Aeva Unveils Industry-Leading High-Power Semiconductor Optical Amplifier for AI Data Center and Physical AI Applications

January 15, 2026

New High-Power SOA Extends Aeva's Photonics Leadership Beyond FMCW LiDAR Sensing to Power the Rapidly Growing Next Generation AI Data Centers and Co-Packaged Optics for Physical AI Infrastructure

MOUNTAIN VIEW, Calif.--(BUSINESS WIRE)--Jan. 15, 2026-- Aeva® (Nasdaq: AEVA), a leader in next-generation sensing and perception systems, today announced the development of a new high-power semiconductor optical amplifier (SOA) delivering industry-leading performance for demanding AI data center, supporting Co-Packaged Optics (CPO) architectures, as well as FMCW LiDAR applications.

As AI workloads continue to scale rapidly, data centers are facing mounting challenges around power efficiency, thermal management, and capacity for transmitting large amounts of data. These constraints are accelerating adoption of high-efficiency, high-temperature optical amplification technologies to support next-generation AI data center architectures such as co-packaged optics, External Laser Small Form-Factor Pluggable (ELSFP), and high-bandwidth parallel optical channels.

The development of the new SOA extends Aeva's vertically integrated photonics platform beyond sensing, opening new opportunities where high-performance optical technologies underpin the future of data centers, Physical AI and autonomous systems. Aeva's SOA technology is produced in modern semiconductor fabs, enabling high yield, excellent reliability, long-term stability, and cost-effective scaling to meet growing market demand.

"As AI infrastructure and autonomous systems continue to scale, the industry needs optical technologies that can deliver high performance without compromising efficiency, manufacturability, reliability, or cost," said Pradeep Srinivasan, VP of Photonics at Aeva. "This new high-power SOA reflects Aeva's deep expertise in photonics and semiconductor design and has the potential to enable a new class of scalable architectures across both AI data centers and FMCW LiDAR applications for automotive and Physical AI applications."

Designed to address these requirements, Aeva's Optical Amplifier demonstrates optical output power exceeding 28 dBm while achieving wall-plug efficiencies greater than 20 percent at temperatures up to 50 degrees Celsius. The combination of high power, efficiency, and thermal robustness drives lower system power dissipation, reduced costs, and significantly improves reliability in large-scale AI data center deployments and advanced multi-beam FMCW LiDAR systems.

The SOA's technical performance and reliability results are detailed in Aeva's paper on high-power semiconductor optical amplifiers, which will be presented at the annual SPIE Photonics West Conference on January 19. To learn more about Aeva's presentation at Photonics West, visit: https://spie.org/photonics-west/presentation/High-power-diode-amplifiers-and-lasers-for-FMCW-lidar-and/13876-22

About Aeva Technologies, Inc. (Nasdaq: AEVA)

Aeva's mission is to bring the next wave of perception to a broad range of applications from automated driving, manufacturing automation and smart infrastructure, to robotics and consumer devices. Aeva is accelerating autonomy with its groundbreaking perception platform that integrates lidar-on-chip technology, system-on-chip processing, and perception algorithms onto silicon leveraging silicon photonics. Aeva 4D LiDAR sensors uniquely detect velocity and position simultaneously, allowing automated devices like vehicles and robots to make more intelligent and safe decisions. For more information, visit www.aeva.com, or connect with us on X or LinkedIn.

Forward looking statements

This press release contains certain forward-looking statements within the meaning of the federal securities laws. Forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. These forward-looking statements include, but are not limited to expectations about our product features, performance, potential applications, and the timing of production, and market adoption. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this press

release, including, but not limited to:(i) the fact that Aeva is an early stage company with a history of operating losses and may never achieve profitability, (ii) Aeva's limited operating history, (iii) the ability to implement business plans, forecasts, and other expectations and to identify and realize additional opportunities, (iv) the ability for Aeva to have its products selected for inclusion in OEM products for commercial scale production, (v) the commercial success of any OEM products in which Aeva's products might be included, (vi) unforeseen manufacturing issues or defects, (vii) Aeva's ability to scale production if any products achieve commercial success, (viii) market acceptance of LiDAR technology and autonomous driving and other applications, (ix) general economic conditions and other material risks and other important factors that could affect our financial results. Please refer to our filings with the SEC, including our most recent Form 10-Q and Form 10-K. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and Aeva assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. Aeva does not give any assurance that it will achieve its expectations.

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Source: Aeva Technologies, Inc.