

Chip manufacturers using optical modules



Overview

Optical Module Chip Market 2025 The optical module chip market exhibits a fragmented yet competitive structure with global technology providers, semiconduc.

Key Takeaways

Leading optical module chip manufacturers include Coherent Corp, Lumentum, Accelink Technologies, ROHM, Lite-On Technology, and emerging startups like Ayar, Alcyon, and Aloe Semiconductor.

Established Global Manufacturers

Coherent Corp: Specializes in high-performance laser and detector chips for 400G and 800G optical modules, targeting cloud and AI data centers. Lumentum: Provides optical components for telecommunications and data center applications, including lasers, detectors, and amplifiers. Accelink Technologies: Focuses on optical transceivers and high-speed optical modules, serving telecom and hyperscale data center markets.

ROH

M: Develops vertically integrated VCSELs and optoelectronic components, widely used in consumer electronics and AI applications.



Lite-

On Technology: Known for high-volume LED and imaging component production, including infrared and opto-semiconductor devices for 5G and data center applications. Toshiba, Onsemi, Renesas Electronics: Provide opto-semiconductors such as photodiodes, laser diodes, and LEDs for industrial and automotive applications.

Notable Optical Module Manufacturers

Zhongji Innolight Co., Ltd.: Offers high-speed optical transceivers (100G–800G) and coherent modules for cloud and telecom networks. Chengdu Eoptolink Communication Technology Co., Ltd.: Produces high-performance optical modules for data centers, FTTx, LTE, and smart grid applications. Huagong Tech, Linktel, CIG Shanghai: Provide optical modules and components for telecom and data communication markets.

Emerging Startups and Innovative Players

Ayar: Develops TeraPHY chips with silicon photonics engines for ultra-low latency, high-bandwidth AI data center interconnects. Alcyon Photonics: Spanish startup producing photonic integrated circuits (PICs) and offering SiPho and InP design services. Aloe Semiconductor: Focuses on dual-polarization PAM4 optics to double bandwidth in datacenter applications.

Akhetonics: German startup working on all-optical general-purpose processors for optical data handling.

Market Trends

The optical module chip market is driven by 5G deployment, hyperscale data centers, and AI workloads, with demand for 400G and 800G modules growing rapidly. Startups are increasingly innovating in silicon photonics, quantum dot lasers, and co-packaged optics, while established manufacturers continue to scale production and improve power efficiency and signal integrity for high-speed networks. These manufacturers collectively form the backbone of the optical communication ecosystem, supplying chips that enable high-speed, low-latency data transmission for modern telecom and cloud infrastructure.

Frequently Asked Questions

What does an optical transceiver do?

Optical modules are mainly packaged by optoelectronic devices TOSA/ROSA, functional circuits and optoelectronic interface components. The optical t...

What is the optical module industry chain?

The upstream industry of optical modules mainly includes optical chips, optical components and optical devices, and the downstream industry mainly...

Who are the main manufacturers and suppliers in the optical module industry chain?

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Article Content

Optical Module Chip Market 2025

The optical module chip market exhibits a fragmented yet competitive structure with global technology providers, semiconductor manufacturers, and specialized optical communication companies vying for

Optical Component Startup Tracker

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

10 companies in the optical transceiver industry chain 2024

To help you choose the best partner, this article will analyze and introduce 10 companies in the optical transceiver industry chain for you.

Top Opto-Semiconductor Manufacturers : Market Share

Compare the world's leading opto-semiconductor companies. Our analysis covers market share, CAGR (11.4%), and vendor evaluations for

Top 10 AI Optical Chips Companies to Watch in 2025 and Beyond

Explore the evolving AI Optical Chips market as we profile ten industry top players shaping innovation, efficiency, and competitive dynamics. Readers will discover the unique positions and strengths of

Chinese Optical Modules Own 7 of the Top 10 Seats. So Why Are

Seven of the global top 10 optical module suppliers in 2024 were Chinese companies (including Source Photonics, acquired by Chinese capital). Innolight and Eoptolink are estimated by

Optical Chips: Types, Applications, and Future Trends

This guide explores optical chips, their types, applications, their impact on optical module performance, and the exciting future trends in optical chip technology.

Which manufacturers produce DSP chips for optical modules?

Optical Transceiver DSP (Digital Signal Processor) chips are semiconductor components used in high-speed optical modules including 400G, 800G, and forthcoming 1.6T/3.2T products.

Which optical chip manufacturers are used in optical modules?

One of the most critical components in an optical transceiver (Optical Transceiver) is the optical chip (optoelectronic chip). This component defines the performance ceiling of the module,

Top 10 Optical Module Manufacturers' Annual Reports ...

Its analog integrated circuit chip shipments consistently rank among the top three in China, serving leading domestic and international optical module manufacturers.

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Top 10 AI Optical Chips Companies to Watch in 2025 and Beyond

7. Ciena Corporation Ciena Corporation serves as a trailblazer in intelligent networking and optical transport, integrating AI optical chips to optimize network performance and automation. Their

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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 interconnect (OCI) chiplet co-packaged

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Optical Module: A Comprehensive Analysis from Source to Terminal

Summary Through this comprehensive analysis in this article, we have gained an in-depth understanding of the design and applications of optical modules, covering multiple key aspects and

Which publicly traded companies manufacture optical chips for optical ...

Optical-chip companies used in optical modules typically refer to publicly traded firms that design, manufacture, or supply optical chips within the optical communication industry chain.

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