our Company an extensive patent portfolio drawn to organic electro-optic (OEO) polymer materials, silicon photonics, and silicon-organic hybrid (SOH) slot modulator platforms (e.g., photonic integrated circuits (PICs), as well as critical, related trade secrets and proprietary knowledge. Our intellectual property portfolio has expanded significantly over the few years. We have actively filed technical utility patents and are currently in the process of readying a number of other inventions for formal filings in 2026 and 2027. We expect to continue innovating our technology platform over the next decade. We had additional patents issued or published over the past year indicating that our technology is being recognized as being unique.

In 2018, we acquired the polymer technology intellectual property assets of BrPhotonics Productos Optoelectrónicos S.A., a Brazilian corporation, which significantly advanced our patent portfolio of OEO polymer technology with fifteen polymer chemistry materials, devices, packaging and subsystems patents and further strengthened our design capabilities to solidify our market position as we prepare to enter the 400Gbps integrated photonics marketplace with a highly competitive, scalable alternative to installed legacy systems.

In 2022, we acquired the polymer technology and intellectual property assets of Chromosol Ltd (UK), which significantly strengthened our Company's design capabilities with foundry PDKs with extremely low temperature atomic layer deposition (ALD) processes that effectively hermetically seal SOH and other OEO polymer devices that have been prepared for high volume manufacturing. The advanced fabrication processes of ALD with temperatures below 100C° will solidify our market position with both the Company's manufacturing foundry partners as well as end-users as we prepare to enter the 800Gbps integrated photonics marketplace. The acquisition also advanced our Company’s patent portfolio of OEO polymer technology with an innovative polymer chemistry device patent that has potential to increase the performance of integrated modulators through optical amplification in a PIC format and enhance the functionality of the PIC by integrating laser light sources made using the polymer-based gain and a laser optical cavity defined on the Silicon photonic platform, with our Company’s high speed, high efficiency modulators.

In total, our patent portfolio as of December 31, 2025, consists of 67 granted patents that include 45 from the US, 1 from Canada, 2 from the United Kingdom, 12 from the EU, 1 from Japan, 5 from China (including Hong Kong), and 1 from Korea.

Our materials patent portfolio has also strengthened significantly with the filing of additional new patent applications on our core Perkinamine® molecular compounds as well as recent, innovative inventions that are expected to protect our P2IC polymer PIC platform from potential competition.

Included in our patent portfolio are the following nonlinear optic chromophore designs:

- Stable Free Radical Chromophores, processes for preparing the same
- Tricyclic Spacer Systems for Nonlinear Optical Devices
- Anti-Aromatic Chromophore Architectures
- Heterocyclical Anti-Aromatic Chromophore Architectures
- Heterocyclical Chromophore Architectures
- Heterocyclical Chromophore Architectures with Novel Electronic Acceptor Systems
- Nonlinear Optical Chromophores Containing Spirofluorene-Isophorone Bridging Groups
- Nonlinear Optical Chromophores Containing Furanyl Accepting Groups
- Nonlinear Optical Chromophores Containing 3-Aminocyclohex-2-en-1-one Based Donor Groups

- Nonlinear Optical Chromophores Containing 3-Methyl-2-cyclopenten-1-one Based Bridge Structures
- Nonlinear Optical Chromophores with Ring-locked Donors that Increase r33 and Stability
- Nonlinear Optical Chromophores with Bridges that Increase Refractive Index
- Nonlinear Optical Chromophores with Acceptors that Increase Refractive Index
- Nonlinear Optical Chromophores with Donors that Increase Refractive Index
- Nonlinear Optical Chromophores with Increased Visible Light Transparency
- Nonlinear Optical Chromophores Containing Donors with Substituents Giving High Steric Hinderance
- Electro-optic Polymers Devices Having High Performance Claddings
- Nonlinear Optical Chromophores Comprising a Diamondoid Group
- Nonlinear Optical Chromophores Containing High Boiling Point Solvents
- Nonlinear Optical Chromophores Having Tetrahydrocarbazole Donor Groups, Lyotropic Compositions Containing the Same, and Methods of Poling Such Compositions
- Nonlinear Optical Chromophores Having Short-chain Bridge Structures, Low Optical Loss Materials Containing the Same, and Methods for Preparing the Same
- Nonlinear Optical Chromophores with Indolizine Donor Groups
- Nonlinear Optical Chromophores with Michler's Base-Type Donors
- Methods of Synthesizing Chromophore Acceptors
- Mitigating Photodegradation of Organic Electra-Optic Materials

Our patent portfolio includes patents not only to nonlinear optic chromophore designs, but also device designs and inventions, fabrication process inventions, packaging design inventions, as well as novel chemistry to enable high performance, low power, small footprint polymer PIC technology. Included in our patent portfolio are the following device designs and fabrication methods:

- Electro-Optic Polymer Devices Having High Performance Claddings, and Methods of Preparing The Same
- Devices And Methods For Electro-Optic Polymer Optic Pathways for Poling and Operation
- Materials for Optoelectronic Devices, Methods of Fabrication Thereof and Materials Therefor
- Wafer-Level Poling of Electro-Optic Phase Modulators
- Patterning Techniques for EO Polymer Films for Use in Slot Modulators and Other Applications
- Encapsulation Material and Processes for Thin Film Devices
- Deposition Techniques for EO Polymer Films for Use in Slot Modulators and Other Applications
- Intrinsically Low Resistivity Hybrid Sol-Gel Polymer Clads and Electro-Optic Devices Made Therefrom

Our strategic plan is to utilize our core proprietary technology and leverage our proprietary optical materials to be the core of and the enabling technology for future generations of optical devices, modules, sub-systems and systems that we will develop or potentially out-license to electro-optic device manufacturers. Our Company contemplates future applications that may address the needs of semiconductor companies, automotive/LiDAR companies, sensing companies, aerospace companies and government agencies.

We rely on a combination of patents, patent applications, trademarks, trade secrets and contractual provisions to protect our technologies. Further, employees are required to surrender any inventions or intellectual property developed as part of their employment agreements. We also have a policy of requiring prospective business partners to enter into non-disclosure agreements (NDAs) before disclosure of any of our confidential or proprietary information. Our Company can make no assurances that we will be able to effectively protect our technologies and know-how or that third parties will not be able to develop similar technologies and know-how independently.

Layered Protection Strategy

Our intellectual property strategy is designed to provide multiple layers of protection:

1. **Composition-of-Matter Patents**
   These patents cover proprietary electro-optic polymer formulations and molecular structures. Composition-of-matter protection may provide broader protection than process-only claims, subject to enforceability and jurisdictional scope.
2. **Process and Integration Patents**
   These patents cover fabrication techniques, BEOL integration methods, deposition approaches, and process compatibility with semiconductor manufacturing environments.

3. **Device Architecture Patents**
   These patents relate to modulator designs, waveguide geometries, and integration structures incorporating our materials.

By combining composition, process, and device-level protection, we seek to support commercialization through material supply, licensing arrangements, and potential royalty-bearing agreements.

Trade Secrets and Know-How

In addition to patent protection, we rely on trade secrets, proprietary know-how, and confidentiality agreements to protect aspects of our technology that may not be publicly disclosed.

These include:

- Detailed formulation techniques,
- Process parameters and yield optimization methods,
- Reliability enhancement techniques, and
- Customer-specific integration data.

Employees, contractors, and collaborators are typically subject to confidentiality and intellectual property assignment agreements.

Patent Term and Limitations

Issued patents have limited terms and are subject to expiration, challenge, invalidation, or circumvention. Issued patents expire on various dates from 2027 through 2044. The scope, enforceability, and commercial value of individual patents may vary by jurisdiction.

We cannot assure that our patent portfolio will prevent competitors from developing alternative technologies, that pending applications will mature into issued patents, or that issued patents will provide a sustained competitive advantage.

IP and Licensing Model Alignment

Our intellectual property portfolio supports our business model by enabling:

- Field-of-use licensing structures,
- Technology transfer arrangements,
- Material supply agreements tied to patented integration methods, and
- Potential royalty-bearing production agreements.

The structure and economics of such arrangements vary depending on negotiated terms and customer requirements.

Competition

The markets for optical modulators and silicon photonics technologies are highly competitive and characterized by rapid technological change, evolving industry standards, and significant capital investment. We compete with a range of companies developing alternative materials systems, device architectures, and integration approaches.

Many of our current and potential competitors are larger, more established companies with substantially greater financial, technical, manufacturing, and marketing resources. Some competitors operate their own wafer fabrication facilities or are vertically integrated across multiple layers of the photonics value chain.

Competing Technologies

Optical modulators may be implemented using several different material platforms and device structures, including:

Silicon-Based Modulators

Conventional silicon photonics modulators typically rely on carrier depletion or carrier injection effects within silicon waveguides. These approaches benefit from compatibility with established CMOS fabrication processes and large-scale foundry

ecosystems. Ongoing development efforts seek to improve bandwidth, reduce power consumption, and enhance integration density.

Thin-Film Lithium Niobate (TFLN)

Thin-film lithium niobate technologies leverage the electro-optic properties of crystalline materials to achieve high-speed modulation. TFLN solutions have gained attention for bandwidth performance and may be deployed in both pluggable transceiver and advanced packaging architectures.

III-V Compound Semiconductor Devices

Indium phosphide and other III-V material systems are used in certain modulated laser and photonic device architectures. These technologies are widely deployed in telecommunications and coherent optical systems and benefit from long operational track records.

Other Emerging Materials and Architectures

Additional material platforms and hybrid integration approaches continue to be explored within the industry, including heterogeneous integration and novel electro-optic materials.

Architectural Tradeoffs and Industry Dynamics

The rapid growth of AI networking has placed significant performance and power-efficiency pressure on optical interconnect technologies. As aggregate data rates move toward 1.6T and beyond, industry participants are evaluating multiple architectural pathways to achieve required throughput.

Many development efforts are focused on increasing per-lane data rates through ultra-high-speed modulators capable of operating at 200G per lane and beyond. Higher per-lane bandwidth can reduce the number of required lanes, potentially lowering packaging complexity, footprint, and power consumption.

However, if ultra-high-speed modulation targets prove difficult to achieve reliably, economically, or at acceptable yields, system designers may adopt alternative scaling strategies. These may include increasing the number of parallel optical lanes while operating at lower per-lane speeds, sometimes referred to as “wide and slow” architectures. Such approaches can increase aggregate throughput by expanding lane count rather than pushing the performance limits of individual modulators.

The relative adoption of high-speed per-lane scaling versus wider parallel implementations will depend on technical feasibility, power budgets, packaging constraints, yield performance, and overall system economics.

Our electro-optic polymer materials are designed to support high-speed, high-bandwidth optical modulation and compact device geometries, which may be relevant in architectures prioritizing higher per-lane bandwidth. At the same time, broader architectural shifts toward increased parallelism could alter modulator content requirements, integration approaches, and competitive dynamics.

Competitive Factors

Adoption of optical modulation technologies depends on a range of technical and commercial factors, including:

- Achievable modulation bandwidth and signal integrity,
- Drive voltage requirements and associated power consumption,
- Compatibility with established semiconductor fabrication processes,
- Reliability and environmental stability,
- Yield performance and cost at scale,
- Ecosystem support and foundry availability, and
- Qualification history and customer risk tolerance.

While our materials are engineered to address several of these factors, competing technologies may improve over time, may offer advantages in certain applications, or may benefit from earlier market adoption and established customer relationships.

Market Adoption Considerations

Customers in the data center and telecommunications markets typically require extensive qualification cycles and long-term reliability validation before deploying new technologies. Switching costs, ecosystem inertia, and supplier relationships may influence technology selection decisions.

Even where performance advantages are demonstrated, adoption may depend on:

- Availability of foundry capacity,
- Alignment with customer product roadmaps,
- Cost competitiveness at target volumes,
- Broader industry standardization trends, and
- Architectural decisions regarding per-lane scaling versus parallel expansion.

There can be no assurance that our technology will achieve widespread market adoption or that it will displace incumbent solutions in any given application.

Human Capital

As of December 31, 2025, we employed 34 full-time employees (FTEs), excluding two employees that retired on December 31, 2025. Our workforce includes personnel engaged in research and development, materials synthesis, device integration, process engineering, quality control, business development, and general and administrative functions. Approximately 23 FTEs were engaged in research and development activities and 11 FTEs were engaged in selling, general and administrative functions.

Our technical team includes scientists and engineers with backgrounds in organic chemistry, polymer science, photonics, semiconductor process integration, materials engineering, and device design. Many members of our technical staff have prior experience in semiconductor manufacturing environments, silicon photonics development, or specialty materials commercialization.

Technical Expertise and Commercialization Focus

Our commercialization strategy requires cross-disciplinary expertise spanning materials chemistry, device physics, semiconductor process integration, reliability engineering, and customer support. As customer programs progress through the Design Win Cycle, our technical personnel support:

- Material formulation optimization,
- Back-end-of-line (“BEOL”) integration process development,
- Process design kit (“PDK”) enablement,
- Yield improvement and reliability validation,
- Alignment with customer product roadmaps, and
- Foundry coordination and technology transfer activities.

We continue to evaluate hiring needs based on program progression, manufacturing scale requirements, and strategic priorities.

Talent Retention and Competition

The markets in which we operate are characterized by competition for highly skilled technical personnel, particularly in semiconductor process engineering, photonics design, and advanced materials development. Our ability to attract, develop, and retain qualified employees is important to our long-term success.

We seek to foster a collaborative environment focused on innovation, technical rigor, and disciplined commercialization. Our compensation programs are designed to align employee interests with long-term stockholder value and may include equity-based incentives.

Workforce Development and Culture

We emphasize cross-functional collaboration among materials scientists, engineers, and commercial personnel to support integration within semiconductor manufacturing ecosystems. As we transition from research-focused activities toward commercialization and production ramp, we continue to evolve internal processes, documentation standards, and quality systems to support scalable operations.

We are committed to maintaining a safe working environment and complying with applicable labor, environmental, and safety regulations.

Facilities

Our principal executive offices and laboratory facilities are located in Englewood, Colorado. This facility supports research and development activities, electro-optic polymer synthesis, materials characterization, device integration, back-end-of-line ("BEOL") process development, and early-stage commercial material supply.

The Englewood facility houses laboratory space, materials processing equipment, analytical instrumentation, and office space supporting scientific, engineering, and administrative functions. Current operations are designed to support customer evaluation programs, prototype support, BEOL integration activities, and limited commercial material production.

As customer programs advance toward potential high-volume production, additional capital investment, equipment procurement, facility expansion, or supplemental third-party manufacturing arrangements may be required to support increased material output and process scale.

We believe our existing facilities are adequate to support current operations. Future facility requirements will depend on commercialization progress, production ramp timelines, and strategic capital allocation decisions.

Glossary

Glossary of select technology terms to provide you with a better understanding our Company's technology and devices:

Electro-optic devices - 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.

Electro-optic material - Electro-optic material is the core active ingredient in high-speed fiber-optic telecommunication systems. Electro-optic materials are materials that are engineered at the molecular level. Molecular level engineering is commonly referred to as "nanotechnology."

Electro-optic modulators - Electro-optic (E/O) modulators are electro-optic devices that perform electric-to-optic conversions within the infrastructure of the internet. Data centers may also benefit from this technology through devices that could significantly increase bandwidth and speed while decreasing costs. Polymer E/O modulators can be designed and fabricated with multiple structures. The waveguides allow the light to be efficiently coupled into and out of the modulators, and provide a basis for integrating modulators together.

Photonic Devices - Photonic devices are components for creating, manipulating, or detecting light. This can include modulators, laser diodes, light-emitting diodes, solar and photovoltaic cells, displays and optical amplifiers. Other examples are devices for modulating a beam of light and for combining and separating beams of light of different wavelength.

Polymers - Polymers, also known as plastics, are large carbon-based molecules that bond many small molecules together to form a long chain. Polymer materials can be engineered and optimized using nanotechnology to create a system in which unique surface, electrical, chemical, and electro-optic characteristics can be controlled. Materials based on polymers are used in a multitude of industrial and consumer products, from automotive parts to home appliances and furniture, as well as scientific and medical equipment.

Available Information

We maintain a website at www.lightwavelogic.com. We make available on our website under "Investors" – "SEC Filings," free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports as soon as reasonably practicable after we electronically file or furnish such material with the SEC. References to our website in this report are provided as a convenience, and the information on our website is not, and shall not be deemed to be a part of this Annual Report on Form 10-K or incorporated into any other filings we make with the SEC. The SEC maintains an Internet site (www.sec.gov) that contains reports, proxy and information statements, and other information

regarding issuers that file electronically with the SEC. In addition, we make available on our website under "Investors – Corporate Governance – Governance Documents", free of charge, our Audit Committee Charter, Compensation Committee Charter, Nominating and Corporate Governance Committee Charter and Code of Ethics and Business Conduct.

We were incorporated under the laws of the State of Nevada on June 24, 1997. In 2004, we acquired PSI-TEC Corp., and in 2006 we merged with PSI-TEC Corp. In 2008, we changed our name to Lightwave Logic, Inc.

Item 1A. Risk Factors.

Risks Related to our Business

Investing in our common stock is risky. In addition to the other information contained in this Annual Report on Form 10-K, you should consider carefully the following risk factors in evaluating our business and us. If any of the following events actually occur, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose all or part of your investment. References to past events are provided by way of example only and are not intended to be a complete listing or a representation as to whether or not such factors have occurred in the past or their likelihood of occurring in the future. The risks described below are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also significantly impair our business operations and could result in a complete loss of your investment.

We have incurred substantial operating losses since our inception and will continue to incur substantial operating losses for the foreseeable future.

Since our inception, we have been engaged primarily in the research and development of our electro-optic polymer materials technologies and products. As a result of these activities, we have incurred significant losses and have experienced negative cash flow since our inception. We incurred a net loss of $20,313,797 for the year ended December 31, 2025, and a net loss of $22,535,041 for the year ended December 31, 2024. As of December 31, 2025, we had an accumulated deficit of $167.3 million. We anticipate that we will continue to incur operating losses through at least 2027.

We may not be able to generate significant revenue either through customer contracts for our existing or future products or technologies or through development contracts from the U.S. government or government subcontractors. We expect to continue to make significant operating and capital expenditures for research and development and to improve and expand production, sales, marketing and administrative systems and processes. As a result, we will need to generate significant revenue to achieve profitability. We cannot assure you that we will ever achieve profitability.

We are subject to the risks frequently experienced by early-stage companies.

The likelihood of our success must be considered in light of the risks frequently encountered by early-stage companies, especially those formed to develop and market new technologies. These risks include our potential inability to:

- Establish significant product sales and marketing capabilities;
- Establish and maintain significant markets for our products and future products;
- Identify, attract, retain and motivate qualified personnel;
- Continue to develop and upgrade our technologies to keep pace with changes in technology and the growth of markets using polymer-based materials;
- Develop expanded product production facilities, along with silicon-based foundry and other outside contractor relationships; and
- Maintain our reputation and build trust with customers.

Our failure to effectively manage our growth and effectively transition from our focus on research and development activities to commercial operations could harm our business.

Failure to manage growth of operations could harm our business. To date, a large number of our activities and resources have been directed at the research and development of our technologies and development of potential related products including work in association with external partners. The transition from a focus on research and development to being a vendor of products requires effective planning and management. Additionally, growth arising from expected synergies from any future acquisitions will require effective planning and management. Future expansion will be expensive and will likely strain management and other resources.

In order to effectively manage growth, we must:

- Continue to develop an effective planning and management process to implement our business strategy;
- Hire, train and integrate new personnel in all areas of our business;
- Expand our facilities and increase capital investments; and
- Continue to successfully partner with silicon-based foundries.

We cannot assure you that we will be able to accomplish these tasks effectively or otherwise effectively manage our growth.

We will require additional capital to continue to fund our operations and if we do not obtain additional capital, we may be required to substantially limit our operations.

Our business does not presently generate the cash needed to finance our current and anticipated operations. Based on our current operating plan and budgeted cash requirements, we believe that we have sufficient funds to finance our operations through at least December 2027; 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. We expect that we will need to seek additional funding through public or private financings, including equity financings, and through other arrangements, including collaborative arrangements. Poor financial results, unanticipated expenses or unanticipated opportunities could require additional financing sooner than we expect. Other than with respect to the Roth Sales Agreement for up to $35 million we entered into with Roth Capital on December 9, 2022, we have no plans or arrangements with respect to the possible acquisition of additional financing, and such financing may be unavailable when we need it or may not be available on acceptable terms. We currently have a remaining amount of $12.2 million that is available to our Company pursuant to the Roth Sales Agreement.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this Annual Report on Form 10-K. We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect.

Additional financing may not be available to us, due to, among other things, our Company not having a sufficient credit history, income stream, profit level, asset base eligible to be collateralized, or market for its securities. If we raise additional funds by issuing equity or convertible debt securities, the percentage ownership of our existing shareholders may be reduced, and these securities may have rights superior to those of our common stock. If adequate funds are not available to satisfy our long-term capital requirements, or if planned revenues are not generated, we may be required to substantially limit our operations.

We are entering new markets, and if we fail to accurately predict growth in these new markets, we may suffer substantial losses.

We are initially targeting applications in fiber optic data communications and telecommunications markets, in particular ultra-high bandwidth optical connections deployed inside and between datacenters and/or AI clusters. In addition, we are exploring other applications that include automotive/LIDAR, sensing, displays, storage, aerospace and defense, satellites, quantum computing etc., for our polymer technology platform. We expect to continue to develop products for these markets and to seek to identify new markets. These markets change rapidly, and we cannot assure you that they will grow or that we will be able to accurately forecast market demand, or lack thereof, in time to respond appropriately. Our investment of resources to develop products for these markets may either be insufficient to meet actual demand or result in expenses that are excessive in light of actual sales volumes. Failure to predict growth and demand accurately in new markets may cause us to suffer substantial losses. In addition, as we enter new markets, there is a significant risk that:

- The market may not accept the price and/or performance of our products;
- There may be issued patents we are not aware of that could block our entry into the market or could result in excessive litigation; and
- The time required for us to achieve market acceptance of our products may exceed our capital resources that would require additional investment.

Our plan to develop relationships with strategic partners may not be successful.

Part of our business strategy is to maintain and develop strategic relationships with private firms, such as packaging companies and silicone-based foundries, and to a lesser extent, government agencies and academic institutions, to conduct research and development and testing of our products and technologies. For these efforts to be successful, we must identify partners whose competencies complement ours. We must also successfully enter into agreements with them on terms attractive

to us, and integrate and coordinate their resources and capabilities with our own. We may be unsuccessful in entering into agreements with acceptable partners or negotiating favorable terms in these agreements. Also, we may be unsuccessful in integrating the resources or capabilities of these partners. In addition, our strategic partners may prove difficult to work with or less skilled than we originally expected. If we are unsuccessful in our collaborative efforts, our ability to develop and market products could be severely limited.

The failure to establish and maintain collaborative relationships may have a materially adverse effect on our business.

We are initially targeting applications in fiber optic data communications and telecommunications markets, in particular ultra-high bandwidth optical connections deployed inside and between datacenters and/or AI clusters. In addition, we are exploring other applications that include automotive/LIDAR, sensing, displays, storage, aerospace and defense, satellites, quantum computing etc., for our polymer technology platform. Our ability to generate significant revenues depends significantly on the extent to which potential customers and other potential industry partners develop, promote and sell systems that incorporate our products, which, of course, we cannot control. Any failure by potential customers and other potential industry partners to successfully develop and market systems that incorporate our products could adversely affect our sales. The extent to which potential customers and other industry partners develop, promote and sell systems incorporating our products is based on a number of factors that are largely beyond our ability to control.

We may participate in joint ventures that expose us to operational and financial risk.

We may participate in one or more joint ventures for the purpose of assisting us in carrying out our business expansion, especially with respect to new product and/or market development. We may experience with our joint venture partner(s) issues relating to disparate communication, culture, strategy, and resources. Further, our joint venture partner(s) may have economic or business interests or goals that are inconsistent with ours, exercise their rights in a way that prohibits us from acting in a manner which we would like, or they may be unable or unwilling to fulfill their obligations under the joint venture or other agreements. We cannot assure you that the actions or decisions of our joint venture partners will not affect our operations in a way that hinders our corporate objectives or reduces any anticipated cost savings or revenue enhancement resulting from these ventures.

If we fail to develop and introduce new or enhanced products on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.

We plan to operate in a dynamic environment characterized by rapidly changing technologies and industry standards and technological obsolescence. To compete successfully, we must design, develop, market and sell products that provide increasingly higher levels of performance and reliability and meet the cost expectations of our customers. The introduction of new products by our competitors, the market acceptance of products based on new or alternative technologies, or the emergence of new industry standards could render our anticipated products obsolete. Our failure to anticipate or timely develop products or technologies in response to technological shifts could adversely affect our operations. In particular, we may experience difficulties with product design, manufacturing, marketing or certification that could delay or prevent our development, introduction or marketing of products. If we fail to introduce products that meet the needs of our customers or penetrate new markets in a timely fashion our Company will be adversely affected.

Our future growth will suffer if we do not achieve sufficient market acceptance of our organic nonlinear optical materials.

We expect our patented and patent-pending optical materials along with trade secrets and licensed materials, to be the core of and the enabling technology for future generations of optical devices, modules, sub-systems and systems that we will develop or out-license to electro-optic device manufacturers. Most of our materials are still in the development stage, and we do not know when a market for our materials will develop, if at all. Our success depends, in part, upon our ability to gain market acceptance of our organic nonlinear optical materials. To be accepted, our materials must meet the technical and performance requirements of our potential customers. OEMs, suppliers or government agencies may not accept polymer-based materials. In addition, even if we achieve some degree of market acceptance for our materials in one industry, we may not achieve market acceptance in other industries that we are targeting. Also, certain large corporations may be predisposed against doing business with a company of our limited size and operating history.

Our potential customers require our products to undergo a lengthy and expensive qualification process, which does not assure product sales.

Prior to purchasing our products, our potential customers will require that our products undergo extensive qualification processes. These qualification processes may continue for several months or more. However, qualification of a product by a customer does not assure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision to the product, changes in our customer's manufacturing process or our selection of a new supplier may require a new qualification process, which may result in additional delays. Also, once one of our products is

qualified, it could take several additional months or more before a customer commences volume production of components or devices that incorporate our products. Despite these uncertainties, we are devoting substantial resources, including design, engineering, sales, marketing and management efforts, to qualifying our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, sales of our products to a customer may be precluded or delayed, which may impede our growth and cause our business to suffer.

Obtaining a sales contract with a potential customer does not guarantee that a potential customer will not decide to cancel or change its product plans, which could cause us to generate no revenue from a product and adversely affect our results of operations.

Even after we secure a sales contract with a potential customer, we may experience delays in generating revenue from our products as a result of a lengthy development cycle that may be required. Potential customers will likely take a considerable amount of time to evaluate our products; it could take 12 to 24 months from early engagement by our sales team to actual product sales. The delays inherent in these lengthy sales cycles increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated sales. In addition, any delay or cancellation of a customer's plans could materially and adversely affect our financial results, as we may have incurred significant expense and generated no revenue. Finally, our customers' failure to successfully market and sell their products could reduce demand for our products and materially and adversely affect our business, financial condition and results of operations. If we were unable to generate revenue after incurring substantial expenses to develop any of our products, our business would suffer.

Many of our products will have long sales cycles, which may cause us to expend resources without an acceptable financial return and which makes it difficult to plan our expenses and forecast our revenue.

Many of our products will have long sales cycles that involve numerous steps, including initial customer contacts, specification writing, engineering design, prototype fabrication, pilot testing, regulatory approvals (if needed), sales and marketing and commercial manufacture. During this time, we may expend substantial financial resources and management time and effort without any assurance that product sales will result. The anticipated long sales cycle for some of our products makes it difficult to predict the quarter in which sales may occur. Delays in sales may cause us to expend resources without an acceptable financial return and make it difficult to plan expenses and forecast revenues.

Successful commercialization of our current and future products will require us to maintain a high level of technical expertise.

Technology in our target markets is undergoing rapid change. To succeed in our target markets, we will have to establish and maintain a leadership position in the technology supporting those markets. Accordingly, our success will depend on our ability to:

- Accurately predict the needs of our target customers and develop, in a timely manner, the technology required to support those needs;
- Provide products that are not only technologically sophisticated but are also available at a price acceptable to customers and competitive with comparable products;
- Establish and effectively defend our intellectual property; and
- Enter into relationships with other companies that have developed complementary technology into which our products may be integrated.

We cannot assure you that we will be able to achieve any of these objectives.

One of our significant target markets is the telecommunications market, which historically has not accepted polymer modulators.

One of our significant target markets is the telecommunications market, which demands high reliability optical components. Historically, polymer modulators have not been accepted into this market even though polymer modulators have achieved Telcordia™ based specifications. It is clear that the telecommunications market is demanding higher and higher data rates for its optical components, and may again decide that polymer based modulators are not suitable even if higher data rates, high reliability, and low power consumption are demonstrated.

Another of our significant target markets is the data communications (datacenter and/or high performance computing) market, which may be subject to heavy competition from other PIC based technologies such as silicon photonics and Indium Phosphide.

Another of our significant target markets is the fiber optic data communications market, in particular ultra-high bandwidth optical connections deployed inside and between datacenters and/or AI clusters, which may be subject to heavy competition from other PIC based technologies such as silicon photonics and Indium Phosphide. As the demands for high performance, low cost ($/Gbps) is implemented into next generation architectures, polymer modulators and polymer based PIC products may be subject to significant competition. Furthermore, there is a potential that technologies such as silicon photonics and Indium Phosphide might reach the metric of $1/Gbps at 800Gbps before ours. Customers may then be less willing to purchase new technology such as ours or invest in new technology development such as ours for next generation systems.

Our inability to successfully acquire and integrate other businesses, assets, products or technologies could harm our business and cause us to fail at achieving our anticipated growth.

We may grow our business through strategic acquisitions and investments, and we are actively evaluating acquisitions and strategic investments in businesses, products or technologies that we believe could complement or expand our product offering, create and/or expand a client base, enhance our technical capabilities or otherwise offer growth or cost-saving opportunities. From time to time, we may enter into letters of intent with companies with which we are negotiating potential acquisitions or investments or as to which we are conducting due diligence. Although we are currently not a party to any binding material definitive agreement with respect to potential investments in, or acquisitions of, complementary businesses, products or technologies, we may enter into these types of arrangements in the future, which could materially decrease the amount of our available cash or require us to seek additional equity or debt financing. We have limited experience in successfully acquiring and integrating businesses, products and technologies. We may not be successful in negotiating the terms of any potential acquisition, conducting thorough due diligence, financing the acquisition or effectively integrating the acquired business, product or technology into our existing business and operations. Our due diligence may fail to identify all of the problems, liabilities or other shortcomings or challenges of an acquired business, product or technology, including issues related to intellectual property, product quality or product architecture, regulatory compliance practices, revenue recognition or other accounting practices, or employee or customer issues.

Additionally, in connection with any acquisitions we complete, we may not achieve the synergies or other benefits we expected to achieve, and we may incur write-downs, impairment charges or unforeseen liabilities that could negatively affect our operating results or financial position or could otherwise harm our business. If we finance acquisitions using existing cash, the reduction of our available cash could cause us to face liquidity issues or cause other unanticipated problems in the future. If we finance acquisitions by issuing convertible debt or equity securities, the ownership interest of our existing stockholders may be diluted, which could adversely affect the market price of our stock. Further, contemplating or completing an acquisition and integrating an acquired business, product or technology could divert management and employee time and resources from other matters, which could harm our business, financial condition and operating results.

Our failure to compete successfully could harm our business.

The markets that we are targeting for our proprietary electro-optic polymer systems and photonic devices are intensely competitive. Most of our present and potential competitors have or may have substantially greater research and product development capabilities, financial, scientific, marketing, manufacturing and human resources, name recognition and experience than we have. As a result, these competitors may:

- succeed in developing materials and product integration expertise that is equal to or superior to our offerings or that will achieve greater market acceptance than our offerings and future offerings;
- devote greater resources to developing, marketing or selling their products;
- respond more quickly to new or emerging technologies or scientific advances and changes in customer requirements, which could render our technologies obsolete;
- introduce products that make the continued development of our materials and future materials uneconomical;
- obtain patents that block or otherwise inhibit our ability to develop and commercialize our materials and future materials;
- withstand price competition more successfully than we can; and
- establish cooperative relationships among themselves or with third parties that enhance their ability to address the needs of our prospective customers.

Our failure to compete successfully against these existing or future competitors could harm our business.

The loss of certain of our key personnel, or any inability to attract and retain additional personnel, could impair our ability to attain our business objectives.

Our future success depends to a significant extent on the continued service of our key management personnel, particularly Yves LeMaitre, our Chief Executive Officer, Aref Chowdhury, Chief Technology Officer, Lance Thompson, Vice President of Engineering, and Robert Blum, Senior Vice President of Sales. Accordingly, the loss of the services of any of these persons would adversely affect our business and our ability to continue to commercialize our products, and impede the attainment of our business objectives.

Our future success will also depend on our ability to attract, retain and motivate highly skilled personnel to assist us with product development and commercialization. Competition for highly educated qualified personnel in the polymer industry is intense. If we fail to hire and retain a sufficient number of qualified management, engineering, sales and technical personnel, we will not be able to attain our business objectives.

If we fail to develop and maintain the quality of our manufacturing integration and design processes, our operating results would be harmed.

The manufacture and integration of our materials for devices is a multi-stage process that requires the use of high-quality materials and advanced manufacturing technologies and design. Also, polymer-related device development and manufacturing, whether performed by a silicon photonics design house or elsewhere, must occur in a highly controlled, clean environment to minimize particles and other yield and quality-limiting contaminants. In spite of stringent quality controls, weaknesses in process control or minute impurities in materials may cause a substantial percentage of a product in a lot to be defective. If we are not able to develop and continue to improve our manufacturing design processes, if stringent quality controls are not maintained, or if contamination problems arise, our operating results would be harmed.

The complexity of our organic nonlinear optical materials may lead to errors, defects and bugs, which could result in the necessity to redesign materials and could negatively impact our reputation with customers.

Organic nonlinear optical materials as complex as those we market and intend to market might contain errors, defects and bugs when first introduced or as new versions are released. Delivery and integration of materials with production defects or reliability, quality or compatibility problems could significantly delay or hinder market acceptance of our materials or result in a costly recall and could damage our reputation and adversely affect our ability to sell our materials. If our organic nonlinear optical materials experience defects, we may need to undertake a redevelopment of the materials, a process that may result in significant additional expenses.

We may also be required to make significant expenditures of capital and resources to resolve such problems. There is no assurance that problems will not be found in new products after commencement of commercial production, despite testing by our suppliers, our customers and us.

If we decide to make commercial quantities of products at our facilities, we will be required to make significant capital expenditures to increase capacity.

We lack the internal ability to manufacture products at a level beyond the stage of early commercial introduction. To the extent we do not have an outside vendor to manufacture our products, we will have to increase our internal production capacity and we will be required to expand our existing facilities or to lease new facilities or to acquire entities with additional production capacities. These activities would require us to make significant capital investments and may require us to seek additional equity or debt financing. We cannot assure you that such financing would be available to us when needed on acceptable terms, or at all. Further, we cannot assure you that any increased demand for our products would continue for a sufficient period of time to recoup our capital investments associated with increasing our internal production capacity.

In addition, we do not have experience manufacturing our products in large quantities. In the event of significant demand for our products, large-scale production might prove more difficult or costly than we anticipate and lead to quality control issues and production delays.

We may not be able to manufacture products at competitive prices.

To date, we have produced limited quantities of materials for license and sale and materials and devices for research, development, demonstration and prototype purposes. The cost per unit for these products currently exceeds the price at which we could expect to profitably sell them. If we cannot substantially lower our cost of production as we move into sales of products in significant commercial quantities, our financial results will be harmed.

We may be unable to export our products or technology to other countries, convey information about our technology to citizens of other countries or sell certain products commercially, if the products or technology are subject to United States export or other regulations.

We develop certain polymer-based products that we believe the United States government and other governments may be interested in using for military and information gathering or antiterrorism activities. United States government export regulations may restrict us from selling or exporting certain products into other countries, exporting our technology to those countries, conveying information about our technology to citizens of other countries or selling certain products to commercial customers. We may be unable to obtain export licenses for products or technology, if they become necessary. We currently cannot assess whether national security concerns would affect our future products and, if so, what procedures and policies we would have to adopt to comply with applicable existing or future regulations.

We are subject to regulatory compliance related to our operations.

We are subject to various U.S. governmental regulations related to occupational safety and health, labor and business practices. Failure to comply with current or future regulations could result in the imposition of substantial fines, suspension of production, alterations of our production processes, cessation of operations, or other actions, which could harm our business.

We may incur liability arising from the use of hazardous materials.

Our business and our facilities are subject to a number of federal, state and local laws and regulations relating to the generation, handling, treatment, storage and disposal of certain toxic or hazardous materials and waste products that we use or generate in our operations. Many of these environmental laws and regulations subject current or previous owners or occupiers of land to liability for the costs of investigation, removal or remediation of hazardous materials. In addition, these laws and regulations typically impose liability regardless of whether the owner or occupier knew of, or was responsible for, the presence of any hazardous materials and regardless of whether the actions that led to the presence were taken in compliance with the law. In our business, we use hazardous materials that are stored on site. We use various chemicals in our manufacturing process that may be toxic and covered by various environmental controls. An unaffiliated waste hauler transports the waste created by use of these materials off-site. Many environmental laws and regulations require generators of waste to take remedial actions at an off-site disposal location even if the disposal was conducted lawfully. The requirements of these laws and regulations are complex, change frequently and could become more stringent in the future. Failure to comply with current or future environmental laws and regulations could result in the imposition of substantial fines, suspension of production, alteration of our production processes, cessation of operations or other actions, which could severely harm our business.

Our data and information systems and network infrastructure may be subject to hacking or other cybersecurity threats. If our security measures are breached and an unauthorized party obtains access to our proprietary business information, our information systems may be perceived as being unsecure, which could harm our business and reputation, and our proprietary business information could be misappropriated which could have an adverse effect on our business and results of operations.

Our Company stores and transmits its proprietary information on its computer systems. Despite our security measures, our information systems and network infrastructure may be vulnerable to cyber-attacks or could be breached due to an employee error or other disruption that could result in unauthorized disclosure of sensitive information that has the potential to significantly interfere with our business operations. Breaches of our security measures could expose us to a risk of loss or misuse of this information, litigation and potential liability. Since techniques used to obtain unauthorized access or to sabotage information systems change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventive measures in advance of such an attack on our systems. In addition, we use third party vendors to store our proprietary information who use cyber or "Cloud" storage of information as part of their service or product offerings, and despite our attempts to validate the security of such services, our proprietary information may be misappropriated by other parties. In the event of an actual or perceived breach of our security, or the security of one of our vendors, the market perception of the effectiveness of our security measures could be harmed and we could suffer damage to our reputation or our business. Additionally, misappropriation of our proprietary business information could prove competitively harmful to our business.

We conduct significantly all of our research and development activities at our Englewood, CO facility, and circumstances beyond our control may result in considerable business interruptions.

We conduct significantly all of our research and development activities at our Englewood, CO facility. Our operations are vulnerable to interruption by fire, earthquake, floods or other natural disaster, quarantines or other disruptions associated with infectious diseases, national catastrophe, terrorist activities, war, disruptions in our computing and communications infrastructure due to power loss, telecommunications failure, human error, physical or electronic security breaches and computer viruses, and other events beyond our control. We do not have a detailed disaster recovery plan.

Risks Related to our Intellectual Property

We may be unable to obtain effective intellectual property protection for our products and technology.

Our intellectual property, or any intellectual property that we have or may acquire, license or develop in the future, may not provide meaningful competitive advantages. Our patents and patent applications, including those we license, may be challenged by competitors, and the rights granted under such patents or patent applications may not provide meaningful proprietary protection. For example, numerous patents held by third parties relate to polymer materials and electro-optic devices. These patents could be used as a basis to challenge the validity or limit the scope of our patents or patent applications. A successful challenge to the validity or limitation of the scope of our patents or patent applications could limit our ability to commercialize our polymer materials technology and, consequently, reduce our revenues.

Moreover, competitors may infringe our patents or those that we license, or successfully avoid these patents through design innovation. To combat infringement or unauthorized use, we may need to resort to litigation, which can be expensive and time-consuming and may not succeed in protecting our proprietary rights. In addition, in an infringement proceeding a court may decide that our patents or other intellectual property rights are not valid or are unenforceable, or may refuse to stop the other party from using the intellectual property at issue on the grounds that it is non-infringing. Policing unauthorized use of our intellectual property is difficult and expensive, and we may not be able to, or have the resources to, prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect these rights as fully as the laws of the United States.

We also rely on the law of trade secrets to protect unpatented technology and know-how. We try to protect this technology and know-how by limiting access to those employees, contractors and strategic partners with a need to know this information and by entering into confidentiality agreements with these parties. Any of these parties could breach the agreements and disclose our trade secrets or confidential information to our competitors, or these competitors might learn of the information in other ways. Disclosure of any trade secret not protected by a patent could materially harm our business.

We may be subject to patent infringement claims, which could result in substantial costs and liability and prevent us from selling our products.

Third parties may claim that our products or related technologies infringe their patents. Any patent infringement claims brought against us may cause us to incur significant expenses, divert the attention of our management and key personnel from other business concerns and, if successfully asserted against us, require us to pay substantial damages. In addition, as a result of a patent infringement suit, we may be forced to stop or delay developing, manufacturing or selling products that are claimed to infringe a patent covering a third party's intellectual property unless that party grants us rights to use its intellectual property. We may be unable to obtain these rights on terms acceptable to us, if at all. Even if we are able to obtain rights to a third party's patented intellectual property, these rights may be non-exclusive, and therefore our competitors may obtain access to the same intellectual property. Ultimately, we may be unable to sell our products or may have to cease some of our business operations as a result of patent infringement claims, which could severely harm our business.

If our products infringe the intellectual property rights of others, we may be required to indemnify customers for any damages they suffer. Third parties may assert infringement claims against our current or potential customers. These claims may require us to initiate or defend protracted and costly litigation on behalf of customers, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of these customers or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, we may be unable to continue selling such products.

Our technology may be subject to government rights.

We may have obligations to government agencies in connection with the technology that we have developed, including the right to require that a compulsory license be granted to one or more third parties selected by certain government agencies. It may be difficult to monitor whether these third parties will limit their use of our technology to these licensed uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse.

Risks Related to our Common Stock

We could be negatively affected as a result of a proxy contest and the actions of activist stockholders.

A proxy contest with respect to election of our directors, or other activist stockholder activities, could adversely affect our business because: (1) responding to a proxy contest and other actions by activist stockholders can be costly and time-consuming, disruptive to our operations and divert the attention of management and our employees; (2) perceived uncertainties as to our

future direction caused by activist activities may result in the loss of potential business opportunities, and may make it more difficult to attract and retain qualified personnel and business partners; and (3) if individuals are elected to our Board of Directors with a specific agenda, it may adversely affect our ability to effectively and timely implement our strategic plans.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934 (Exchange Act) the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act), the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), and the rules and regulations of The NASDAQ Stock Market. We expect that compliance with these rules and regulations will continue to increase our legal, accounting and financial compliance costs, make some activities more difficult, time-consuming and costly, and place significant strain on our personnel, systems and resources.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and the effectiveness of our disclosure controls and procedures quarterly. In particular, Section 404 of the Sarbanes-Oxley Act, (Section 404), requires us to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on, and our independent registered public accounting firm to attest to, the effectiveness of our internal control over financial reporting. Our compliance with applicable provisions of Section 404 requires that we incur substantial accounting expense and expend significant management time on compliance-related issues as we implement additional corporate governance practices and comply with reporting requirements. Moreover, if we are not able to comply with the requirements of Section 404 applicable to us in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities, stockholder or other third-party litigation, all of which would require additional financial and management resources.

Furthermore, investor perceptions of our Company may suffer if deficiencies are found, and this could cause a decline in the market price of our stock or hinder our ability to raise capital. Irrespective of compliance with Section 404, any failure of our internal control over financial reporting could have a material adverse effect on our stated operating results and harm our reputation. If we are unable to continue to implement and maintain these requirements effectively or efficiently, it could harm our operations, financial reporting, or financial results and could result in an adverse opinion on our internal controls from our independent registered public accounting firm.

The exercise of options and warrants and other issuances of shares of common stock or securities convertible into common stock will dilute your interest.

Our Board may determine from time to time that it needs to raise additional capital by issuing additional shares of our common stock or other securities and we are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, shares of our common stock. Because our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing, or nature of any future offerings, or the prices at which such offerings may be affected. Additional equity offerings may dilute the holdings of existing stockholders or reduce the market price of our common stock.

As of December 31, 2025, we have outstanding and exercisable options and warrants to purchase an aggregate of 8,186,290 shares of our common stock at exercise prices ranging from $0.51 to $16.81 per share with a weighted average exercise price of $3.57 per share. The exercise of options and warrants at prices below the market price of our common stock could adversely affect the price of shares of our common stock. Additional dilution may result from the issuance of shares of our capital stock in connection with any collaboration (although none are contemplated at this time) or in connection with other financing efforts, including pursuant to the Roth Sales Agreement with Roth Capital. Any issuance of our common stock that is not made solely to then-existing stockholders proportionate to their interests, such as in the case of a stock dividend or stock split, will result in dilution to each stockholder by reducing his, her or its percentage ownership of the total outstanding shares. Moreover, if we issue options or warrants to purchase our common stock in the future and those options or warrants are exercised or we issue restricted stock, stockholders may experience further dilution. Holders of shares of our common stock have no preemptive rights that entitle them to purchase their pro rata share of any offering of shares of any class or series.

The trading price of our common stock has been, and may continue to be, volatile, and the value of our common stock may decline. This volatility, as well as general market conditions, may cause our stock price to fluctuate greatly and even potentially expose us to litigation.

Our common stock may be subject to continued volatility. During the 52 weeks in 2025, the share price for our common stock ranged from a low of $0.79 to a high of $6.26. We cannot assure you that the market price for our common stock will be less volatile or will remain at its current level. A decrease in the market price for our shares could result in substantial losses for

investors. The market price of our common stock may be significantly affected by one or more of the following factors, many of which are beyond our control, including:

- our Company's ability to execute on its business plan;
- the status of particular development programs and the timing of performance under specific development agreements;
- actual or anticipated demand for our products and future products and technologies;
- amount and timing of our costs related to our development and marketing efforts or other initiatives and expansion of our operations;
- changes in anticipated commercial deployment of certain products and financial results;
- our ability to enter into, renegotiate or renew key agreements or strategic relationships;
- our ability to develop expanded product production facilities, along with silicon-based foundry and other outside contractor relationships;
- issuance of new or updated research or reports by securities analysts;
- the use by investors or analysts of third-party data regarding our business that may not reflect our operations;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- large trades, block trades or short selling of our common stock;
- actual or anticipated changes in our competitive position relative to our industry competitors;
- announcements or implementation by our competitors of technological innovations or new products;
- changes in laws or regulations applicable to our products or industry;
- additions or departures of key personnel;
- capital-raising activities or commitments;
- product shortages requiring suppliers to allocate minimum quantities;
- the commencement or conclusion of legal proceedings that involve us;
- costs related to possible future acquisitions of technologies or businesses;
- economic conditions specific to our industry, as well as general economic and market conditions; or
- other events or factors, including those resulting from civil unrest, war, foreign invasions, terrorism, or public health crises or responses to such events.

Furthermore, the stock markets frequently experience extreme price and volume fluctuations that affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, elections, interest rate changes, or international currency fluctuations, may negatively impact the market price of our common stock. As a result of such fluctuations, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation or derivative litigation.

A sale of a substantial number of shares of our common stock may cause the price of our common stock to decline and may impair our ability to raise capital in the future.

Our common stock is traded on The NASDAQ Capital Market and, despite certain increases of trading volume from time to time, there have been periods when the market for our common stock could be considered "thinly-traded," meaning that the number of persons interested in purchasing our common stock at or near bid prices at any given time may be relatively small. Finance transactions or option/warrant exercises resulting in a large amount of newly issued shares that become readily tradable, or other events that cause current stockholders to sell shares, could place downward pressure on the trading price of our stock the trading price of our stock could decline.

If our existing stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market, including shares issued upon the exercise of outstanding options or warrants or pursuant to the Roth Sales Agreement, the market price of our common stock could decline. Sales of a substantial number of shares of our common stock may make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate.

Our common stock will be subject to potential delisting if we do not maintain the listing requirements of the Nasdaq Capital Market.

Our common stock commenced trading on The NASDAQ Capital Market on September 1, 2021. We cannot assure you that an active trading market for our common stock will continue to be sustained. Nasdaq has rules for continued listing, including, without limitation, minimum market capitalization and other requirements. Failure to maintain our listing, or de-listing from Nasdaq, would make it more difficult for stockholders to dispose of our securities and more difficult to obtain accurate

price quotations on our securities. This could have an adverse effect on the price of our common stock. Our ability to issue additional securities for financing or other purposes, or otherwise to arrange for any financing we may need in the future, may also be materially and adversely affected if our common stock and/or other securities are not traded on a national securities exchange.

If securities or industry analysts do not publish research or reports about our business, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for most listed companies' securities depends in part on the research and reports that securities or industry analysts publish about them or their business. We currently have no independent research analysts that cover our stock and we may not obtain research coverage by securities and industry analysts until our products are commercialized and we obtain revenues, and there is no assurances that we will ever obtain independent research analysts coverage. If no securities or industry analysts commence coverage of us, the trading price for our common stock could be negatively affected. In the event any analyst who covers us downgrades our securities, the price of our securities would likely decline. If one or more of these analysts ceases to cover us or fails to publish regular reports on us, interest in the purchase of our securities could decrease, which could cause the price of our common stock and its trading volume to decline.

Our Board of Directors has the authority, without stockholder approval, to issue preferred stock with terms that may not be beneficial to existing common stockholders and with the ability to affect adversely stockholder voting power and perpetuate their control over us.

Our articles of incorporation, as amended, allow us to issue shares of preferred stock without any vote or further action by our stockholders. Our Board of Directors has the authority to fix and determine the relative rights and preferences of preferred stock. Our Board of Directors also has the authority to issue preferred stock without further stockholder approval, including large blocks of preferred stock. As a result, our Board of Directors could authorize the issuance of a series of preferred stock that would grant to holders thereof the preferred right to our assets upon liquidation, the right to receive dividend payments before dividends are distributed to the holders of common stock or other preferred stockholders and the right to the redemption of the shares, together with a premium, prior to the redemption of our common stock or existing preferred stock, if any.

Preferred stock could be used to dilute a potential hostile acquirer. Accordingly, any future issuance of preferred stock or any rights to purchase preferred stock may have the effect of making it more difficult for a third party to acquire control of us. This may delay, defer or prevent a change of control or an unsolicited acquisition proposal. The issuance of preferred stock also could decrease the amount of earnings attributable to, and assets available for distribution to, the holders of our common stock and could adversely affect the rights and powers, including voting rights, of the holders of our common stock and preferred stock.

Our articles of incorporation and amended and restated bylaws, and certain provisions of Nevada corporate law, as well as certain of our contracts, contain provisions that could delay or prevent a change in control even if the change in control would be beneficial to our stockholders.

Nevada law, as well as our articles of incorporation, as amended, and amended and restated bylaws, contain anti-takeover provisions that could delay or prevent a change in control of our Company, even if the change in control would be beneficial to our stockholders. These provisions could lower the price that future investors might be willing to pay for shares of our common stock. These anti-takeover provisions:

- authorize our Board of Directors to create and issue, without stockholder approval, preferred stock, thereby increasing the number of outstanding shares, which can deter or prevent a takeover attempt;
- prohibit cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- empower our Board of Directors to fill any vacancy on our Board of Directors, whether such vacancy occurs as a result of an increase in the number of directors or otherwise;
- provide that our Board of Directors be divided into three classes, with approximately one-third of the directors to be elected each year;
- provide that special meetings of our stockholders may only be called by the chairperson, president or chief executive officer, or by resolution of the Board of Directors or at the request in writing of stockholders owning 66 2/3% in amount of the entire capital stock of the Company issued and outstanding and entitled to vote;
- establish advance notice procedures with regard to stockholder proposals relating to stockholder nominees for director and other stockholder proposals;
- provide that our Board of Directors is expressly authorized to adopt, amend or repeal our bylaws; and
- provide that our directors will be elected by a plurality of the votes cast in the election of directors.

Nevada Revised Statutes, the terms of our employee stock option agreements and other contractual provisions may also discourage, delay or prevent a change in control of our Company. Nevada Revised Statutes sections 78.378 to 78.3793 provide state regulation over the acquisition of a controlling interest in certain Nevada corporations unless the articles of incorporation or bylaws of the corporation provide that the provisions of these sections do not apply. Our articles of incorporation, as amended, and amended and restated bylaws do not state that these provisions do not apply. The statute creates a number of restrictions on the ability of a person or entity to acquire control of a Nevada company by setting down certain rules of conduct and voting restrictions in any acquisition attempt, among other things. The statute contains certain limitations and it may not apply to our Company. Our 2025 Equity Incentive Plan includes change-in-control provisions that allow us to grant options that may become vested immediately upon a change in control. Our Board of Directors also has the power to adopt a stockholder rights plan that could delay or prevent a change in control of our Company even if the change in control is generally beneficial to our stockholders. These plans, sometimes called "poison pills," are oftentimes criticized by institutional investors or their advisors and could affect our rating by such investors or advisors. If our Board of Directors adopts such a plan, it might have the effect of reducing the price that new investors are willing to pay for shares of our common stock.

Together, these charter, statutory and contractual provisions could make the removal of our management and directors more difficult and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our common stock. Furthermore, the existence of the foregoing provisions, as well as the significant common stock beneficially owned by our founders, executive officers, and members of our Board of Directors, could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity.

Cybersecurity Risk Management and Strategy. We rely on various software applications, information technology systems, computing infrastructure, and cloud service providers to effectively conduct business operations. Several of these systems are managed or utilize a third party administrator, implementing their own cybersecurity measures to safeguard our data.

We have not experienced a cybersecurity incident that resulted in a material adverse impact to our business or operations; however, there can be no guarantee that we will not experience such an incident in the future. For a description of the risks from cybersecurity threats that may materially affect our Company and how they may do so, please see "Risk Factors" included in Part I, Item 1A of this Annual Report on Form 10-K, including "Our data and information systems and network infrastructure may be subject to hacking or other cyber security threats. If our security measures are breached and an unauthorized party obtains access to our proprietary business information, our information systems may be perceived as being unsecure, which could harm our business and reputation, and our proprietary business information could be misappropriated which could have an adverse effect on our business and results of operations."

Cybersecurity Governance.

Our Vice President of Human Resources and Administration oversees our cybersecurity strategy, supported by an internal IT Manager and a third-party administrator. This structure ensures that cybersecurity remains a priority at the highest management levels while leveraging specialized expertise.

We maintain a comprehensive cyber risk management program that is designed to meet industry-standard best practices and processes to assess, identify, and manage material risks associated with cybersecurity threats to our information technology systems. Our cybersecurity framework is designed to proactively address potential vulnerabilities and mitigate risks.

The IT Manager oversees our information security policies and procedures, and coordinates with the third party administrator to ensure compliance with our security standards and management of third party risks. The Vice President of Human Resources and Administration provides regular updates to the audit committee of the Board of Directors, which is responsible for oversight of cybersecurity, as well as to the full board. Our information security policies and procedures are subject to regular reviews to adapt to evolving threats and to ensure ongoing compliance with regulatory requirements. By maintaining a robust cybersecurity posture, we protect our assets, safeguard sensitive information, and ensure the continuity of our operations.

Item 2. Properties.

Our principal executive office and research and development facility is located at 369 Inverness Parkway, Suite 350, Englewood, Colorado. The 23,104 square feet facility includes fully functional 1,000 square feet of class 1,000 cleanroom, 500 square feet of class 10,000 cleanroom, chemistry laboratories, and analytic laboratories, and serves as our office, laboratory and research and development space. Our total annual base rent during 2026 is expected to be approximately $399,199.

Item 3. Legal Proceedings.

We are not a party to any litigation of a material nature, nor are we aware of any threatened litigation of a material nature.

Item 4. Mine Safety Disclosures.

Not Applicable.

PART II

Item 5. Market For Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases Of Equity Securities.

Market Information

Our common stock trades on the Nasdaq Capital Market under the symbol LWLG.

Holders of Common Stock

On March 20, 2026, we had approximately 68 holders of our common stock, not including persons who hold our common stock in nominee or "street name" accounts through brokers or banks.

Dividend Policy

Our Company has never paid a cash dividend and has no present plans to pay cash dividends.

Securities Authorized for Issuance under Equity Compensation Plans

Equity Compensation Plans as of December 31, 2025.

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders[1]	8,371,078	$ 3.57	3,987,631
Equity compensation plans not approved by security holders [2]	275,000	$ 0.60	—
Total	8,646,078	$ 3.07	3,987,631

1. Reflects shares of common stock to be issued pursuant to our 2025 Equity Incentive Plan, 2016 Equity Incentive Plan and our 2007 Employee Stock Plan, all of which are for the benefit of our directors, officers, employees and consultants. We have reserved 6,000,000 shares of common stock for such persons pursuant to our 2025 Equity Incentive Plan. We terminated our 2016 Employee Stock Plan in May 2025 and no additional awards are made under that plan. We terminated our 2007 Employee Stock Plan in June 2016 and no additional awards are made under that plan.

2. Comprised of common stock purchase warrants we issued for services.

Recent Sales of Unregistered Securities

None during the period covered by this Annual Report on Form 10-K that were not previously disclosed in a Current Report on Form 8-K or in a Quarterly Report on Form 10-Q.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

None.

Item 6. RESERVED.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following management's discussion and analysis of financial condition and results of operations provides information that management believes is relevant to an assessment and understanding of our plans and financial condition. The following selected financial information is derived from our historical financial statements and should be read in conjunction with such financial statements and notes thereto set forth elsewhere within this Annual Report on Form 10-K and the "Forward-Looking Statements" explanation included elsewhere herein. For discussion and analysis pertaining to 2024 overview and highlights as compared to 2023, please refer to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission ("SEC") on March 18, 2025.

Overview

Lightwave Logic, Inc. is a specialty materials and intellectual property company focused on the development and commercialization of proprietary electro-optic ("EO") polymer materials designed to enable high-speed optical modulators for data communications and other photonic applications.

Our Perkinamine® family of EO polymer materials is engineered for integration into silicon photonics ("SiPh") and other photonic integrated circuit ("PIC") platforms. When incorporated into device architectures, these materials are designed to support high-speed, high-bandwidth optical modulation with lower drive voltage requirements relative to certain conventional silicon-based approaches and certain other traditional photonic material systems, including III-V–based technologies. The electro-optic properties of these materials can allow shorter interaction lengths in modulator designs, which can contribute to more compact device footprints and increased integration density. In addition, our materials are intended to be compatible with complementary metal-oxide-semiconductor ("CMOS") fabrication processes, which may facilitate integration into established semiconductor foundry workflows. Reduced drive voltage operation may enable lower system-level power consumption and simplified driver electronics in specific implementations.

We do not manufacture optical transceivers, photonic devices, or complete optical modules. Instead, our strategy is to commercialize our technology through a combination of material sales, intellectual property licensing, process design kit ("PDK") enablement, and royalty or other fee-based arrangements tied to customer production.

Our customers and prospective customers include semiconductor foundries, silicon photonics device designers, optical module manufacturers, and system integrators serving artificial intelligence ("AI"), cloud computing, data center, and telecommunications markets. We pursue customer adoption through a structured commercialization process designed to support evaluation, integration, qualification, and production readiness within established semiconductor manufacturing ecosystems.

As of January 2026, multiple customer programs are progressing through defined development stages under our commercialization framework. The timing and scale of potential production revenue depend on customer product qualification and adoption cycles, technical validation, manufacturing readiness, end-market demand, and broader industry conditions.

Unless the context otherwise requires, all references to the "Company," "we," "our" or "us" and other similar terms means Lightwave Logic, Inc. Also, this Form 10-K Annual Report may include the names of various government agencies and the trade names of other companies. Unless specifically stated otherwise, the use or display by us of such other parties' names and trade names in this report is not intended to and does not imply a relationship with, or endorsement or sponsorship of us by, any of these other parties.

Commencement of Commercial Operations

We commenced commercial operations in May 2023. Presently, our commercial operations consist of a material supply license agreement to provide Perkinamine® chromophore materials for polymer based photonic devices and photonic integrated circuits (PICs). The license agreement represents tangible commercial progress for electro-optic polymers as part of our Company's business plan. During 2025, we entered into a non-recurring engineering joint development arrangement with a customer to develop an electro-optical polymer-based modulator chip for use in communication applications

Business Strategy

Business Model - Material + IP Licensing

Our business model is centered on the commercialization of proprietary electro-optic polymer materials and related intellectual property through material supply and licensing arrangements.

We do not currently seek to manufacture finished optical transceivers, discrete photonic devices, or complete optical modules. Our strategy is to enable customers to incorporate our materials into their own device platforms and manufacturing ecosystems, leveraging established semiconductor foundry infrastructure.

Our revenue model may include one or more of the following components:

Material Sales

We supply EO polymer materials to customers for evaluation, prototyping, and potential commercial production. Material sales may occur during development phases as well as during volume manufacturing, subject to customer qualification and demand.

If customer programs transition to commercial production incorporating our materials, material revenue would be expected to scale with device volumes.

Intellectual Property Licensing

We may enter into licensing agreements covering aspects of our polymer compositions, device designs, integration processes, and related intellectual property. Licensing arrangements may include:

- Upfront license fees,
- Development or milestone-based payments, or
- Field-of-use or application-specific licenses.

The structure and economics of such agreements vary depending on customer requirements and the scope of intellectual property granted.

Royalty or Production-Based Fees

In certain arrangements, we may receive royalties or other production-based payments tied to the manufacture or sale of devices incorporating our materials or licensed technology. The structure, rate, and duration of such payments depend on negotiated terms and customer product lifecycles.

There can be no assurance that any given customer program will result in royalty-bearing production.

Revenue Timing Considerations

Customer engagements typically progress through multi-stage development cycles. During early stages, revenue may consist primarily of material sales, non-recurring engineering ("NRE") fees, prototype-related activities, or development support.

Based on the current status of customer programs, we anticipate that revenues, if any, recognized during 2026 would primarily relate to material supply, NRE arrangements, or prototype and development activities. We do not currently expect significant revenue from volume commercial production of customer products until 2027 at the earliest. The timing and magnitude of any production-related revenue depend on successful product qualification, yield validation, customer adoption decisions, end-market demand, and broader industry conditions.

There can be no assurance that development-stage programs will transition to volume production, that anticipated timelines will be achieved, or that commercial revenues will occur as expected.

Strategic Flexibility

While our current strategy is focused on materials supply and intellectual property licensing, we may evaluate selective opportunities to participate more directly in device-level development in limited circumstances. Such participation, if pursued, would likely be application-specific and would depend on market conditions, partnership opportunities, capital requirements, and strategic considerations.

We have not committed to entering device manufacturing as a core component of our business model, and any such activity would be evaluated in the context of our overall capital allocation priorities and commercialization strategy.

Operating Leverage

Our model is designed to leverage existing semiconductor fabrication infrastructure rather than require capital-intensive wafer fabrication facilities. By integrating into established foundry process flows, we seek to enable scalable production through customer and foundry manufacturing capacity.

If customer programs advance to high-volume production, incremental material demand and royalty streams may provide operating leverage due to the intellectual property-driven nature of our model. However, realization of such leverage depends on successful qualification, customer adoption, competitive dynamics, and end-market demand.

Commercialization Process (Design Win Cycle)

We pursue customer adoption through a structured, multi-stage engagement framework that we refer to as our Design Win Cycle. This process is designed to guide customer programs from initial technology evaluation through potential production ramp within established semiconductor manufacturing ecosystems.

While program timelines vary based on customer requirements, foundry schedules, application complexity, and market conditions, the Design Win Cycle typically spans approximately 18 to 24 months.

Capital Requirements

We have satisfied our capital requirements since inception primarily through the issuance and sale of our common stock.

Results of Operations

Comparison of the year ended December 31, 2025 to the year ended December 31, 2024

Revenues

During the year ended December 31, 2025, we recognized $106,855 of licensing and royalty revenue and $130,000 of non-recurring engineering revenue. During the year ended December 31, 2024, we recognized $81,855 of licensing and royalty revenue and $13,750 of revenue for the device processing work on the device supplied by a customer.

Cost of Sales

During the year ended December 31, 2025, we recognized $6,823 in cost of sales. During the year ended December 31, 2024, we recognized $7,395 in cost of sales.

Operating expenses

	For the Year Ended December 31, 2025	For the Year Ended December 31, 2024	Change from Prior Year	Percent Change from Prior Year
Research and development	11,489,687	16,806,548	$ (5,316,861)	(32%)
General and administrative	9,501,769	6,370,805	3,130,964	49%
	$ 20,991,456	$ 23,177,353	$ (2,185,897)	(9%)

Research and development expenses decreased for the year ended December 31, 2025, as compared to the year ended December 31, 2024, primarily due to decreases in research and development non-cash stock option and restricted stock awards and units amortization expenses, prototype device development and wafer fabrication expenses, research and development salary and employee benefits expenses, and research and development travel expenses.

We expect to continue to incur substantial research and development expenses developing and commercializing our electro-optic materials platform. These expenses will increase because of accelerated development efforts to support commercialization of our non-linear optical polymer materials technology and create next-generation photonic EO device designs; working with semiconductor foundries; hiring additional technical and support personnel; engaging senior technical advisors; pursuing other potential business opportunities and collaborations; customer testing and evaluation; and incurring related operating expenses.

General and administrative expenses increased for the year ended December 31, 2025, as compared to the year ended December 31, 2024, primarily due to increases in general and administrative salary and employee benefits expenses and general and administrative non-cash stock option and restricted stock awards and units amortization expenses, offset by a decrease in consulting expenses.

Other Income

	For the Year Ended December 31, 2025	For the Year Ended December 31, 2024	Change from Prior Year	Percent Change from Prior Year
Other Income	$ 447,627	$ 554,102	$ (106,475)	(19%)

Other income decreased for the year ended December 31, 2025, as compared to year ended December 31, 2024, primarily due to an increase in commitment fee associated with the purchase of shares by an institutional investor for sale under a stock purchase agreement and a decrease in interest income on money market account, offset by a decrease in loss due to retirement of certain expired patent applications and patents.

Net Loss

	For the Year Ended December 31, 2025	For the Year Ended December 31, 2024	Change from Prior Year	Percent Change from Prior Year
Net Loss	$ 20,313,797	$ 22,535,041	$ (2,221,244)	(10%)

Net loss was $20,313,797 and $22,535,041 for the year ended December 31, 2025 and 2024, respectively, for a decrease of $2,221,244 due primarily to decreases prototype device development and wafer fabrication expenses, and research and development travel expenses, offset by net increases in salaries and employee benefits expenses and an increase in commitment fee associated with the purchase of shares by an institutional investor for sale under a stock purchase agreement.

Critical Accounting Policies and Estimates

Our Company's accounting policies are more fully described in Note 1 of Notes to Financial Statements. As disclosed in Note 1 of Notes to Financial Statements, the preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures.

An accounting policy is considered to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used, or changes in the accounting estimate that are reasonably likely to occur, could materially impact the consolidated financial statements.

We consider the estimates related to the fair value of option and warrant awards on the date of grant using the Black Scholes model, recognition of the compensation expense for performance stock units over the service period based on the likelihood that the applicable performance goals will be achieved, valuation of internally developed patents and externally acquired intangible assets, test for impairment of long-lived and finite-lived intangible assets, and estimation of the deferred tax assets valuation allowance to be the most critical in the preparation of our consolidated financial statements as they are important to the portrayal of our financial condition and require significant or complex judgment and estimates on the part of management. Further details on each item are discussed in Notes 1, 7, 9 and 11 to our Financial Statements included in this Annual Report on Form 10-K.

Although these estimates are based on our management's best knowledge of current events and actions our Company may undertake in the future, actual results could differ from the estimates.

Liquidity and Capital Resources

During the year ended December 31, 2025, our primary source of operating cash inflows was (i) proceeds from the sale of common stock to Titan Partners Group LLC (investment banker) ("Titan"), proceeds from the sale of common stock to Lincoln Park Capital Fund, LLC (institutional investor) ("Lincoln Park") pursuant to purchase agreements with Lincoln Park and proceeds from sale of common stock by Roth Capital Partners, LLC (investment banking company) ("Roth Capital") pursuant

to the at-the-market sales agreement with Roth Capital as described in Note 10 to the Financial Statements and (ii) proceeds received pursuant to the exercise of options and warrants.

On December 15, 2025, we entered into an underwriting agreement (the "Underwriting Agreement") with Titan Partners Group LLC, a division of American Capital Partners, LLC, as the underwriter (the "Underwriter"), relating to an underwritten public offering of 11,666,667 shares of the Company's common stock, par value $0.001 per share, at a price to the public of $3.00 per share (the "Offering"). Pursuant to the Underwriting Agreement, we granted to the Underwriter an option, exercisable not later than thirty (30) days after the date of the closing of the Offering, to purchase from us up to 1,750,000 additional shares of common stock for the purpose of covering over-allotments, if any. The Offering closed on December 17, 2025. The net proceeds us from the Offering were approximately $32.8 million during the year ended December 31, 2025, and approximately $4.9 million in January 2026, after deducting underwriting discounts and commissions and other estimated offering expenses payable by us. We intend to use the net proceeds from the Offering for working capital and other general corporate purposes and may use a portion of the net proceeds to accelerate our commercialization timeline, accelerate and expand its U.S. production capacity to support customer partnerships and design-ins, to pursue strategic mergers and acquisitions or to invest in complementary technologies or businesses. Pursuant to the Underwriting Agreement, we agreed to issue to the Underwriter warrants to purchase up to 350,000 shares of Common Stock, or three percent (3%) of the total number of shares of Common Stock sold in the Offering, as well as additional underwriter warrants to purchase up to an aggregate of 52,500 shares of common stock, which were issued upon the exercise by the Underwriter of its option. The underwriter warrants will be immediately exercisable at an exercise price of $3.45 per share during the five-year period following the date of the Underwriting Agreement.

On February 28, 2023, we entered into a purchase agreement with Lincoln Park (the "2023 Purchase Agreement") to sell up to $30 million of registered common stock over a 36-month period. On March 17, 2025, we entered into a new purchase agreement with Lincoln Park (the "2025 Purchase Agreement") to sell up to $30 million of registered common stock over a 36-month period. On December 12, 2025, the 2025 Purchase Agreement was terminated in conjunction with the Titan Offering. On December 9, 2022, we entered into the at-the-market sales agreement with Roth Capital, as sales agent, (the "Roth Sales Agreement") pursuant to which we may offer and sell up to $35 million in shares of our registered common stock, from time to time through Roth Capital. As of the date of this filing, $12,235,261 remains available pursuant to the Roth Sales Agreement.

During the year ended December 31, 2025, the Company received $1,486,983 in proceeds pursuant to the 2023 Purchase Agreement, $3,646,655 in proceeds pursuant to the 2025 Purchase Agreement, $18,785,657 in proceeds pursuant to the Roth Sales Agreement, $32,825,700 in proceeds from the Titan Offering, $355,583 in proceeds pursuant to the exercise of options and warrants, and $75,000 in cash collections from the material supply and license agreement.

During the year ended December 31, 2025, our primary sources of cash outflows from operations included payroll, rent, utilities, payments to vendors including laboratory and wafer fabrication materials and supplies expenses, and third-party service providers.

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 our products; 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 $2,400,000 of expenditures per month over the next 12 months. On December 31, 2025, our cash and cash equivalents totaled $69,017,354.

We expect the proceeds received pursuant to the Titan Offering and the Roth Sales Agreement, the exercise of options and warrants, and commercial operations to provide us with sufficient funds to maintain our operations over the next 12 months. Our current cash position enables us to finance our operations at least through December 2027 before we will be required to replenish our cash reserves. Our cash requirements are expected to increase at a rate consistent with our Company's revenue growth as we expand our activities and operations with the objective of increasing our revenue stream from the commercialization of our electro-optic polymer technology. We currently have no debt to service. We expect that our cash used in operations will continue to increase during 2026 and beyond because of the following planned activities:

- The addition of management, sales, marketing, technical, production and other staff to our workforce;
- Increased spending for the expansion of our research and development efforts, including purchases of additional laboratory and production equipment;
- Increased spending in marketing as our products are introduced into the marketplace;
- Partnering with commercial foundries to implement our electro-optic polymers into accepted PDKs by the foundries;

- 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.

At the Market Sales Agreement – Roth Capital

On December 9, 2022, we entered into the Roth Sales Agreement with Roth Capital, as sales agent. Pursuant to the Roth Sales Agreement, our Company may offer and sell up to $35 million in shares of our common stock, from time to time through Roth Capital. Upon delivery of a placement notice based on our Company's instructions and subject to the terms and conditions of the Roth Sales Agreement, Roth Capital may sell the shares by methods deemed to be an "at-the-market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act, including sales made directly on or through The Nasdaq Capital Market, on any other existing trading market for the Company's common stock, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, or by any other method permitted by law, including negotiated transactions, subject to the prior written consent of our Company. We are not obligated to make any sales of shares under this agreement. The Company or Roth Capital may suspend or terminate the offering of shares upon notice to the other party, subject to certain conditions. Roth Capital will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices and applicable state and federal law, rules and regulations and the rules of Nasdaq. We have agreed to pay Roth Capital commissions for its services of acting as agent of 3.0% of the gross proceeds from the sale of the shares pursuant to the Roth Sales Agreement.

The amount of proceeds we receive from the Roth Sales Agreement, if any, will depend upon the number of shares of our common stock sold and the market price at which they are sold. There can be no assurance that we will be able to sell any shares under or fully utilize this agreement. Roth Capital is not required to sell any specific number of shares of our common stock under the agreement.

We cannot assure you that we will be able to sell any shares under or fully utilize the Roth Sales Agreement with Roth Capital. 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, which could result in our Company reducing some capital expenditures or reducing staff and discretionary costs.

Analysis of Cash Flows

For the year ended December 31, 2025

Net cash used in operating activities was $13,749,186 for the year ended December 31, 2025, primarily attributable to the net loss of $20,313,797 adjusted by $2,051,204 in options issued for services, $551,466 amortization of deferred compensation, $801,595 amortization of performance stock units, $1,278,403 amortization of restricted stock units, $370,311 in common stock issued as commitment shares under the 2023 and 2025 Purchase Agreements, $1,903,368 in depreciation expenses and patent amortization expenses, $205,354 amortization of right of use asset, $20,018 gain on disposal of property and equipment, $45,170 loss due to retirement of certain expired patent applications, ($145,188) in accounts receivable, ($199,360) in prepaid expenses and other current assets, and ($277,694) in accounts payable, accrued bonuses, accrued expenses, contract liability and other liabilities. Net cash used in operating activities consisted of payments for research and development, legal, professional and consulting expenses, salaries, rent and other expenditures necessary to develop our business infrastructure.

Net cash used by investing activities was $1,817,202 for the year ended December 31, 2025, consisting of $485,429 in cost for intangibles and $1,331,773 in asset additions for the Colorado headquarter facility and labs.

Net cash provided by financing activities was $56,915,778 for the year ended December 31, 2025, and consisted of $355,583 in proceeds from exercise of options and warrants, ($171,925) cashless option exercise tax payments, ($12,875) tax payment on net settlement of vested restricted stock awards, $5,133,638 in proceeds from the sale of common stock pursuant to the 2023 and 2025 Purchase Agreements, $32,825,700 in proceeds from the Titan Offering and $18,785,657 in proceeds from the sale of common stock pursuant to the Roth Sales Agreement.

On December 31, 2025, our cash and cash equivalents totaled $69,017,354, our assets totaled $79,185,249, our liabilities totaled $4,539,419 and we had stockholders' equity of $74,645,830.

For the year ended December 31, 2024

Net cash used in operating activities was $15,550,515 for the year ended December 31, 2024, primarily attributable to the net loss of $22,535,041 adjusted by $4,440,003 in options issued for services, $446,628 amortization of deferred compensation, $154,210 in common stock issued for commitment shares, $1,682,760 in depreciation expenses and patent amortization expenses, $192,487 amortization of right of use asset, $213,440 loss on disposal of property and equipment and retirement of certain expired patent applications and patents, $(15,189) in accounts receivable, $835,880 in prepaid expenses and other current assets, and ($965,693) in accounts payable, accrued bonuses, accrued expenses, contract liability and other liabilities. 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 $2,697,899 for the year ended December 31, 2024, consisting of $430,501 in cost for intangibles and $2,267,398 in asset additions for the Colorado headquarter facility and labs.

Net cash provided by financing activities was $14,484,291 for the year ended December 31, 2024, and consisted of $337,350 in proceeds from exercise of options and warrants, $12,366,965 in proceeds from resale of common stock to an institutional investor and $1,779,976 in proceeds from at the market sale of common stock by an investment banking company.

On December 31, 2024, our cash and cash equivalents totaled $27,667,964, our assets totaled $37,807,983, our liabilities totaled $4,384,078 and we had stockholders' equity of $33,423,905.

Contractual Obligations

See "Note 8–Leases" of the notes to the financial statements contained elsewhere within this Annual Report on Form 10-K for a discussion of our operating lease for office and laboratory space.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not required for smaller reporting companies.

Item 8. Financial Statements and Supplementary Data

Our Financial Statements are attached as Appendix A (following Exhibits) and included as part of this Form 10-K Report. A list of our Financial Statements is provided in response to Item 15 of this Form 10-K Report.

Item 9. Changes In and Disagreements With Accountants On Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

As of December 31, 2025, our Company evaluated the effectiveness and design and operation of its disclosure controls and procedures. Our Company's disclosure controls and procedures are the controls and other procedures that we designed to ensure that our Company records, processes, summarizes, and reports in a timely manner the information that it must disclose in reports that our Company files with or submits to the Securities and Exchange Commission. Our principal executive officer and principal financial officer reviewed and participated in this evaluation. Based on this evaluation, our Company made the determination that its disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal controls over financial reporting based on the framework in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2025.

The Company's internal control over financial reporting includes policies and procedures that (1) pertain to maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of the assets of the Company; (2)

provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. In addition, the design of any system of controls is based in part on certain assumptions about the likelihood of future events, and controls may become inadequate if conditions change. There can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Attestation Report of the Registered Public Accounting Firm

This Annual Report does not include an attestation report of our Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit our Company to provide only management's attestation in this Annual Report.

Changes in Internal Control Over Financial Reporting

No change in our Company's internal control over financial reporting occurred during our fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Trading Arrangements

During the three months ended December 31, 2025, none of our directors or officers (as defined in Rule 16a-1(f) under the Exchange Act) adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or any "non-Rule 10b5-1 arrangement" as defined in Item 408(c) of Regulation S-K.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2025, our most recent fiscal year end, and is incorporated herein by reference.

Item 11. Executive Compensation.

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2025, our most recent fiscal year end, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2025, our most recent fiscal year end, and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2025, our most recent fiscal year end, and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2025, our most recent fiscal year end, and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following Audited Financial Statements are filed as part of this Form 10-K Report:

Report of Independent Registered Public Accounting Firm

Balance Sheets

Statements of Comprehensive Loss

Statement of Stockholders' Equity Statements of Cash Flows

Notes to Financial Statements

(b) The following exhibits are filed as part of this report.

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Exhibit Number	Filing Date	
1.1	Sales Agreement, dated as of December 9, 2022, by and between the Company and Roth Capital Partners, LLC	8-K	1.1	12/9/2022	
1.2	Underwriting Agreement, dated December 15, 2025, by and between Lightwave Logic, Inc. and Titan Partners Group LLC, as Underwriter	8-K	1.1	12/17/2025	
3.1	Amended and Restated Articles of Incorporation of Lightwave Logic, Inc. (conformed copy incorporating all amendments through June 8, 2015)	10-Q	3.1	11/14/2025	
3.2	Second Amended and Restated Bylaws - June 18, 2024	8-K	3.1	6/25/2024	
4.1	Description of Registrant's Securities	10-K	4.1	3/18/2025	
4.2	Form of Underwriter Warrant	8-K	4.1	12/17/2025	
10.1*	Employee Agreement - Yves Lemaitre	8-K	10.1	9/16/2025	
10.2*	Form of Executive Paid Time Off Waiver Agreement	10-K	10.7	3/16/2018	
10.3*	Form of Director Agreement	10-K	10.8	3/16/2018	
10.4*	Form of Director and Officer Indemnification Agreement	8-K	10.3	1/21/2022	
10.5	Form of Director's Non-Disclosure Agreement	10-K	10.10	3/16/2018	
10.6*	2007 Employee Stock Plan	DEF 14C	Exhibit A	2/19/2008	
10.7*	2007 Employee Stock Plan Amendment	DEF 14A	Appendix A	7/22/2014	
10.8*	2016 Equity Incentive Plan	DEF 14A	Appendix A	4/20/2016	
10.9*	2016 Equity Incentive Plan Amendment	DEF 14A	Appendix A	4/12/2019	
10.10*	2016 Equity Incentive Plan Amendment No. 2	DEF 14A	Appendix A	4/14/2023	
10.11*	2025 Equity Incentive Plan	DEF 14A	Exhibit A	3/28/2025	
10.12	Lease Agreement dated October 26, 2017	8-K	10.1	11/2/2017	
10.13	First Amendment to the October 26, 2017 Lease Agreement dated November 22, 2022	8-K	10.23	3/1/2023	
19.1	Insider Trading Policy	10-K	19.1	2/29/2024	
21.1	Subsidiaries of the Registrant	10-K	21.1	2/29/2024	
23.1	Consent of Independent Registered Public Accounting Firm - Stephano Slack LLC				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

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Exhibit Number	Filing Date	
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.				Furnished 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.				Furnished herewith
97.1	Compensation Clawback Policy	10-K	97.1	2/29/2024	
101-INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)				Filed herewith
101-SCH	Inline XBRL Taxonomy Extension Schema Document				Filed herewith
101-CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				Filed herewith
101-DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				Filed herewith
101-LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				Filed herewith
101-PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				Filed herewith
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				Filed herewith

* Management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary

None

LIGHTWAVE LOGIC, INC.

FINANCIAL STATEMENTS

DECEMBER 31, 2025 AND 2024

CONTENTS

	PAGE
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM (PCAOB ID Number 3523)	F-2
BALANCE SHEETS	F-3
STATEMENTS OF COMPREHENSIVE LOSS	F-4
STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY	F-5 - F-6
STATEMENTS OF CASH FLOWS	F-7
NOTES TO FINANCIAL STATEMENTS	F-8 - F-27

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Lightwave Logic, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying balance sheets of Lightwave Logic, Inc. (the Company) as of December 31, 2025 and 2024, and the related statements of comprehensive loss, changes in stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2025, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2025 and 2024, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2025, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ Stephano Slack LLC

We have served as the Company's auditor since 2024.

Wayne, Pennsylvania
March 20, 2026

LIGHTWAVE LOGIC, INC.
BALANCE SHEETS

	December 31, 2025	December 31, 2024 Restated
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 69,017,354	$ 27,667,964
Accounts Receivable	190,753	45,565
Prepaid expenses and other current assets	601,101	401,741
	69,809,208	28,115,270
PROPERTY AND EQUIPMENT - net of accumulated depreciation of $7,802,183 and $6,037,723	5,222,252	5,691,545
OTHER ASSETS		
Intangible assets - net of accumulated amortization of $473,771 and $771,631	1,713,420	1,355,445
Operating Lease - Right of Use - Building	2,440,369	2,645,723
	4,153,789	4,001,168
TOTAL ASSETS	$ 79,185,249	$ 37,807,983
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 477,939	$ 515,955
Accrued bonuses and accrued expenses	1,400,008	877,165
Accounts payable and accrued expenses - related parties	56,250	200,779
Contract liability	6,541	23,208
Operating lease liability	194,770	168,289
	2,135,508	1,785,396
LONG TERM LIABILITIES		
Operating lease liability	2,403,911	2,598,682
	2,403,911	2,598,682
TOTAL LIABILITIES	4,539,419	4,384,078
STOCKHOLDERS' EQUITY		
eferred stock, $0.001 par value, 1,000,000 authorized, no shares issued or outstanding	—	—
Common stock $0.001 par value, 250,000,000 authorized, 146,050,506 and 123,301,653 issued and outstanding at December 31, 2025 and December 31, 2024	146,051	123,302
Additional paid-in-capital	242,016,025	180,956,329
Deferred compensation	(203,458)	(656,735)
Accumulated deficit	(167,312,788)	(146,998,991)
TOTAL STOCKHOLDERS' EQUITY	74,645,830	33,423,905
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 79,185,249	$ 37,807,983

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

LIGHTWAVE LOGIC, INC.
STATEMENTS OF COMPREHENSIVE LOSS
FOR THE YEARS ENDED DECEMBER 31, 2025 AND 2024

	2025	2024
NET SALES	$ 236,855	$ 95,605
COST AND EXPENSE		
Cost of sales	6,823	7,395
Research and development	11,489,687	16,806,548
General and administrative	9,501,769	6,370,805
	20,998,279	23,184,748
LOSS FROM OPERATIONS	(20,761,424)	(23,089,143)
OTHER INCOME (EXPENSE)		
Interest income	842,445	926,854
Commitment fee	(370,311)	(154,210)
Loss on disposal of property and equipment and intangible assets	(25,152)	(213,440)
Other income (expense)	645	(5,102)
NET LOSS	$ (20,313,797)	$ (22,535,041)
LOSS PER SHARE		
Basic and diluted	$ (0.16)	$ (0.19)
WEIGHTED AVERAGE NUMBER OF SHARES		
Basic and diluted	128,628,727	120,599,885

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

LIGHTWAVE LOGIC, INC.
STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2025 AND 2024
Restated

	Year Ended December 31, 2025					
	Number of Shares	Common Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Deficit	Total
BALANCE AT DECEMBER 31, 2024 (as restated)	123,301,653	$ 123,302	$180,956,329	$ (656,735)	$(146,998,991)	$ 33,423,905
Common stock issued to institutional investor	3,085,881	3,086	5,130,552	—	—	5,133,638
Common stock issued for commitment shares	309,730	309	370,002	—	—	370,311
Common stock sales at the market by investment banking company	5,885,853	5,886	18,779,771	—	—	18,785,657
Common stock issued to investment bank	11,666,667	11,667	32,814,033	—	—	32,825,700
Exercise of options	374,012	374	280,209	—	—	280,583
Cashless exercise of 1,350,000 options	434,148	434	(172,359)	—	—	(171,925)
Exercise of warrants	125,000	125	74,875	—	—	75,000
Options issued for services	—	—	2,051,204	—	—	2,051,204
Options issued to settle accrued bonuses	—	—	48,068	—	—	48,068
Performance stock units (PSUs) issued for services, net of share settlement for taxes	394,076	394	320,098	—	—	320,492
Restricted stock units (RSUs) issued for services	340,757	341	1,278,062	—	—	1,278,403
Restricted stock awards issued for services, net of forfeitures and share settlement for taxes	132,729	133	85,181	(98,189)	—	(12,875)
Deferred compensation	—	—	—	551,466	—	551,466
Net loss for the year ended December 31, 2025	—	—	—	—	(20,313,797)	(20,313,797)
BALANCE AT DECEMBER 31, 2025	146,050,506	$ 146,051	$242,016,025	$ (203,458)	$(167,312,788)	$ 74,645,830

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

LIGHTWAVE LOGIC, INC.
STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2025 AND 2024 (CONTINUED)
Restated

	Year Ended December 31, 2024					
	Number of Shares	Common Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Deficit	Total
BALANCE AT DECEMBER 31, 2023 (as restated) (see Note 2)	118,137,309	$ 118,137	$161,211,920	$ (432,293)	$(124,463,950)	$ 36,433,814
Common stock issued to institutional investor	3,850,000	3,850	12,363,115	—	—	12,366,965
Common stock issued for commitment shares	41,956	42	154,168	—	—	154,210
Common stock sales at the market by investment banking company	551,501	552	1,779,424	—	—	1,779,976
Exercise of options	375,000	375	245,725	—	—	246,100
Exercise of warrants	119,000	119	91,131	—	—	91,250
Options issued for services	—	—	4,440,003	—	—	4,440,003
Restricted stock awards issued for services	226,887	227	670,843	(671,070)	—	—
Deferred compensation	—	—	—	446,628	—	446,628
Net loss for the year ended December 31, 2024	—	—	—	—	(22,535,041)	(22,535,041)
BALANCE AT DECEMBER 31, 2024 (as restated)	123,301,653	$ 123,302	$180,956,329	$ (656,735)	$(146,998,991)	$ 33,423,905

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

LIGHTWAVE LOGIC, INC.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2025 AND 2024

	2025	2024
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (20,313,797)	$ (22,535,041)
Adjustments to reconcile net loss to net cash used in operating activities		
Stock options issued for services	2,051,204	4,440,003
Amortization of deferred compensation	551,466	446,628
Performance stock units issued for services	801,595	—
Restricted stock units issued for services	1,278,403	—
Common stock issued for commitment shares	370,311	154,210
Depreciation and amortization of patents	1,903,368	1,682,760
Amortization of right of use asset	205,354	192,487
Loss on disposal of property and equipment and intangible assets	25,152	213,440
(Increase) decrease in assets		
Accounts receivable	(145,188)	(15,189)
Prepaid expenses and other current assets	(199,360)	835,880
(Decrease) increase in liabilities		
Accounts payable	(38,016)	(931,641)
Accrued bonuses, accrued expenses and other liabilities	89,807	277,735
Accounts payable and accrued expenses-related parties	(144,529)	(112,704)
Contract liability	(16,667)	(16,667)
Deferred lease liability	—	(38,297)
Operating lease liability	(168,289)	(144,119)
Net cash used in operating activities	(13,749,186)	(15,550,515)
CASH FLOWS FROM INVESTING ACTIVITIES		
Cost of intangibles	(485,429)	(430,501)
Purchase of property and equipment	(1,331,773)	(2,267,398)
Net cash used in investing activities	(1,817,202)	(2,697,899)
CASH FLOWS FROM FINANCING ACTIVITIES		
Exercise of options and warrants	355,583	337,350
Cashless option exercise tax payments	(171,925)	—
Tax payment on net settlement of vested restricted stock awards	(12,875)	—
Issuance of common stock, institutional investor	5,133,638	12,366,965
Issuance of common stock to investment bank	32,825,700	—
Common stock sales at the market by investment banking company	18,785,657	1,779,976
Net cash provided by financing activities	56,915,778	14,484,291
NET DECREASE IN CASH AND CASH EQUIVALENTS	41,349,390	(3,764,123)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	27,667,964	31,432,087
CASH AND CASH EQUIVALENTS - END OF PERIOD	$ 69,017,354	$ 27,667,964
Supplemental Disclosure of Non-cash activities:		
Options issued to settle accrued bonuses	$ 48,068	$ —
Trade-in credit for purchase of property and equipment	$ 28,800	$ —
Restricted stock awards issued for services	$ 169,846	$ 671,069

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

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

History and Nature of Business

Lightwave Logic, Inc. is a specialty materials and intellectual property company focused on the development and commercialization of proprietary electro-optic ("EO") polymer materials designed to enable high-speed optical modulators for data communications and other photonic applications.

Our Perkinamine® family of EO polymer materials is engineered for integration into silicon photonics ("SiPh") and other photonic integrated circuit ("PIC") platforms. When incorporated into device architectures, these materials are designed to support high-speed, high-bandwidth optical modulation with lower drive voltage requirements relative to certain conventional silicon-based approaches and certain other traditional photonic material systems, including III-V–based technologies. The electro-optic properties of these materials can allow shorter interaction lengths in modulator designs, which can contribute to more compact device footprints and increased integration density. In addition, our materials are intended to be compatible with complementary metal-oxide-semiconductor ("CMOS") fabrication processes, which may facilitate integration into established semiconductor foundry workflows. Reduced drive voltage operation may enable lower system-level power consumption and simplified driver electronics in specific implementations.

We do not manufacture optical transceivers, photonic devices, or complete optical modules. Instead, our strategy is to commercialize our technology through a combination of material sales, intellectual property licensing, process design kit ("PDK") enablement, and royalty or other fee-based arrangements tied to customer production.

Our customers and prospective customers include semiconductor foundries, silicon photonics device designers, optical module manufacturers, and system integrators serving artificial intelligence ("AI"), cloud computing, data center, and telecommunications markets. We pursue customer adoption through a structured commercialization process designed to support evaluation, integration, qualification, and production readiness within established semiconductor manufacturing ecosystems.

Lightwave Logic, Inc. was organized under the laws of the State of Nevada in 1997, and it commenced with its current business plan in 2024.

Basis of Presentation

The accompanying financial statements are presented in accordance with accounting principles generally accepted in the United States of America.

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures. Although these estimates are based on management's best knowledge of current events and actions the Company may undertake in the future, actual results could differ from the estimates.

Cash Equivalents

The Company considers all highly liquid investments with an original maturity from the date of purchase of three months or less to be cash equivalents.

Concentration of Credit Risk

Certain financial instruments potentially subject the Company to concentrations of credit risk, primarily cash and accounts receivable. At December 31, 2025, the Company maintained cash balances at financial institutions in excess of FDIC-insured limits. Cash uninsured by FDIC totaled approximately $68,767,354 at December 31, 2025 and $27,417,964 at December 31, 2024. The Company monitors the creditworthiness of the financial institutions in which it maintains deposits.

The Company is also exposed to concentrations of credit risk with respect to its customers. For the year ended December 31, 2025, the Company had two customers that accounted for 55% and 45% of total revenue. As of December 31, 2025, two customers accounted for 68% and 32% of total accounts receivable, respectively. For the year ended December 31, 2024, the Company had two customers that accounted for 86% and 14% of total revenue. As of December 31, 2024, one customer accounted for 100% of total accounts receivable. The Company performs ongoing credit evaluations of its customers and generally does not require collateral.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Accounts Receivable

Accounts receivable are carried at their contractual amounts, less an estimated allowance for credit losses. Management estimates the allowance for credit losses using a loss-rate approach based on historical loss information, adjusted for management's expectations about current and future economic conditions, as the basis to determine expected credit losses. Management exercises significant judgment in determining expected credit losses. Key inputs include macroeconomic factors, industry trends, the creditworthiness of counterparties, historical experience, the financial conditions of the customers, and the amount and age of past due accounts. Management believes that the composition of receivables at year-end is consistent with historical conditions as credit terms and practices and the client base has not changed significantly. Receivables are considered past due if full payment is not received by the contractual due date, which is typically 30 days from the invoice date. Past due accounts are generally written off against the allowance for credit losses only after all collection attempts have been exhausted. The allowance for credit losses was zero 0 as of December 31, 2025 and 2024.

Property and Equipment

Property and equipment is stated at the Company's original cost or fair value for acquired property and equipment net of accumulated depreciation. Depreciation of property and equipment is computed using the straight-line method over the estimated useful lives of the respective assets, which are generally as follows: 3 years for office equipment, 3 to 5 years for lab equipment, 7 years for furniture and 3 years for software. Leasehold improvements are amortized over the lesser of remaining life of the lease or useful life of the asset, using the straight-line method. The cost of normal maintenance and repairs is charged to operating expenses as incurred. Material expenditures that increase the life of an asset are capitalized and depreciated over the estimated remaining useful life of the asset. The cost of assets sold, or otherwise disposed of, and the related accumulated depreciation is relieved from the property accounts, and any gains or losses are recognized in income from continued operations.

Intangible Assets

Definite-lived intangible assets are stated at cost. Patents are amortized over their estimated useful lives, commencing from the date of grant for the remaining legal lives of the patents. The patents generally have a term of up to 20 years from the date of filing of the earliest related patent application. When certain patent applications are abandoned by the Company for claims that are covered by patents already granted to the Company, the cost of patent applications are removed from the accounts and the resulting expense is reflected in the statement of comprehensive loss.

Fair Value of Financial Instruments

The carrying value of the Company's short-term financial instruments such as cash, accounts payable and accrued expenses approximate their fair values because of their short maturities.

Revenue Recognition and Contract Liability

The Company recognizes revenue in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers. Under ASC 606, revenue is recognized when control of goods or services is transferred to a customer in an amount that reflects the consideration to which the Company expects to be entitled.

To achieve this, the Company applies the five-step model:

1. Identify the contract with a customer.
2. Identify the performance obligations in the contract.
3. Determine the transaction price for the contract.
4. Allocate the transaction price to the performance obligations.
5. Recognize revenue as performance obligations are satisfied.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue Recognition and Contract Liability (Continued)

The Company's primary revenue streams includes technology license and material supply agreements and non-recurring engineering revenue from joint development agreements.

Technology License and Material Supply Agreements

The Company enters into technology license and material supply agreements, under which it grants customers a non-exclusive, royalty-bearing license to use its patented electro-optic polymer technology (the "Licensed Product"). The Company also supplies proprietary polymers to licensees for use in their manufacturing of photonic devices.

The Company assesses whether the license and the supply of proprietary polymers represent distinct performance obligations. Based on this assessment, the Company has determined that the license and material supply are not distinct for financial reporting purposes because they are highly interdependent. Accordingly, the Company accounts for these as a single performance obligation.

Revenue under these agreements is recognized as follows:

Upfront License Fees – Nonrefundable upfront license fees are recorded as contract liability and recognized on a pro-rata basis over the contract term.

Minimum Annual Royalties – Fixed royalty payments required under the contract are also recognized on a pro-rata basis over the contract term.

Variable Royalties – Royalties exceeding the minimum annual amount are recognized when earned, typically when the licensee's sales exceed the minimum threshold.

Milestone Payments – Recognized only when the contractual milestone is achieved, such as when the licensee sells a specified number of units of the Licensed Product.

Joint Development Agreement

The Company entered into a memorandum of agreement ("MOA") with a customer to specify certain binding terms related to the joint development of electro-optical polymer-based modulators on silicon photonics for use in communication applications. The MOA was executed in January 2026; however, the Company commenced work under the arrangement during 2025. The development work consists of preparing reference documentation and support of a multi-project wafer chip produced at a mutually agreed upon foundry, the design and post processing of fabricated chips, and complete product verification and volume manufacturing preparation, with each party to the agreement having responsibility over various deliverables for each phase.

The Company evaluated the arrangement under ASC 808, Collaborative Arrangements, and concluded the arrangement meets the definition of a collaborative arrangement. The Company also concluded that certain promised services within the arrangement represent units of account with a customer and therefore are within the scope of ASC 606. Consideration received from the customer for such services is presented as net sales in the accompanying financial statements.

The arrangement includes development services to be performed in phases. The Company evaluated the promised goods and services within each phase and concluded they are not separately identifiable because they are highly interdependent and represent inputs to a combined output that is delivered and accepted at the phase level. Accordingly, each phase is accounted for as a single combined performance obligation. Phases 1 and 2 are within the scope of ASC 606.

Phase 1 consideration was $130,000, which the Company recognized in net sales upon completion and delivery to the customer of the Phase 1 products and services. Phase 2 consideration was $200,000, payable in installments subject to customer's confirmation of completion and acceptance of the related deliverables. Deliverables and consideration for Phase 3 have not been determined.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Joint Development Agreement (Continued)

The Company recognizes revenue at a point in time upon completion and customer acceptance of the phase deliverables, as applicable. Customer acceptance is considered the substantive indicator that control of the completed phase deliverables has transferred.

Contract Costs

The Company capitalizes incremental costs to obtain contracts if they are expected to be recoverable, in accordance with ASC 340-40, Other Assets and Deferred Costs – Contracts with Customers. These capitalized costs are amortized over the expected contract term in a manner consistent with the related revenue recognition. The Company evaluated costs to fulfill the joint development arrangement under ASC 340-40 and concluded such costs do not meet the capitalization criteria because the costs are not expected to be recovered through the consideration payable under the arrangement.

The Company expenses costs to fulfill the development arrangement as incurred, as the activities are not reimbursable and meet the definition of research and development under ASC 730.

Contract Liability

Contract liability represents amounts received in advance for performance obligations not yet satisfied, including nonrefundable upfront license fees. The Company recognizes contract liability revenue as revenue when the related performance obligations are satisfied.

Cost of Sales

Cost of sales consists of labor costs, material costs and manufacturing overhead costs associated with the production of materials transferred to the customer under the technology license and material supply agreement at the Company's facility.

Income Taxes

The Company follows FASB ASC 740, "Income Taxes," which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed annually for temporary differences between the financial statement and tax bases of assets and liabilities that will result in taxable or deductible amounts in the future based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. Income tax expense is the tax payable or refundable for the period plus or minus the change during the period in deferred tax assets and liabilities.

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 fair value of restricted stock awards and units is estimated by the market price of the Company's common stock at the date of grant. Restricted stock awards and units are being amortized to expense over the shorter of the requisite service period or the actual vesting period. Performance stock units are subject to both performance-based and service vesting requirements. The grant-date fair value of performance stock units is based on the fair value of the Company's stock on a grant date and is recognized over the service period based on an assessment of the likelihood that the applicable performance goals will be achieved, and compensation expense is periodically adjusted based on actual and expected performance. The Company estimates the fair value of option and warrant 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 shorter of the requisite service period or the actual vesting period, using the straight-line method. Consistent with the accounting requirement for employee share-based payment awards, nonemployee share-based payment awards within the scope of Topic 718 are measured at grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Stock-based Payments (Continued)

The Company has elected to account for forfeiture of stock-based awards as they occur.

Loss Per Share

The Company follows 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 2025 and 2024, 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.

Leases

The Company is a lessee in operating leases primarily incurred to facilitate manufacturing, research and development, and selling, general and administrative activities. At contract inception, the Company determines if an arrangement is or contains a lease, and if so, recognizes a right-of-use asset and lease liability at the lease commencement date. For operating leases, the lease liability is measured at the present value of the unpaid lease payments at the lease commencement date, whereas for finance leases, the lease liability is initially measured at the present value of the unpaid lease payments and subsequently measured at amortized cost using the interest method. Operating lease right-of-use assets are included in other assets on the Balance Sheets. The short-term portion of operating lease liabilities is included in other current liabilities on the Balance Sheets and the long-term portion is included in long term liabilities on the Balance Sheets. As of December 31, 2025, the Company had no leases that qualified as financing arrangements.

Key estimates and judgments include how the Company determines the discount rate used to discount the unpaid lease payments to present value and the lease term. The Company monitors for events or changes in circumstances that could potentially require recognizing an impairment loss.

The Company elected a short-term lease exemption practical expedient under ASU 2026-02, "Leases" (Topic 842), which allows the Company to not recognize leases with the total lease term of 12 months or less on the balance sheet.

Impairment of Long Lived and Finite-Lived Intangible Assets

Long lived assets, such as property, equipment, and intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable, such as a significant decrease in market price of an asset group, a significant adverse change in legal factors or business climate that could affect the value of an asset group, or a continuous deterioration of the Company's financial condition. Recoverability of asset groups to be held and used is measured by comparing the undiscounted future cash flows expected to be generated by the asset group to the carrying amount of the asset group. If the carrying amount of the asset group exceeds its estimated undiscounted future cash flows, impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques, including discounted cash flow models, quoted market values, and third-party independent appraisals, as considered necessary.

For the years ended December 31, 2025 and 2024, the Company did not record an impairment of its long-lived and finite-lived intangible assets.

Comprehensive Loss

The Company follows FASB ASC 220.10, "Reporting Comprehensive Income (Loss)." Comprehensive loss 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 loss. Since the Company has no items of other comprehensive loss, comprehensive loss is equal to net loss.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recently Adopted Accounting Pronouncements

In December 2023, the FASB issued Accounting Standards Update (ASU) 2023-09 – Income Taxes (Topic 740), which requires disclosures related to the rate reconciliation and income taxes paid improve the transparency of income tax disclosures by requiring (1) consistent categories and greater disaggregation of information in the rate reconciliation and (2) income taxes paid disaggregated by jurisdiction. The other amendments in this update improve the effectiveness and comparability of disclosures by (1) adding disclosures of pretax income (or loss) and income tax expense (or benefit) to be consistent with U.S. Securities and Exchange Commission (SEC) Regulation S-X 210.4-08(h), Rules of General Application—General Notes to Financial Statements: Income Tax Expense, and (2) removing disclosures that no longer are considered cost beneficial or relevant. For public business entities, the amendments in this update are effective for annual periods beginning after December 15, 2024. The Company adopted the guidance for the annual reporting period ended December 31, 2025.

In November 2023, the FASB issued ASU 2023-07, Improvements to Reportable Segment Disclosures ("ASU 2023-07"), which requires incremental disclosures about reportable segments but does not change the definition of a segment or the guidance for determining reportable segments. The new guidance requires disclosure of significant segment expenses that are (1) regularly provided to (or easily computed from information regularly provided to) the chief operating decision maker ("CODM") and (2) included in the reported measure of segment profit or loss. The new standard also requires companies to disclose the title and position of the individual (or the name of the committee) identified as the CODM, allows companies to disclose multiple measures of segment profit or loss if those measures are used to assess performance and allocate resources, and is applicable to companies with a single reportable segment. The requirements are effective for annual reporting periods beginning on January 1, 2024, and are required to be applied retrospectively. The Company has adopted the additional disclosure requirements under ASU 2023-07. The additional requirements did not have a material impact on the financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

ASU 2024-03 – Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40) requires disclosure, in the notes to financial statements, of specified information about certain costs and expenses, such as the amounts of purchases of inventory, employee compensation, depreciation, intangible asset amortization, included in each relevant expense caption; disclosure of a qualitative description of the amounts remaining in relevant expense captions that are not separately disaggregated quantitatively; and disclosure of the total amounts of selling expenses. For public business entities, the amendments in this update are effective for annual periods beginning after December 15, 2026 and interim reporting periods within fiscal years beginning after December 15, 2027. Early adoption is permitted. The Company is evaluating the impact of this ASU on its financial statement disclosures.

NOTE 2 - RESTATEMENT OF FINANCIAL STATEMENTS AND CORRECTION OF PRIOR-PERIOD ERRORS

The Company identified an error related to the accounting for non-cash stock option exercises in previously issued financial statements. As a result, the Company corrected the error by recording the cumulative impact as an adjustment to opening stockholders' equity.

Error Identified in the Year Ended December 31, 2021

During the year ended December 31, 2021, the Company incorrectly expensed a portion of the value of the net shares issued in connection with non-cash stock option exercises as compensation expense. The Company determined that the value of the net shares issued in non-cash stock option exercises should not have been recognized as compensation expense, resulting in an overstatement of compensation expense in the Company's previously issued financial statements.

The correction of this error resulted in a decrease to accumulated deficit by $3,407,443 and a corresponding decrease to additional paid-in capital as of December 31, 2021. The cumulative impact of this correction has been reflected as an adjustment to opening accumulated deficit and additional paid-in capital as of December 31, 2023 (the beginning of the earliest period presented), and the comparative stockholders' equity balances as of December 31, 2024 have been restated to reflect the correction.

NOTE 2 - RESTATEMENT OF FINANCIAL STATEMENTS AND CORRECTION OF PRIOR-PERIOD ERRORS (CONTINUED)

Restated Financial Information

The following table presents the effects of the restatement on the Company's previously reported balance sheet and statement of changes in stockholders' equity as of December 31, 2023 and 2024.

	As Previously Reported	Adjustment	As Restated
As of December 31, 2023			
Additional paid-in-capital	$ 164,619,363	$ (3,407,443)	$ 161,211,920
Accumulated deficit	$ (127,871,393)	$ 3,407,443	$ (124,463,950)
As of December 31, 2024			
Additional paid-in-capital	$ 184,363,772	$ (3,407,443)	$ 180,956,329
Accumulated deficit	$ (150,406,434)	$ 3,407,443	$ (146,998,991)

NOTE 3 – MANAGEMENT'S PLANS

The Company's future expenditures and capital requirements will depend on numerous factors, including: the progress of our research and development efforts; the rate at which the Company can, directly or through arrangements with original equipment manufacturers, introduce and sell its polymer materials technology; the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; market acceptance of the Company's products and competing technological developments; and the Company's ability to establish joint development, joint venture and licensing arrangements. The Company expects that it will incur approximately $2,400,000 of expenditures per month over the next 12 months. The Company's current cash position enables it to finance its operations through at least December 2027. On December 15, 2025, the Company entered into an underwriting agreement with an investment bank to sell 13,416,667 shares of its Common Stock. The net proceeds to the Company from this offering were $37,756,627, after deducting underwriting discounts and commissions and other offering expenses payable by the Company. On March 17, 2025, the Company entered into a purchase agreement with an institutional investor to sell up to $30,000,000 of common stock over a 36-month period (described in Note 10). This purchase agreement was terminated on December 15, 2025. As of the termination date, pursuant to the purchase agreement, the Company had received $3,646,655 under this agreement. On December 9, 2022, the Company entered into a sales agreement with an investment banking company whereby the Company may offer and sell shares of its common stock having an aggregate offering price of up to $35,000,000 from time to time through or to the investment banking company, as sales agent or principal (described in Note 10). As of the date of this filing, pursuant to the sales agreement, the Company has $22,081,511 in shares of common stock, and has $12,235,261 in shares remaining available to the Company per the agreement. The Company's first commercial agreement occurred in May 2023 from a material supply and license agreement that incorporates the Company's patented electro-optic polymer materials for use in manufacturing photonic devices (described in Note 4). For the year ended December 31, 2025, the Company recognized $106,855 in revenue related to this agreement. The Joint Development Agreement also described in Note 4 resulted in the Company recognizing $130,000 in non-recurring engineering revenue for the year ended December 31, 2025. The Company's cash requirements are expected to increase at a rate consistent with the Company's path to revenue as it expands its activities and operations with the objective of increasing its revenue stream from commercialization of its electro-optic polymer technology. The Company currently has no debt to service.

NOTE 4 – REVENUE

The Company's first commercial agreement occurred in May 2023, in the form of a four-year material supply and license agreement (the "License Agreement") that incorporates the Company's patented electro-optic polymer materials for use in manufacturing of photonic devices (the "Licensed Product"). The licensee shall pay the Company a running royalty with a minimum royalty paid on an annual basis over the term of the License Agreement the minimum royalty payments and milestone license fees. The License Agreement is a non-exclusive material supply and license agreement.

Additional future revenue will be generated from royalties from the licensee's sale of Licensed Product that exceed the minimum royalty payments and milestone license fees.

NOTE 4 – REVENUE (CONTINUED)

In December 2025, Company entered into a memorandum of agreement (also referred to as "joint development agreement") under which it, along with other parties, performs its respective part of the development work to develop an electro-optical polymer-based modulator chip for use in communication applications. The development work consists of preparing reference documentation and support of a multi-project wafer chip produced at a mutually agreed upon foundry, the design and post processing of fabricated chips, and complete product verification and volume manufacturing preparation, with each party to the agreement having responsibility over various deliverables for each phase.

During 2024, the Company also performed device processing work for a customer.

Timing of Revenue Recognition and Contract Balances

Revenues related to the initial license fee and a minimum annual royalty are recognized over time commencing with the License Agreement in May 2023. An up-front license fee in the amount of $50,000 was paid during the period ended December 31, 2023. $6,541 and $23,208 of this amount is recorded as a contract liability in current liabilities on the Company's balance sheets as of December 31, 2025 and December 31, 2024, respectively. For the years ended December 31, 2025 and December 31, 2024, the Company recognized $106,855 and $81,855 in revenue related to this agreement.

Revenues related to the joint development agreement are recognized at a point of time, when control over the performance obligations is transferred to a customer. For the year ended December 31, 2025, the Company recognized $130,000 in non-recurring engineering revenue related to this agreement.

In March 2024, the Company completed device processing work on the devices supplied by a customer. Revenue for this contract was recognized at the time of shipment of the devices back to the customer and amounted to $13,750 for the year ended December 31, 2024.

Contract balances are as follows:

	December 31, 2025	December 31, 2024
Accounts receivable, net	$ 190,753	$ 45,565
Short-term contract assets	$ —	$ —
Long-term contract assets	$ —	$ —
Short-term contract liability	$ 6,541	$ 23,208

Significant changes in the contract balances for the years ended December 31, 2025 and December 31, 2024 are as follows:

	Year Ended December 31, 2025	
	Assets	Liabilities
Balance at December 31, 2024	$ 45,565	$ (23,208)
Revenue recognized that was previously included in contract liability	—	16,667
Decreases/increases due to cash received	(75,000)	—
Billed receivables recorded	29,435	—
Transferred to receivables from unbilled receivables	(29,435)	—
Unbilled receivables recorded	220,188	—
Balance at December 31, 2025	$ 190,753	$ (6,541)

	Year Ended December 31, 2024	
	Assets	Liabilities
Balance at December 31, 2023	$ 30,376	$ (39,875)
Revenue recognized that was previously included in contract liability	—	16,667
Decreases/increases due to cash received	(63,884)	—
Billed receivables recorded	109,449	—
Transferred to receivables from unbilled receivables	(95,564)	—
Unbilled receivables recorded	65,188	—
Balance at December 31, 2024	$ 45,565	$ (23,208)

NOTE 4 – REVENUE (CONTINUED)

Assets Recognized for the Costs to Obtain a Contract

There are no assets recognized for the costs to obtain the License Agreement.

NOTE 5 – PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets consist of the following:

	December 31, 2025	December 31, 2024
Insurance	$ 194,258	$ 154,945
Deposits for equipment purchases	172,937	—
Rent	89,468	36,525
Software licenses	75,257	151,451
Subscriptions	39,934	—
Other	23,120	9,415
Investor relations	6,127	5,271
Prototype devices	—	44,134
	$ 601,101	$ 401,741

NOTE 6 – PROPERTY AND EQUIPMENT

Property and equipment consist of the following:

	December 31, 2025	December 31, 2024
Office equipment	$ 189,694	$ 155,511
Lab equipment	12,194,071	10,953,487
Furniture	66,438	54,493
Leasehold improvements	440,855	432,400
Software	133,377	133,377
	13,024,435	11,729,268
Less: Accumulated depreciation	7,802,183	6,037,723
Property and equipment, net	$ 5,222,252	$ 5,691,545

Depreciation expense for the years ended December 31, 2025 and 2024 was $1,821,084 and $1,563,477, respectively. During the year ended December 31, 2025, the Company traded in property and equipment with a cost and accumulated depreciation of $25,140 for a gain of $28,800. During the year ended December 31, 2025, the Company retired property and equipment with a cost of $40,266 and accumulated depreciation of $31,484 for a loss of $8,782. During the year ended December 31, 2024, the Company retired property and equipment with a cost of $203,480 and accumulated depreciation of $200,314 for a loss of $3,166.

NOTE 7 – INTANGIBLE ASSETS

Intangible assets represent legal fees and patent fees associated with the prosecution of patent applications. The Company has recorded amortization expense on patents granted, which are amortized over the remaining legal life. Maintenance patent fees are paid to a government patent authority to maintain a granted patent in force. Some countries require the payment of maintenance fees for pending patent applications. Maintenance fees paid after a patent is granted are expensed, as these are considered ongoing costs to “maintain a patent”. Maintenance fees paid prior to a patent grant date are capitalized to patent costs, as these are considered “patent application costs”. No amortization expense is recorded for remaining patent applications since patents on these applications have yet to be granted

NOTE 7 – INTANGIBLE ASSETS (CONTINUED)

Intangible assets consist of the following:

	December 31, 2025	December 31, 2024
Patents	$ 2,187,191	$ 2,127,076
Less: Accumulated amortization	473,771	771,631
Intangible assets, net	$ 1,713,420	$ 1,355,445

Amortization expense for the years ended December 31, 2025 and 2024 was $82,284 and $119,283, respectively. During the year ended December 31, 2025, the Company retired certain expired patents and patent applications with a cost of $425,314 and accumulated amortization of $380,144 for a loss of $45,170. During the year ended December 31, 2024, the Company retired certain expired patent applications and patents with a cost of $217,176 and accumulated amortization of $6,902 for a loss of $210,274.

NOTE 8 – LEASES

On October 30, 2017, the Company entered into a lease agreement (the "Lease") to lease approximately 13,420 square feet of office, chemistry, clean room and research and development space located in Colorado for the Company's principal executive offices and research and development facility. The term of the lease was sixty-one (61) months, beginning on November 1, 2017 and ending on November 30, 2022. In January 2022, the term was extended for an additional twenty-four (24) months.

On November 22, 2022, the Company entered into an amendment to the Lease ("the Amended Lease") to lease an additional approximately 9,684 square feet of adjacent office and warehouse space. The term of the Amended Lease is one hundred twenty-eight (128) months, with an effective date of June 1, 2023. Base rent through January 31, 2024 of the Amended Lease term was approximately $30,517 per month. The base rent for the next full year of the Amended Lease term is approximately $377,288, with an increase in annual base rent of approximately 3% in each subsequent year of the lease term. Commencing on June 1, 2023, monthly installments of base rent and one-twelfth of landlord's estimate of tenant's proportionate share of annual operating expenses shall be due on the first day of each calendar month. The Amended Lease also provides an allowance of up to $43,216 to be used solely for the cost of renovations to the additional lease premises. As of December 31, 2025, the operating lease right-of-use asset and operating lease liability amounted to $2,440,369 and $2,598,681, respectively. As of December 31, 2024, the operating lease right-of-use asset and operating lease liability amounted to $2,645,723 and $2,766,971, respectively.

For purposes of calculating operating lease liability, lease term includes the initial non-cancelable term plus any term under renewal options that are reasonably assured. Any rent escalations, along with rent abatements, are included in the computation of rent expense calculated on a straight-line basis over the lease term. The interest rate implicit in lease contracts is typically not readily determinable and as such the Company uses the appropriate incremental borrowing rate based on information available at the lease commencement date in determining the present value of the lease payments.

Undiscounted future minimum lease payments under the Amended Lease as of December 31, 2025, by year and in aggregate, including the extended term, are as follows:

YEARS ENDING DECEMBER 31,	AMOUNT
2026	$ 399,199
2027	411,174
2028	423,612
2029	436,300
2030	449,431
Thereafter	1,471,840
	3,591,556
Less discounted interest	(992,875)
TOTAL	$ 2,598,681

The Company has elected not to recognize right-of-use assets and lease liabilities arising from short-term leases. There are no other material operating leases.

NOTE 8 – LEASES (CONTINUED)

The following table presents weighted average assumptions used to compute the Company's right-of-use assets and lease liabilities:

	December 31, 2025
Weighted average remaining lease term (in years)	8.08
Weighted average discount rate	8.25%

As of December 31, 2025, current operating leases had remaining terms between 12 months and 8.08 years, with some leases having options to extend the lease terms.

Current lease agreements do not contain any residual value guarantees or material restrictive covenants. As of December 31, 2025, the Company did not have any finance leases.

Operating and short-term lease costs totaling $372,282 and $107,140 are included in research and development and general and administrative expenses for the year ended December 31, 2025. Operating and short-term lease costs totaling $513,428 and $102,077 are included in research and development and general and administrative expenses for the year ended December 31, 2024.

NOTE 9 – INCOME TAXES

As discussed in Note 1, the Company utilizes the asset and liability method of accounting for income taxes in accordance with FASB ASC 740.

Loss before provision for income taxes for the years ended December 31, 2025 and 2024 was as follows:

	2025	2024
Domestic	$ (20,313,797)	$ (22,535,041)
Foreign	—	—
Loss before income taxes	$ (20,313,797)	$ (22,535,041)

The income tax (benefit) provision consists of the following:

	2025	2024
Current	$ —	$ —
Deferred	(4,364,876)	(4,219,770)
Change in valuation allowance	4,364,876	4,219,770
Total	$ —	$ —

Upon adoption of ASU 2023-09, Improvements to Income Tax Disclosures, the reconciliation of the statutory federal rate to the Company's effective income tax rate for the year ended December 31, 2025 was as follows:

	Amount	%
U.S. federal statutory tax rate	$ (4,265,897)	21.00
State taxes, net of federal benefits		
State taxes	(480,058)	2.36
Change in valuation allowance	480,058	(2.36)
Change in valuation allowance	3,884,818	(19.12)
Nontaxable or nondeductible items	86,312	(0.42)
Other adjustments		
Expirations of net operating losses	421,674	(2.08)
Others	(126,906)	0.62
Effective tax rate	$ —	0.00

NOTE 9 – INCOME TAXES (CONTINUED)

The reconciliation of the statutory federal rate to the Company's effective income tax rate for the year ended December 31, 2024 in accordance with the guidance prior to the adoption of ASU 2023-09 was as follows:

	Amount	%
Income tax benefit at U.S. federal income tax rate	$ (4,732,359)	21.00
State tax benefit, net of federal tax effect	(762,723)	3.38
Exercised share-based compensation	(280,090)	1.24
Other	1,555,403	(6.90)
Change in valuation allowance	4,219,770	(18.73)
	$ —	—

The components of deferred tax assets as of December 31, 2025 and 2024 are as follows:

	2025	2024
Net operating loss carryforwards	34,183,017	29,736,871
Share-based compensation	5,411,811	4,901,024
Section 174 research and development expenses	3,568,353	4,931,791
Lease liability	633,557	677,244
Others	77,793	113,864
Total deferred tax assets	43,874,531	40,360,794
Valuation allowance	(41,389,874)	(37,024,998)
Deferred tax assets net of valuation allowance	2,484,657	3,335,796
Section 481(a) adjustment	(1,490,581)	(2,264,040)
Right of use asset	(594,960)	(647,567)
Property and Equipment	(399,115)	(424,188)
Total deferred tax liabilities	(2,484,657)	(3,335,796)
Net deferred tax assets (liabilities)	—	—

The valuation allowance for deferred tax assets as of December 31, 2025 and 2024 was $41,389,874 and $37,024,998. The change in the total valuation for the year ended December 31, 2025 was an increase of $4,364,876, and for the year ended December 31, 2024 was an increase of $4,219,770.

In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the net operating losses and temporary differences become deductible. Management considered projected future taxable income and tax planning strategies in making this assessment. The value of the deferred tax assets was offset by a valuation allowance, due to the current uncertainty of the future realization of the deferred tax assets.

As of December 31, 2025, the Company had federal net operating loss carry forwards of approximately $140,064,567, comprised of federal net operating losses in the amount of approximately $34,755,366 recorded in tax years beginning prior to January 1, 2018 expiring through the year ending December 31, 2037 and federal net operating losses recorded in tax years beginning January 1, 2018 and after in the amount of approximately $105,309,201 which are allowed for an indefinite carryforward period but may be subject to limitations. This amount can be used to offset future taxable income of the Company.

The timing and manner in which the Company can utilize operating loss carryforwards in any year may be limited by provisions of the Internal Revenue Code regarding changes in ownership of corporations. Such limitations may have an impact on the ultimate realization of its carryforwards and future tax deductions.

NOTE 9 – INCOME TAXES (CONTINUED)

The Company follows ASC 740-10, which provides guidance for the recognition and measurement of certain tax positions in an enterprise's financial statements. Recognition involves a determination of whether it is more likely than not that a tax position will be sustained upon examination with the presumption that the tax position will be examined by the appropriate taxing authority having full knowledge of all relevant information. The adoption of ASC 740-10 did not require an adjustment to the Company's financial statements.

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, 2025, the Company had no unrecognized tax benefits and no charge during 2025, and accordingly, the Company did not recognize any interest or penalties during 2025 related to unrecognized tax benefits. There is no accrual for uncertain tax positions as of December 31, 2025.

The Company files U.S. income tax returns and state income tax returns. With few exceptions, the U.S. and state income tax returns filed for the tax years ended on December 31, 2022 and thereafter are subject to examination by the relevant taxing authorities.

On July 4, 2025, the U.S. H.R.1, an act to provide for reconciliation pursuant to title II of H. Con. Res. 14. (the "OBBBA") was enacted. The OBBBA introduces multiple tax law and other legislative changes, including modifications to income tax provisions such as existing 21% corporate income tax rate made permanent, domestic research and development expenses, the restoration of 100% bonus depreciation, changes to Section 163(j) interest limitations, and U.S. taxation of international earnings; the repeal or acceleration of the sunset of certain tax credits under the 2022 Inflation Reduction Act and elimination of certain penalties for violations of certain regulatory credit programs. The Company recognized the effects of the OBBBA provisions in its financial results to the extent they are applicable to the year ended December 31, 2025 and will continue to evaluate the impact of these provisions on its 2026 and subsequent consolidated financial statements.

NOTE 10 – 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

On July 26, 2024, the Company filed a $100,000,000 universal shelf registration statement with the U.S. Securities and Exchange Commission which became effective on August 5, 2024.

On February 28, 2023, the Company entered into a purchase agreement with an institutional investor to sell up to $30,000,000 of common stock over a 36-month period. Concurrently with entering into the purchase agreement, the Company also entered into a registration rights agreement which provides the institutional investor with certain registration rights related to the shares issued under the purchase agreement. Pursuant to the purchase agreement, the Company issued 50,891 shares of common stock to the institutional investor as an initial commitment fee valued at $279,391 fair value, and 101,781 shares of common stock were reserved for additional commitment fees to the institutional investor in accordance with the terms of the purchase agreement.

During the period February 28, 2023 through December 31, 2025, the institutional investor purchased 7,756,336 shares of common stock for proceeds of $30,000,000 and the Company issued 101,781 shares of common stock as additional commitment fee, valued at $518,265 fair value, leaving zero in reserve for additional commitment fees. During the year ended December 31, 2025, pursuant to the purchase agreement, the institutional investor purchased 1,035,881 shares of common stock for proceeds of $1,486,983 and the Company issued 5,046 shares of common stock as additional commitment fee, valued at $8,029 fair value. During the year ended December 31, 2024, pursuant to the purchase agreement, the institutional investor purchased 3,850,000 shares of common stock for proceeds of $12,366,965, and the Company issued 41,956 shares of common stock as additional

NOTE 10 – STOCKHOLDERS' EQUITY (CONTINUED)

Common Stock (Continued)

commitment fee, valued $154,210 fair value. As of December 31, 2025, no amounts remain available under this purchase agreement.

On March 17, 2025, the Company entered into a new purchase agreement with the same institutional investor to sell up to $30,000,000 of common stock over a 36-month period. Concurrently with entering into the purchase agreement, the Company also entered into a registration rights agreement which provides the institutional investor with certain registration rights related to the shares issued under the purchase agreement. Pursuant to the purchase agreement, the Company issued 245,098 shares of common stock to the institutional investor as an initial commitment fee valued at $222,990 fair value, and 490,196 shares of common stock were reserved for additional commitment fees to the institutional investor in accordance with the terms of the purchase agreement.

During the year ended December 31, 2025, pursuant to the purchase agreement, the institutional investor purchased 2,050,000 shares of common stock for proceeds of $3,646,655 and the Company issued 59,586 shares of common stock as additional commitment fee, valued at $139,292 fair value. This purchase agreement was terminated on December 15, 2025 in conjunction with an offering to sell shares of the Company's common stock to an investment bank.

On December 17, 2025, the Company closed the offering with an investment bank to sell up to 13,416,667 shares of its common stock, including up to 1,750,000 shares to cover over-allotments. Pursuant to the underwriting agreement for the offering, the Company agreed to issue to the underwriter warrants to purchase up to 350,000 shares of common stock, or three percent (3%) of the total number of shares of common stock sold in the offering, as well as additional underwriter warrants to purchase up to an aggregate of 52,500 shares of common stock in connection with the exercise of the option by the underwriter. During the year ended December 31, 2025, the Company sold 11,666,667 shares under this agreement for the net proceeds of $32,825,700, after deducting underwriting discounts and commissions and other offering expenses payable by the Company. The underwriter warrants will be immediately exercisable at an exercise price of $3.45 per share during the five-year 5 period following the date of the underwriting agreement. As of the year ended December 31, 2025, 350,000 underwriter warrants were outstanding. No underwriting warrants were exercised during the year ended December 31, 2025.

On December 9, 2022, the Company entered into a sales agreement with an investment banking company. In accordance with the terms of this sales agreement, the Company may offer and sell shares of its common stock having an aggregate offering price of up to $35,000,000 from time to time through or to the investment banking company, as sales agent or principal. Sales of shares of the Company's common stock, if any, may be made by any method deemed to be an "at-the-market offering". The sales agent is entitled to compensation under the terms of the sales agreement at a commission rate equal to 3% of the gross proceeds of the sales price of common stock that they sell.

During the year ended December 31, 2025, pursuant to the sales agreement, the investment banking company sold 5,885,853 shares of the Company's common stock for proceeds of $18,785,657 after a payment of the commission in the amount of $581,004 to the investment banking company. During the year ended December 31, 2024, pursuant to the sales agreement, the investment banking company sold 551,501 shares of the Company's common stock for proceeds of $1,779,976 after a payment of the commission in the amount of $55,054 to the investment banking company. During the period from January 1, 2026 through March 20, 2026, pursuant to the sales agreement, the investment banking company sold 0 shares of the Company's common stock.

NOTE 11 – STOCK BASED COMPENSATION

Common Stock Options and Warrants

During 2007, the Board of Directors of the Company adopted the 2007 Employee Stock Plan ("2007 Plan") that was approved by the shareholders. Under the 2007 Plan, the Company is authorized to grant options to purchase up to 10,000,000 shares of common stock to directors, officers, employees and consultants who provide services to the Company. The 2007 Plan is intended to permit stock options granted to employees under the 2007 Plan to qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended ("Incentive Stock Options"). All options granted under the 2007 Plan, which are not intended to qualify as Incentive Stock Options are deemed to be non-qualified options ("Non-Statutory Stock Options").

NOTE 11 – STOCK BASED COMPENSATION (CONTINUED)

Common Stock Options and Warrants (Continued)

Effective June 24, 2016, the 2007 Plan was terminated. As of December 31, 2025, options to purchase 350,000 shares of common stock are outstanding under the 2007 Plan.

During 2016, the Board of Directors of the Company adopted the 2016 Equity Incentive Plan ("2016 Plan") that was approved by the shareholders at the 2016 annual meeting of shareholders on May 20, 2016. Under the 2016 Plan, the Company is authorized to grant awards of incentive and non-qualified stock options and restricted stock to purchase up to 3,000,000 shares of common stock to employees, directors and consultants. Effective May 16, 2019, the number of shares of the Company's common stock available for issuance under the 2016 Plan was increased from 3,000,000 to 8,000,000 shares. Effective May 25, 2023, the number of shares of the Company's common stock available for issuance under the 2016 Plan was increased from 8,000,000 to 13,000,000 shares and awards of restricted stock units were authorized for issuance. Effective May 15, 2025, the 2016 Plan was terminated. As of December 31, 2025, options to purchase 7,569,828 shares of common stock have been issued and are outstanding, 498,694 restricted shares of common stock have been granted, net of forfeitures, 1,616,380 restricted stock units have been granted, and 542,566 performance stock units have been issued under the 2016 Plan.

During 2025, the Board of Directors of the Company adopted the 2025 Equity Incentive Plan ("2025 Plan") that was approved by the shareholders at the 2025 annual meeting of shareholders on May 15, 2025. Under the 2025 Plan, the Company is authorized to grant awards of incentive and non-qualified stock options and restricted stock to purchase up to 6,000,000 shares of common stock to employees, directors and consultants. As of December 31, 2025, options to purchase 451,250 shares of common stock have been issued and are outstanding and 1,561,119 restricted stock units have been granted under the 2025 Plan. As of December 31, 2025, 3,987,631 shares of common stock remain available for grants under the 2025 Plan.

These plans are administered by the Company's Board of Directors or its compensation committee which determines the persons to whom awards will be granted, the number of awards to be granted, and the specific terms of each grant. Options granted under the 2025 Plan are generally exercisable for a period of 10 years from the date of grant and may vest on the grant date, another specified date or over a period of time.

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award, with the following assumptions for the year ended December 31, 2025: no dividend yield, expected volatility, based on the Company's historical volatility, 78.7% to 82.0%, risk-free interest rate between 4.18% to 4.48% and expected option life of 10 years, which is based on the legal contractual life of the options.

The Black-Scholes option pricing model assumptions for 2024 are as follows: no dividend yield, expected volatility, based on the Company's historical volatility, 76.3% to 78.5%, risk-free interest rate between 3.73% to 4.47% and expected option life of 10 years, which is based on the legal contractual life of the options.

As of December 31, 2025, there was $1,524,567 of unrecognized compensation expense related to non-vested option awards that is expected to be recognized through September 2028. As of December 31, 2024, there was $2,755,783 of unrecognized compensation expense related to non-vested option awards.

Share-based compensation was recognized as follows:

	2025	2024
Stock options	$ 2,051,204	$ 4,440,003
Restricted stock awards	551,466	446,628
Restricted stock units	1,278,403	—
Performance stock units	801,595	—
Total share-based compensation	$ 4,682,668	$ 4,886,631

NOTE 11 – STOCK BASED COMPENSATION (CONTINUED)

Common Stock Options and Warrants (Continued)

The following tables summarize all stock option and warrant activity of the Company during the years ended December 31, 2025 and 2024:

	Non-Qualified Stock Options and Warrants Outstanding and Exercisable		
	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 2023	8,809,807	$0.51 - $16.81	$ 2.76
Granted	1,628,000	$1.96 - $5.00	$ 4.05
Forfeited	(43,948)	$4.28 - $7.67	$ 5.70
Exercised	(494,000)	$0.57 - $1.15	$ 0.68
Outstanding, December 31, 2024	9,899,859	$0.51 - $16.81	$ 3.07
Granted	1,113,586	$0.99 - $3.56	$ 2.28
Expired	(75,000)	$0.67 - $0.69	$ 0.68
Forfeited	(93,355)	$0.99 - $5.58	$ 3.26
Exercised	(1,849,012)	$0.60 - $4.70	$ 0.71
Outstanding, December 31, 2025	8,996,078	$0.51 - $16.81	$ 3.47
Exercisable, December 31, 2025	8,186,290	$0.51 - $16.81	$ 3.57

The aggregate intrinsic value of options and warrants outstanding and exercisable as of December 31, 2025 was $9,210,466 and $8,336,267, respectively. 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 $3.24 for the Company's common stock on December 31, 2025. During the year ending December 31, 2025, 1,724,012 options with the aggregate intrinsic value of $1,129,713 were exercised for proceeds of $280,583. Of this amount, 1,350,000 options were exercised via cashless settlement. During the year ending December 31, 2025, 125,000 warrants with the aggregate intrinsic value of $468,750 were exercised for proceeds of $75,000. During the year ending December 31, 2024, 375,000 options with the aggregate intrinsic value of $1,399,958 were exercised for proceeds of $246,100. During the year ending December 31, 2024, 119,000 warrants with the aggregate intrinsic value of $171,550 were exercised for proceeds of $91,250.

	Non-Qualified Stock Options and Warrants Outstanding			
Range of Exercise Prices	Number Outstanding Currently Exercisable at December 31, 2025	Weighted Average Remaining Contractual Life		Weighted Average Exercise Price of Options and Warrants Currently Exercisable
$0.51 - $16.81	8,186,290	5.7 Years	$	3.57

NOTE 11 – STOCK BASED COMPENSATION (CONTINUED)

Restricted Stock Awards and Units

The Company grants restricted stock units ("RSUs") and restricted stock awards ("RSAs") to employees and directors. RSUs represent the right to receive shares of common stock upon vesting, while RSAs are shares issued at the grant date that remain subject to forfeiture until vesting conditions are met. These awards are amortized on a straight-line basis over the vesting period into stock-based compensation expense. The vesting period ranges from immediate vesting to monthly or quarterly vesting.

Upon the occurrence of a Change in Control, 100% of the unvested RSAs and RSUs shall vest as of the date of the Change in Control. Upon vesting, the restrictions on the shares lapse.

The fair value of restricted stock awards and units is estimated by the market price of the Company's common stock at the date of grant. Restricted stock activity during the years ended December 31, 2025 and December 31, 2024 is as follows:

	Restricted Stock Awards				Restricted Stock Units			
	Year Ended				Year Ended			
	December 31, 2025		December 31, 2024		December 31, 2025		December 31, 2024	
	Number of Shares	Weighted Average Grant Date Fair Value per Share	Number of Shares	Weighted Average Grant Date Fair Value per Share	Number of Shares	Weighted Average Grant Date Fair Value per Share	Number of Shares	Weighted Average Grant Date Fair Value per Share
Non-vested, beginning of period	227,492	$ 3.28	78,452	$ 5.71	—	$ —	—	$ —
Granted	160,000	1.06	226,887	2.96	3,177,499	2.88	—	—
Vested	(216,529)	2.81	(77,847)	4.79	(340,757)	1.30	—	—
Cancelled and forfeited	(17,367)	4.13	—	—	—	—	—	—
Non-vested, end of period	153,596	$ 1.54	227,492	$ 3.28	2,836,742	$ 3.07	—	$ —

Restricted stock awards and units are being amortized to expense over the shorter of the requisite service period or the vesting period. As of December 31, 2025 and 2024, the unamortized value of the restricted stock awards was $203,458 and $656,735, respectively. As of December 31, 2025 and 2024, the unamortized value of the restricted stock units was $5,836,770 and $0, respectively.

During the years ended December 31, 2025 and 2024, the Company recognized $98,189 and $671,070, respectively, for restricted stock awards issuances, net of forfeitures and share settlement for taxes as deferred compensation.

Performance Stock Units

On April 18, 2025, the Company granted 2,187,501 performance stock units (PSUs) subject to both performance-based and service vesting requirements to the Company's executives. Performance vesting requirements are tied to various individual and corporate goals related to the Company's commercialization, as measured over a one-year performance period. The grant date fair value of the PSUs granted was $2,029,126, as determined by the Company's closing common stock price on the date of the grant. The grant date fair value per share was $0.93.

On September 12, 2025, in conjunction with entering into a multi-year employment agreement with the Company's Chief Executive Officer ("CEO"), the Company modified 1,616,380 of the PSUs held by the CEO by removing the performance conditions and converting the awards into RSUs, with vesting subject to continued service. Consistent with ASC 718, $298,311 compensation expense recognized from the grant date through the modification date was based on the original grant-date fair value of $0.93 per share and the probability of achieving performance conditions based on the evaluation as of the modification date. Upon the modification, the Company determined the fair values of the modified and the original awards, and the incremental

NOTE 11 – STOCK BASED COMPENSATION (CONTINUED)

Performance Stock Units (Continued)

fair value of the modified award together with the remaining unrecognized original grant-date fair value, totaling $3,365,938 will be recognized prospectively, over the remaining vesting period.

The Company determined that achievement of some performance conditions for the remaining PSUs is probable as of December 31, 2025, and recorded $503,284 stock-based compensation expense related to the PSU vesting. The Company issued 542,566 shares for the PSUs earned based on the achievement of the performance conditions and repurchased 148,490 shares to cover the employee portion of payroll taxes, thus issuing 394,076 net shares. As of December 31, 2025, no PSUs remain outstanding. No PSUs were outstanding or expensed as of and during the year ended December 31, 2024.

NOTE 12 – LOSS PER SHARE

The Company calculates earnings (loss) per share ("EPS") in accordance with FASB ASC 260, Earnings Per Share. Basic EPS is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted loss per share reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock. For the years ended December 31, 2025 and 2024, the Company reported a net loss; therefore, diluted EPS is calculated the same as basic EPS, as the inclusion of all potentially dilutive securities would be anti-dilutive.

The following securities were excluded from the calculation of diluted loss per share because their effect would have been anti-dilutive:

- Options and warrants: 2,202,237 shares (2025), 3,988,729 shares (2024)
- Unvested RSUs: 229,212 shares (2025), 0 Shares (2024).

NOTE 13 – RELATED PARTIES

During the years ended December 31, 2025, and 2024, the Company engaged in transactions with related parties, including consultants, directors, and entities affiliated with members of the Board of Directors. These transactions primarily relate to legal services, consulting fees, director compensation, accounting services, and expense reimbursements.

Related party transactions for the year ended December 31, 2025 were as follows:

- The Company incurred $228,976 in fees and travel expenses to directors, with $56,250 accrued as of December 31, 2025.

- The Company incurred $241,696 in consulting fees and travel expenses to a member of the Board of Directors under his consulting agreement, with $0 accrued as of December 31, 2025.

Related party transactions for the year ended December 31, 2024 were as follows:

- The Company incurred $90,360 in legal fees with a related party law firm, of which $90,360 remained accrued as of December 31, 2024.

- The Company incurred $207,269 in accounting and IT service fees and expense reimbursements to related parties, with $8,326 accrued as of December 31, 2024.

- The Company incurred $251,194 in fees and travel expenses to directors, with $72,748 accrued as of December 31, 2024.

- The Company incurred $438,716 in consulting fees and travel reimbursements to advisory board members, with $29,345 accrued as of December 31, 2024.

NOTE 14 – RETIREMENT PLAN

The Company established a 401(k) retirement plan covering all eligible employees beginning November 15, 2013, which was amended effective February 15, 2025. The plan offers two types of elected deferrals: pre-tax deferrals and Roth deferrals. The Company matches 100% of each participant contribution, up to 4% for all eligible employees. Matching contributions vest immediately. Participants are entitled to receive distributions of all vested amounts beginning at age 59 1/2. Matching contributions to all eligible non-executive participants charged to expense were $187,630 and $134,766 for the years ending December 31, 2025 and 2024, respectively. The plan is subject to the annual IRS elective deferral limit of $23,500 per employee for 2025, $7,500 catch-up for those aged 50 and over, and $11,250 or 150% of the regular catch-up limit for those aged 60-63.

NOTE 15 – SEGMENT REPORTING

The Company operates as a single reportable segment, as the Chief Operating Decision Maker ("CODM"), the Chief Executive Officer ("CEO"), evaluates the business as a whole and does not receive discrete financial information for separate business units. The CODM is responsible for evaluating financial results and making resource allocation decisions. The Company determined that it has one operating and reportable segment based on the way the CODM organizes, manages, and evaluates the Company's operations on a consolidated basis.

The CODM assesses the Company's financial performance based on operating loss, which aligns with the amount reported in the statements of comprehensive loss. The following table presents a reconciliation of segment operating loss to net loss for the years ended December 31, 2025 and 2024:

	2025	2024
NET SALES	$ 236,855	$ 95,605
COST AND EXPENSE		
Cost of sales	6,823	7,395
Research and development	11,489,687	16,806,548
General and administrative	9,501,769	6,370,805
Total significant segment expenses	20,998,279	23,184,748
LOSS FROM OPERATIONS	(20,761,424)	(23,089,143)
OTHER INCOME (EXPENSE)		
Interest income	842,445	926,854
Commitment fee	(370,311)	(154,210)
Loss on disposal of property and equipment and intangible assets	(25,152)	(213,440)
Other income (expense)	645	(5,102)
NET LOSS	$ (20,313,797)	$ (22,535,041)

Significant Segment Expenses

The Company considers the following as significant expenses in evaluating its segment performance:

- Research and Development: includes costs related to personnel, laboratory and wafer fabrication materials and supplies, prototype device development and wafer fabrication expenses, and third-party consulting costs aimed at developing high-performance electro-optic polymer materials.
- General and Administrative: includes personnel costs, professional fees, and other overhead expenses.
- Cost of Sales: represents labor costs, material costs and manufacturing overhead costs associated with the production of materials transferred to the customer under the technology license and material supply agreement at the Company's facility.

Other segment items were $0 for the years ended December 31, 2025 and 2024. Other segment items were $0 because cost of sales, research and development, and general and administrative expenses comprise all expenses included in the CODM measure of segment operating loss.

NOTE 15 – SEGMENT REPORTING (CONTINUED)

Segment assets

The CODM does not regularly review asset information by segment; accordingly, the Company has not disclosed segment assets.

Entity-Wide Disclosures

- Geographic Revenue Information: for the year ended December 31, 2025, $236,855 of the Company's net sales were generated outside the United States. For the year ended December 31, 2024, $13,750 of the Company's net sales were generated in the United States and $81,855 were generated outside the United States. Revenue is attributed to geographic areas based on the customer's bill-to location. For the years ended December 31, 2025 and 2024, 100% of net sales were generated in two countries, which represented 10% or more of consolidated net sales.
- Long-lived assets: long-lived assets, consisting primarily of property and equipment, intangible assets, and right of use assets under operating leases were all located in the United States and totaled $9,376,041 and $9,692,713 as of December 31, 2025 and 2024, respectively.
- Major Customers: for the year ended December 31, 2025 and 2024, the Company has two customers that accounted for 10% or more of total revenue. For the year ended December 31, 2025, Customer A and Customer B accounted for approximately 55% and 45% of total net sales, respectively. For the year ended December 31, 2024, Customer A and Customer B accounted for approximately 14% and 86% of total net sales, respectively. The related revenues were attributable to the Company's single reportable segment.

NOTE 16 – SUBSEQUENT EVENTS

On January 8, 2026, investment bank exercised an option to purchase from the Company up to 1,750,000 additional shares of common stock for the purpose of covering over-allotments. Pursuant to the underwriting agreement for the offering, the Company issued to the underwriter warrants to purchase up to 52,500 shares of Common Stock. The Company received $4,930,928 in cash proceeds, after deducting underwriting discounts and commissions and other estimated offering expenses payable by the Company. The underwriter warrants will be immediately exercisable at an exercise price of $3.45 per share during the five-year period following the date of the underwriting agreement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

By: /s/ Yves LeMaitre
Yves LeMaitre
Chief Executive Officer
(Principal Executive Officer)

Date: March 20, 2026

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Yves LeMaitre Yves LeMaitre	Chief Executive Officer, Principal Executive Officer, Director	March 20, 2026
/s/ Snizhana Quan Snizhana Quan	Principal Financial Officer and Principal Accounting Officer	March 20, 2026
/s/ Ronald A. Bucchi Ronald A. Bucchi	Director, Chair of the Board of Directors	March 20, 2026
/s/ Siraj Nour El-Ahmadi Siraj Nour El-Ahmadi	Director	March 20, 2026
/s/ Craig Ciesla Craig Ciesla	Director	March 20, 2026
/s/ Laila Partridge Laila Partridge	Director	March 20, 2026
/s/ Thomas M. Connelly, Jr. Thomas M. Connelly, Jr.	Director	March 20, 2026