

Hot-selling co-packaged photonics original product



Overview

Intel® Silicon Photonics Bringing together the performance and reliability of integrated photonics with the scalability of silicon to enable high Co-Package.

Key Takeaways

Lumentum's 200G-per-lane EML lasers and Intel's fully integrated optical compute interconnect (OCI) chiplets are among the hottest co-packaged photonics products in 2026. Leading Products and Technologies



1. **Lumentum 200G EML Lasers** Lumentum is currently the dominant supplier of 200G electro-absorption modulated lasers (EMLs), critical for next-generation 1.6T pluggable transceivers. These lasers are in high demand due to AI data center expansion, with NVIDIA pre-allocating capacity and lead times extending past 2027. Lumentum's EMLs are noted for high power, low latency, and compatibility with co-packaged optics (CPO) systems, making them a top-selling original product in the photonics market .

2. **Intel Optical Compute Interconnect (OCI) Chiplets** Intel has demonstrated the first fully integrated optical I/O chiplet co-packaged with a CPU, enabling 64 channels at 32 Gbps per direction over 100 meters of fiber. This product addresses AI infrastructure needs for higher bandwidth, lower power consumption, and longer reach, making it a key innovation in co-packaged photonics .

3. **Broadcom Co-Packaged Optics (CPO) Modules** Broadcom's CPO solutions integrate optics and silicon on a single substrate, offering high bandwidth density and power efficiency. These modules are widely adopted in AI and HPC data centers, supporting multi-terabit interconnects while reducing energy consumption .

4. **Coherent and Other Optical Component Leaders** Coherent, Mitsubishi, Sumitomo, and Applied Optoelectronics supply high-speed lasers, modulators, and photonic semiconductors for CPO systems. Coherent and Lumentum are the largest pure-play optical component companies with deep silicon photonics exposure, making their products highly sought after .

Market Trends Driving Sales

- **AI Data Center Growth:** The surge in AI workloads is driving demand for high-bandwidth, low-latency optical interconnects.
- **Power Efficiency:** CPO reduces energy consumption by placing optical engines adjacent to ASICs or XPU, lowering link power from 30 W to 9 W in some 1.6T networks .
- **Supply Constraints:** Limited suppliers of high-performance EMLs and co-packaged lasers have created shortages and price increases, boosting the market value of original products .
- **Integration Innovations:** Advances in photonic integrated circuits (PICs), micro ring resonators, and phase-change materials enhance energy efficiency and scalability for AI and HPC applications .

Summary

For 2026, the hottest co-packaged photonics products include:

- Lumentum 200G EML lasers – high-volume, high-demand lasers for AI data centers.
- Intel OCI chiplets – fully integrated optical I/O solutions co-packaged with CPUs.
- Broadcom CPO modules – high-density, energy-efficient optical interconnects.

- Coherent and Applied Optoelectronics components – critical lasers and modulators for next-gen optical systems. These products are driving the rapid growth of the co-packaged photonics market, projected to expand from \$2.4B in 2023 to \$5.9B by 2029, fueled by AI infrastructure and high-performance computing demands .

Article Content

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Contemporary optical communications and other systems often employ photonic integrated circuits and application specific

Silicon Photonics Networking for Agentic AI | NVIDIA

NVIDIA's Spectrum-X Ethernet Photonics switches usher in the next era of AI infrastructure by integrating co-packaged optics (CPO)

Silicon Photonics Companies

It acquired silicon photonics industry leader Luxtera in 2019 to strengthen its high-speed optical interconnects portfolio in data

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This paper gives a brief overview of state-of-the-art of co-packaged optical I/O and requirements of its next generations. We also

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

