

CPO Optical Module Semiconductor



Overview

Unlike traditional pluggable models, CPO integrates optical modules directly onto the switch ASIC substrate, reducing electrical reach and effectively addressing signal integrity issues. This approach has gained traction among major data centers. As AI clusters push beyond 100 Tb/s per node, the gap between what silicon can generate and what traditional copper interconnects can deliver is widening fast. Three hurdles are now colliding: First, power delivery is nearing practical limits. Adding GPUs no longer scales linearly, with power and. Co-Packaged Optics (CPO) is a technology and design approach where optical components, such as lasers and photodetectors, are integrated alongside electrical components, like Application-Specific Integrated Circuits (ASICs), within the same package. This integration significantly reduces the. GF's SCALE solution, or Silicon photonics Co-packaged Advanced Light Engine solution, is the industry's first Optical Compute Interconnect Multi-Source Agreement (OCI MSA) capable platform, exceeding the requirements for the OCI MSA's optical interconnect specification for modern AI scale-up. According to ZDNet, the company said in its 1Q26 earnings release that its foundry has secured orders from a major optical communication module provider. However, optimizing the packaging strategy for CPO. CPO stands for Co-packaged Optics.



Article Content

May 28, 2026

Sivers: This Small-Cap Could Ride CPO Hypergrowth

Sivers Semiconductors (SIVEF) (ticker "SIVE" on Nasdaq Stockholm) is a \$1.3 billion small-cap semiconductor company that develops Co-Packaged Optics (CPO) and optical I/O solutions.

Jan 18, 2026

OFC 2026 News Roundup | Business | Mar 2026

KISTA, Sweden — Sivers Semiconductors established a strategic partnership with optical components companies O-Net Technologies and

Jan 23, 2026

\$POET +17% pre on this news. Earnings today post. POET

At the center of the POET/Lumilens joint development program is a new paradigm for integration and module fabrication – the Electrical-Optical Interposer (EOI) – combining alignment

Oct 01, 2025

What is Co-Packaged Optics (CPO) Technology? | Corning

What is Co-Packaged Optics? Co-Packaged Optics (CPO) is a technology and design approach where optical components, such as lasers and photodetectors,

Oct 09, 2025

Co-Packaged Optics (CPO) Market Analysis: 1.6T Transition & AI

Strategic analysis of the Co-Packaged Optics (CPO) market, tracking the 2026 inflection point for 1.6T modules. Explores value migration, supply chain bottlenecks, and thermal

Apr 07, 2026

Five Key Trends of Co-Packaged Optics (CPO) in 2026

Meeting market expectations and building confidence in co-packaged optics will require more than performance demonstrations. CPO adoption

May 09, 2026

An Introduction To CPO Technology

Compared with the separate packaging of traditional optical modules and electronic chips, CPO achieves a much more compact form factor, which is highly suitable

Nov 27, 2025

Optical Module Package Market 2025

Optical Module Package Market was valued at 8942 million in 2024 and is projected to reach US\$ 20220 million by 2032, at a CAGR of 12.7%

Nov 29, 2025

Samsung Electronics Launches Silicon Photonics Foundry Business ...

Samsung plans to launch turnkey CPO services in 2029. CPO integrates optical modules directly into switch chip packages, eliminating the need for separate modules and reducing power

Dec 20, 2025

Samsung Foundry Reportedly Wins Optical Module Order,

As a result, optical transmission technologies are becoming increasingly important. TrendForce forecasts that co-packaged optics (CPO) will steadily increase their share of optical

May 20, 2026

What Is a Co-Packaged Optics Thermal Cycle Test Chamber?

A Co-Packaged Optics thermal cycle test chamber is a critical environmental testing solution for validating the reliability of advanced photonic and semiconductor packaging technologies.

Mar 24, 2026

Silicon photonics and co-packaged optics at the heart of

While linear-drive pluggable modules remain competitive, CPO is expected to offer unmatched customization and scalability, with large-scale

Nov 01, 2025

Co-Packaged Optics (CPO) 2025-2035: Technologies,

Co-Packaged Optics (CPO) presents a promising solution to these

Oct 10, 2025

POET Technologies Secures 50 Million Dollar AI Engine Order

POET Technologies and Lumilens sign a 500 million dollar potential supply deal for AI optical networks, following a 50 million dollar initial order.

Aug 13, 2025

The advent of co-packaged optics (CPO) in 2025

CPO is a crucial technology for artificial intelligence (AI) and high-performance computing (HPC) applications. It enhances a chip's interconnect

Feb 23, 2026

Top 5 Stocks For AI's Optical Revolution In 2026

Moving forward, the company expects its Vesta 200 6.4T CPX, a CPO-based optical solution targeted at hyperscalers, to be a strong growth vector for Ciena, in addition to the

Jun 01, 2026

Embedded Optical Transmission Tech, Arrival of CPO Set to Deliver

Embedded or integrated semiconductor optical modules are starting to gain traction, with the shipments of On-Board Optics (OBO), Near-Packaged Optics (NPO) and Co-Packaged Optics (CPO) solutions

Jan 22, 2026

LIVE WEBINAR | CO-PACKAGED OPTICS: POWERING THE NEXT

Powering co-packaged optics with advanced semiconductor equipment and process innovation. April 28 – 8 am SGT (Singapore, 04/28) – 5 pm PST (San Francisco, 04/27)
The webinar has now ended.

Feb 24, 2026

AI infrastructure accelerates the shift to scalable optical systems ...

CPO and soldered optical integration were another major focus. The OCI MSA promoted optics over copper for AI scale-up networks, aiming to reduce power consumption by eliminating high

Jan 20, 2026

Co-Packaged Optics Race: Strategic Approaches from NVIDIA and

IDTechEx Research Article: Co-packaged optics (CPO) is gaining significant attention as the next architecture for next-generation switching. The shift toward co-packaged optics is also

May 16, 2026

Top Silicon Photonics Stocks 2026: Breaking the

The industry knows it. The true endgame is called Co-Packaged Optics (CPO). Instead of plugging a separate optical module into the front of a switch,

Aug 26, 2025

CPO Is Extending The Limits Of What's Possible In AI...

Additional challenges involve promoting the standardization of CPO module form factors, improving the automation of testing and validation, and

Nov 22, 2025

Opinion: optical transceivers at the chokepoint of AI growth and supply ...

As AI infrastructure accelerates at an unprecedented pace, optical connectivity has become one of the defining enablers and constraints of next-generation data centers. In this Opinion

Aug 18, 2025

Co Packaged Optics (CPO) – Scaling with Light for the

This section will explore the evolution of the market from copper to co-packaged copper and from digital signal processor (DSP) optics to linear

Mar 08, 2026

GlobalFoundries accelerates adoption of co-packaged optics for

SCALE CPO solution is the industry's first OCI MSA capable platform and built with GF's proven silicon photonics technology MALTA, N.Y., May 04, 2026 (GLOBE NEWSWIRE) --

Apr 02, 2026

Optical Component Startup Tracker

The number of venture-backed optical component startups has exploded - the Optical Component Start-Up Tracker identifies these companies

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