

Optical Computing Module



Overview

These compact devices are the indispensable workhorses converting electrical signals into light pulses and back, enabling the unprecedented data transfer speeds and low latency that define contemporary supercomputing. Without them, exascale computing and complex AI training. SCALE CPO solution is the industry's first OCI MSA capable platform and built with GF's proven silicon photonics technology MALTA, N., May 4, 2026 – GlobalFoundries (Nasdaq: GFS) (GF) today announced the introduction of its SCALE™ optical module solution for co-packaged optics (CPO). In addition to hosting a dedicated photonics market briefing, Scaling Datacom Optical Technologies for Next Generation Networks, and. 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. This. Electro-absorption Modulated Lasers (EML): EMLs are high-performance lasers that can switch on and off at incredible speeds, making them ideal for 800G and 1.



Article Content

Aug 09, 2025

The Application of Optical Modules in High-Performance

Optical modules deliver high bandwidth, low latency, and scalable connectivity for high-performance computing, enabling efficient data center

Nov 27, 2025

Intel launches optical compute interconnect chiplet:

The optical compute interconnect (OCI) chiplet can be attached to CPUs and GPUs to enable high bandwidth, low power consumption, and

Oct 29, 2025

Telecom Optical Module Market is Estimated to Reach \$12B by 2035

Telecom Optical Module Market is Estimated to Reach \$12B by 2035 | 5.6% CAGR (2025-2035) | Wiseguy R Telecom optical modules enable high-speed data transmission across fiber optic

Apr 18, 2026

AI data centers hit interconnect limits, boosting optical module demand

The surge in optical module stocks reflects a deeper shift in AI infrastructure: the bottleneck is no longer computing power alone, but how that power is connected.

Apr 05, 2026

Optical module design resources | TI

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

Feb 11, 2026

Optical Modules in General-Purpose Computing Scenarios

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models providing flexible plug-and-play solutions tailored to diverse interface

Nov 08, 2025

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

With 1.6T gaining momentum and 400G/lane, the industry is moving beyond component innovation toward power-efficient, integrated, and deployment-ready optical architectures. Yole

Mar 02, 2026

USI to Launch Next-Generation 1.6T Optical Module Targeting AI and

USI's 1.6T optical module adopts the latest optical communication technologies, doubling the transmission rate of mainstream 800G modules to 1.6 Terabits per second (Tbps).

Jun 19, 2026

USI | USI to Launch Next-Generation 1.6T Optical Module Targeting

This new product is designed to meet the surging demands of high-performance computing (HPC) and AI-driven data centers, enhancing network topology efficiency and addressing

Jul 23, 2025

200G Optical Module Market Report: Size, Growth,

200G Optical Module Market size was valued at USD 2.5 Billion in 2023 and is projected to reach USD 5.1 Billion by 2031, growing at a CAGR of 14.2% The

Dec 20, 2025

Google's High-Speed Interconnect Architecture to Push

Google's next-generation TPU, Ironwood, integrates a 3D Torus network topology with the Apollo optical circuit switch (OCS) all-optical network,

Dec 10, 2025

Yole Group

Yole Group - Access daily business, market & technology updates in the semiconductor industry, our Analysts' Analysis and Presentations and more

Jun 15, 2026

2026 Global Optical Module Selection Guide (Website Homepage)

In 2026, driven by AI computing power, optical modules have entered a critical era of rate iteration, technological restructuring, and scenario segmentation. 800G has become the mainstream

May 17, 2026

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

These pressures are driving renewed momentum behind co-packaged optics (CPO). According to LightCounting, sales of lasers and photonic integrated

Jan 30, 2026

GlobalFoundries accelerates adoption of co-packaged optics for

The platform integrates electrical ICs on single-digit advanced nodes, enabling optimization between best-in-class compute and state-of-the-art optics without compromising

Apr 10, 2026

Europe 400G Optical Module Market 2024

Europe 400G Optical Module Market size was valued at US\$ 567.2 million in 2024 and is projected to reach US\$ 1.28 billion by 2030, at a CAGR of 14.5%.

Aug 21, 2025

Optical Module Market Analysis and Forecast in 2026

AI computing power has driven explosive growth in the optical module market, with 800G and 1.6T technologies leading the industry transformation.

Oct 28, 2025

GlobalFoundries" Unveils Optical Module Solution Targeting CPO

MALTA, N.Y., May 5, 2026 — GlobalFoundries (GF) has introduced an optical module solution for co-packaged optics (CPO). According to the company, the Silicon photonics Co-packaged Advanced

Nov 16, 2025

Optical module - A comprehensive exploration

What is an optical module? The optical module is one of the core components of the optical communication system. The optical module is

Jun 29, 2025

Intel® Silicon Photonics

Optical Compute Interconnect (OCI) Intel® Optical Compute Interconnect (OCI) is a new class of optical connectivity devices, delivering multi-terabit per second solutions with the reach and energy

Jul 23, 2025

The Technological Evolution and Application Trends of

Future optical modules will continue evolving toward greater density, higher speeds, affordability, extended reach, and ease of maintenance. With

May 06, 2026

The Evolution of Optical Modules: Powering the Future

This article takes a deep dive into the world of optical modules, exploring their evolution from 400G to the mind-boggling 3.2T, and unpacking the

Mar 21, 2026

Intel Demonstrates First Fully Integrated Optical I/O Chiplet

Intel Corporation's Integrated Photonics Solutions (IPS) Group has demonstrated the industry's first fully integrated bidirectional optical compute

Dec 21, 2025

Intel's OCI-Compatible Chiplet Provides 64 Optical

Intel's Integrated Photonics Solutions (IPS) Group made a big splash at the Optical Fiber Communication Conference (OFC) 2024 with its fully

Jan 19, 2026

800GbE optics shipments to grow 60% in 2025 - report

The datacom optical component market will grow 60%+ to reach over US\$16 billion in revenue during 2025, based primarily on continued growth in

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://moletenare-ew.co.za>

Email: info@moletenare-ew.co.za

Phone: +86 138 1658 3346

Address: Ningbo, China

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