

Finland offers 1G of silicon photonics technology



Overview

VTT Technical Research Centre of Finland, together with Tampere University of Technology (TUT), accelerates the development and commercialisation of silicon photonics products as part of the renewal of the Finnish electronics industry. It connects photonics companies, universities, research institutes, and public authorities. This document is not just a blueprint for our future endeavors but a testament to the collective ideas and foresight of a remarkably wide group of Technology Industries of Finland. Your commitment and expert insights have been the cornerstone of this strategy. To this end, Okmetic, a prominent silicon wafer manufacturer, produces E-SOI® wafers that VTT identifies as a highly beneficial platform for developing photonic integrated circuits (PICs) and chips, highlighting the wafers' relevance to silicon photonics technology. With the help of silicon photonics, companies can develop. FinnLight provides a comprehensive combination of technologies covering all classes of photonics materials as well as full-scale process lines for device fabrication and assembly. It belongs to the National Infrastructure. Photonics, imaging, lasers, fiber optics, and nanophotonics.



Article Content

Semiconductor Strategy for Finland

S-specific research and education. Photonics and optoelectronics: Finland is home to one of the most important clusters of photonics expertise in Europe (with 300 companies, 6000 employees, €2B

PHOTONICS IN FINLAND

Finland has a long tradition of high-tech research and industry, and has a high level of expertise in photonics with many pioneer photonics-related technologies developed in the country. Educational

Semiconductor Strategy for Finland

As we stand at the forefront of a new era in technological advancement and geopolitical shifts, it is my privilege to present Chips from the North – Semiconductor Strategy for Finland. This document is not

How Finland is turbocharging its semiconductor industry

Finland's strengths may not lie in high-volume production of semiconductors, but the research, development, and production of

PowerPoint-esitys

Foreign companies have targeted Finnish expertise and technologies, either through acquisitions (e.g., Picosun by Applied Materials, Minima by Bosch) or by establishing offices in Finland (e.g., Huawei,

INDUSTRIAL MANUFACTURING EXTENDED REALITY SECURITY PHOTONICS IN FINLAND

Finland has emerged as a world leader in photonics research and innovation, with a thriving ecosystem of academic and industrial players collaborating to advance cutting-edge technologies and

"Finnish SMEs are at the forefront of integrated photonics" – New chip ...

One key focus area is photonic integrated circuits (PICs), which are essential for enabling advanced applications in data communication, sensing, and quantum technologies. In Finland, there

Integrated Photonics | Aalto University

Integrated photonics offers a massive reduction in size, weight, and power (SWaP) with increased performance and reliability compared to systems

Silicon photonics

Silicon photonics is the study and application of photonic systems which use silicon as an optical medium. The silicon is usually patterned with sub

Celebration of light – The Finnish photonics technology

PREIN is an initiative that brings together the main actors of the Finnish photonics research scene to develop the new generation of light-based

"Finnish SMEs are at the forefront of integrated photonics" – New chip ...

Finnish SMEs and European innovators are at the forefront of integrated photonics, developing chips for applications that address global challenges.

Roadmapping the next generation of silicon photonics

What will the next generation of silicon photonics look like? What are the common threads in the integration and fabrication bottlenecks that silicon

Silicon Photonics Market Size, Share & Trends Report,

The global silicon photonics market size was estimated at USD 1.29 billion in 2022 and is projected to reach USD 8.13 billion by 2030, growing at a CAGR of 25.8%

FinnLight Photonics Infrastructure

We offer a wide range of design capabilities for designing optical systems, photonic components and light sources, and silicon photonics. We also provide training in

Photonics technologies and optical solutions | VTT

Silicon-based photonics technologies Silicon photonics is the new electronics. Silicon photonic integrated circuits (PIC) are the photonic equivalent of microprocessors.

Turning silicon photonics into a new competitive asset for the ...

VTT Technical Research Centre of Finland, together with Tampere University of Technology (TUT), accelerates the development and commercialisation of silicon photonics products as part of the

Turning silicon photonics into a new competitive asset for the ...

The RAPSI co-innovation project, co-financed by Business Finland, consists of a public research project, which is carried out by VTT and Tampere University of Technology (TUT), and a

Photonics in Finland: The making of a technology cluster

Carlos Lee, EPIC's Director General, talks to Juha Purmonen, Executive Director of Photonics Finland, a technology cluster driving the

PREIN: PHOTONICS – THE SCIENCE OF LIGHT

PREIN Flagship is a Photonics Research and Innovation platform focusing on light-based solutions from scientific excellence to

PHOTONICS IN FINLAND

With strong expertise, industry and academic collaboration and a commitment to innovation, Finland is shaping the future of photonics and strengthening Europe's leadership in this critical field.

Photonics Pilot Lines – Current Developments and Opportunities

Join us to get a real insight into what's happening in photonic chips and pilot lines – and what it means for Finland. Ohjelma / Agenda: 8:00–8:30 PIXEUROPE & VTT Silicon Photonics, Timo

PHOTONICS IN FINLAND

1960s, Finland has played a pioneering role in photonics, development-breakthrough technologies optics, imaging, lasers, fiber optics, and nanophotonics. Today with a strong foundation in high-tech

Finland's Fastest-Growing Technology Sector:

Finland's Fastest-Growing Technology Sector: Photonics Accelerates Export and Innovation by Juha Purmonen June 12, 2025 A new national report

FinnLight Photonics Infrastructure

FinnLight provides a comprehensive combination of technologies covering all classes of photonics materials as well as full-scale process lines for device fabrication and

Silicon photonics, technology of light and | VTT News

VTT is the leading developer of silicon photonics in Finland. Various applications, from medicine to autonomous transport, can benefit from the high speed, energy

Finnish National Photonics Roadmap – Photonics Finland

Why we need a Roadmap It will present the strengths of the Finnish Photonics sector and outline the needs for future development It will position Finnish Photonics as

Top 64 Silicon Photonics Companies in Finland (2026) | ensun

In Finland, the silicon photonics industry is characterized by a strong emphasis on research and development, supported by institutions like VTT Technical Research Centre and various universities.

About Photonics – Photonics Finland

About Photonics Photonics – the science and technology of light – is one of the most significant enabling technologies of our time. Finland has a long tradition of high-tech research and industry, and has a

Contact Us

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