

Dutch Silicon Photonics Module



AI Overview

The Netherlands is a leading hub for silicon photonics, with advanced research, foundries, and pilot lines enabling high-performance photonic integrated circuits (PICs) for communication, sensing, AI, and quantum applications. Key Players and Ecosystem PhotonDelta is a central ecosystem in the Netherlands, supporting the industrialization and application of photonic chips. It facilitates international collaboration, funds startups, and promotes innovation in integrated photonics, including Indium Phosphide (InP) and silicon-based platforms. SMART Photonics operates as a foundry for integrated photonic circuits, offering solutions for data, telecom, sensing, Lidar, and medical applications, emphasizing energy-efficient, high-speed, and compact chip designs. New Origin focuses on silicon nitride (SiN) photonics, establishing a pure-play foundry in collaboration with the University of Twente and MESA+ Nanolab. Their platform supports low-loss propagation and wavelengths from visible to near-infrared, targeting applications in optical communication, HPC/AI, LiDAR, AR/VR, bio-sensing, imaging, and quantum technologies. TNO's Photonic Chip Pilot Line provides a 6-inch wafer-scale fabrication facility for InP photonic chips at the High Tech Campus Eindhoven. This pilot line bridges research and industrial manufacturing, enabling scalable production, prototyping, and validation of next-generation photonic modules. PITC (Photonics Integration Technology Centre) complements these efforts by advancing PIC chip design, testability, integration, and packaging, supporting both InP and SiN programs, and fostering collaboration between research and industry. Applications of Dutch Silicon Photonics Modules Dutch silicon photonics modules are applied across multiple domains: High-speed optical communication for 5G/6G networks and data centers Sensing and Lidar for autonomous vehicles, smart agriculture, and aerospace Medical diagnostics and bio-sensing for early detection and monitoring Hi...

Article Content

Nvidia Unveils Silicon Photonics Cpo Technology For Ai Data Centers ...

Discover NVIDIA's groundbreaking silicon photonics CPO technology, transforming AI data center networks. Learn about the Spectrum-X and Quantum-X switches that enhance

Photonic Chip Pilot Line: InP chip fabrication at 6-inch

The Netherlands is developing a new industrial pilot line for photonic chips. This pilot line, hosted by TNO and part of the EU's PIXEurope project, will be built at the

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

Integrated Photonics

The new MasterPlus Optics& Photonics is a collaboration between the three Dutch technical universities, PhotonDelta and Optics Netherlands and offers Master

Xavveo's Silicon Photonics Chips Reach Production

BERLIN, July 7, 2026 — Xavveo, an imec-backed startup building a new perception architecture, has confirmed that its proprietary silicon photonics chips are now production-ready.

Hard Krypton Exclusive | Tsinghua-affiliated Chip Enterprise Secures ...

Hard Krypton: What are the advantages of the core technology platform, silicon photonics technology, compared with others? Do the investors have any additional comments? Wang Hui: The

OpenLight Showcases III-V Silicon Photonics Breakthroughs for AI

OpenLight will unveil new III-V heterogeneous silicon photonics innovations, including 400G-per-lane modulators and 1.6T transceiver PICs, at OFC 2026 for AI and hyperscale data centers.

AI photonics selloff sparks bullish calls on SIVE and AAOI

AI analyst Serenity called the decline a buying opportunity, citing Sivers' silicon photonics partnerships and AAOI's expansion plans. The selloff highlights a split in AI investing, with investors

Nvidia turns to silicon photonics to supercharge next-gen AI

Earlier this year, the company confirmed that its next-generation rack-scale AI platforms will abandon pluggable optical modules in favor of co-packaged optics. At the Hot Chips conference,...

PhotonDelta – European Integrated Photonics Ecosystem

Dutch photonic startups supported by PhotonDelta, a cross-border ecosystem of photonic chip technology organisations, have made a series of breakthrough announcements at the Dutch Pavilion

STMicro's Silicon Photonics Hits Mass Production: What 800G/1.6T

STMicroelectronics enters high-volume PIC100 silicon photonics production for AI data centers. Here's what 800G/1.6T co-packaged optics mean for fabric design, power budgets, and

Top Silicon Photonics Stocks 2026: Breaking the Copper Wall

And the newest entrant: UMC (NYSE: UMC), which licensed imec's iSiPP300 silicon photonics process and plans to begin risk production in 2026–2027. The finished, shippable product

AI Data Center Optical Transceiver Module Market 2025–2030

Silicon photonics is primarily deployed in short-range data communication within data centers, specifically in pluggable optical transceivers that interconnect servers, racks, switches, ASICs, and

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 4, 2026 – GlobalFoundries (Nasdaq: GFS)

Intel® Silicon Photonics

Today, the Intel Silicon Photonics Product Division is the volume market leader in Silicon Photonics, with over 8 million PICs and over 32 million on-chip integrated lasers shipped from our high-volume fabs

About Us

We have a state-of-the-art production facility located in Enschede, the Netherlands, supporting the global industrial development of PIC and MEMS enabled modules.

NVIDIA Unveils Silicon Photonics CPO Technology Transforming AI

With AI computing rapidly advancing, data center network infrastructures are under increasing pressure. At GTC 2025 on March 18, 2025, NVIDIA unveiled its revolutionary silicon

Custom MEMS and Photonic Integrated Circuits

As a vertically integrated company, we work across all stages of the production process from design to delivery of a finished module. And with world-class

New Origin | Dutch ChipTech Foundry for Photonics

The development from early Silicon-Oxide-Nitride (SiON) chips to today's most advanced SiN Photonic Integrated Circuits (PICs) has resulted in a vibrant

36Kr Exclusive | Cambridge Associate Professor Launches Silicon

Silicon photonics technology is experiencing rapid growth in the optical communication field. According to industry forecasts, the share of silicon photonics technology in the optical module

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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. This technology uses silicon as an

Contact Us

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