

Major Manufacturers of Silicon Photonics Modules



AI Overview

There are over 100 companies worldwide capable of producing silicon photonics modules, ranging from major semiconductor giants to specialized photonic startups. Overview of the Industry The silicon photonics market is rapidly growing, driven by demand for high-speed data transport, energy-efficient data centers, AI applications, and optical interconnects in cloud, telecom, and high-performance computing. Companies producing silicon photonics modules include both established semiconductor leaders and specialized photonic firms, as well as innovative startups. These companies operate across North America, Europe, and Asia, leveraging different technology platforms such as silicon photonics (SiPh), silicon nitride (SiN), and indium phosphide (InP).

Major Players Some of the leading companies in silicon photonics include:

- Intel Corporation (US) – Integrates photonics with CMOS technology for data centers and AI applications.
- Cisco Systems (US) – Focuses on networking solutions with integrated photonics.
- IBM (US) – Develops silicon photonics for high-performance computing.
- STMicroelectronics (US/Europe) – Produces photonic modules for telecom and data applications.
- NeoPhotonics, Hamamatsu Photonics – Specialized photonics firms delivering high-speed optical components.
- Rockley Photonics, Ayar Labs – Focus on vertical specialization for niche applications like healthcare and AI.

Broader Ecosystem Beyond the top companies, there is a growing ecosystem of over 100 firms involved in silicon photonics module production. This includes:

- Specialized startups like Dust Photonics, SCINTIL Photonics, Sicoya, and EFFECT Photonics, which provide modulators, detectors, and integrated optical systems.
- Traditional semiconductor companies adapting their facilities to include photonic production, often leveraging existing cleanroom infrastructure.
- Regional cl...

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The Silicon Photonics Market refers to the global industry involved in the research, development, manufacturing, and application of silicon photonics technology.

LRO, LPO, and Silicon Photonics: Reducing Power Consumption in

Silicon photonics reduces power consumption in both LRO and LPO modules by integrating optical components directly on silicon chips. Traditional optical modules require separate

Top 100 Silicon Photonics Companies in 2026 | ensun

Discover all relevant Silicon Photonics Companies worldwide, including Analog Photonics and Intel Corporation (UK)

Yole Group

Photonics and Lighting Aehr Receives Follow-On Order from Major Silicon Photonics Customer for Fully Automated Wafer-Level Burn-In System for

STARLight Project chosen as the European consortium

The STARLight project brings together a consortium of leading industrial and academic partners to position Europe as a technology leader in 300mm silicon

AI Data Centers Drive Optical Transceiver Market Growth

Analysis of how AI and hyperscale data centers accelerate global optical transceiver adoption, including 400G/800G evolution, silicon photonics, CPO, and Link-PP integration for next

Who are the leading photonic chip manufacturers?

Leading manufacturers include Intel's silicon photonics division, Broadcom, Lumentum, and Cisco, alongside specialized companies and PIC

Top 10 Silicon Photonics Market share by company

Major Challenges: High initial capital requirements for manufacturing, complex thermal management issues in integrated circuits, lack of standardized testing protocols for hybrid photonic

With an anticipated CAGR of 5.5%, the Data Center Silicon Photonic ...

The Data Center Silicon Photonic Module refers to advanced technology that integrates silicon photonics with high-speed data transmission capabilities, enabling efficient data

Top Silicon Photonics Modules Companies & How to Compare

High-Volume Manufacturing: Lumentum and Sumitomo Electric provide robust production capacities. Cost-Conscious Buyers: InnoLight and NeoPhotonics deliver competitive pricing with solid...

Automotive Solidstate LiDAR Silicon Photonic Chip Market 2026-2034

North America remains the most advanced market for the Automotive Solid-state LiDAR Silicon Photonic Chip Market, driven by a confluence of strong R& D ecosystems, early-stage

FinancialContent

Silicon photonics-based optical transceivers are a critical enabling technology for this transformation. We believe Aehr is well positioned to participate in what could be a significant

Top Photonic Quantum Computing Companies in 2026

A global group of companies including PsiQuantum, Xanadu, and Quandela are advancing distinct photonic strategies spanning silicon photonics,

Lightmatter®

Lightmatter takes you inside the manufacturing process of the Passage M1000 3D photonic interposer. Follow the complete journey from wafer fabrication and

Optical Transceiver Market: Top 10 Manufacturers Ranked

Optical transceiver market leaders: the top 10 manufacturers powering 400G and 800G modules for hyperscale data centers and AI networking.

Instagram

Goldman estimates this segment could represent \$106B of the total opportunity. The shift is also structural. Copper is becoming less efficient as bandwidth requirements rise. Silicon photonics

Co-Packaged Optics (CPO) Market Trends 2026: AI Data Center

Explore the future of co-packaged optics (CPO) in AI data centers. Learn how silicon photonics, optical I/O, and high-speed optical interconnect technologies are shaping next-generation

Photonics

Photonics Spectra is a global photonics resource and magazine with news, products, research, and applications covering optics, lasers, imaging, and sensing.

Top 10 companies in Silicon Photonics Market in 2023

Top 10 Companies In Silicon Photonics Market Rise in adoption of 2.5D integrated onboard silicon photonics by data centers and rising demand for

OFC 2026 New Launches Roundup Part II: Photonics Market Highlights

This post highlights the most impactful announcements, from high-capacity coherent links to silicon photonic s manufacturing and all-optical switching. Let's dig into what these mean for the

Top Silicon Photonics Companies, Leaders & Major Players

List of the top Silicon Photonics companies based on extensive research conducted by Mordor Intelligence analysts and expert advisors that identified these brands to be the leaders and major

Silicon Photonics Companies

The dominant strategies in the silicon photonics industry are vertical specialization and integration. Intel and Cisco are pursuing integration, focusing on merging electronic and photonic components onto

Top 6 Silicon Photonics Companies Worldwide 2026

The top 6 silicon photonics companies in 2026, including Cisco Systems, Intel, IBM, NeoPhotonics, Hamamatsu Photonics, and STMicroelectronics globally.

Optical Component Startup Tracker

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

Intel® Silicon Photonics

What Is Silicon Photonics? Silicon Photonics is a combination of two of the most important inventions of the 20th century—the silicon integrated circuit and the semiconductor laser. It enables faster data

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.

Contact Us

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