

## **Global Silicon Photonics Market Report and Forecast 2023-2028**

Market Report | 2023-03-31 | 178 pages | EMR Inc.

### **AVAILABLE LICENSES:**

- Single User License \$2799.00
- Five User License \$3999.00
- Corporate License \$4999.00

### **Report description:**

Global Silicon Photonics Market Report and Forecast 2023-2028

Market Outlook

According to the report by Expert Market Research (EMR), the global silicon photonics market achieved a value of USD 1347.9 million in 2022. With the accelerating demand for high-speed data transmission and efficient power consumption in data centres, the market is projected to grow at a CAGR of 41.6% between 2023 and 2028, reaching a value of USD 11079.54 million by 2028. Silicon photonics is a cutting-edge technology that combines silicon-based electronics with photonics to enhance data transfer and processing capabilities. The technology employs light to transfer data among computer chips, allowing faster and more energy-efficient data communication. Silicon photonics has applications in various industries, including telecommunications, data centres, healthcare, and military, among others.

The surge in demand for high-speed data transmission and efficient power consumption in data centres is a significant factor driving the global silicon photonics market growth. As the volume of data generated and processed worldwide continues to increase exponentially, the need for faster and more efficient data transmission technologies becomes critical. Silicon photonics addresses this challenge by enabling ultra-fast data transfer and reducing power consumption, thereby increasing the overall efficiency of data centres.

The implementation of 5G technology is anticipated to boost the global silicon photonics market, as 5G networks require faster and more efficient data transmission. Silicon photonics, with its capacity to handle ultra-fast data transfer, is well-suited to support the requirements of 5G technology. This is expected to drive market growth during the forecast period.

Another key trend propelling the silicon photonics market expansion is the rising focus on sustainable technologies. Silicon photonics contributes to energy efficiency and reduces carbon emissions by minimising the energy consumption of data centres. This feature has become increasingly important as industries and governments worldwide prioritise sustainable development and carbon reduction initiatives.

In addition, the increasing demand for high-performance computing and artificial intelligence (AI) solutions is anticipated to fuel the growth of the silicon photonics market. The technology's ability to handle vast amounts of data at high speeds makes it a suitable choice for AI applications, which require rapid data processing and analysis. As AI continues to gain traction across industries, the silicon photonics market demand is expected to rise in tandem.

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

## Market Segmentation

The market can be divided based on product, component application, and region.

### Market Breakup by Product

- Optical Multiplexers
- Active Optical Cable
- Fibre Optical Switches
- Transceiver
- Others

### Market Breakup by Component

- Photodetectors
- Laser
- Modulators
- Others

### Market Breakup by Application

- Data Centre and High-Performance Computing
- Telecommunications
- Others

### Market Breakup by Region

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

## Competitive Landscape

The EMR report looks into the market shares, plant turnarounds, capacities, investments, and acquisitions and mergers, among other major developments, of the global silicon photonics companies. Some of the major key players explored in the report by Expert Market Research are as follows:

- Cisco Systems, Inc.
- Intel Corporation
- IBM Corporation
- NeoPhotonics Corporation
- Hamamatsu Photonics K.K
- STMicroelectronics N.V.
- Others

## About Us

Acquire unparalleled access to critical industry insights with our comprehensive market research reports, meticulously prepared by a team of seasoned experts. These reports are designed to equip decision-makers with an in-depth understanding of prevailing market trends, competitive landscapes, and growth opportunities.

Our high-quality, data-driven analyses provide the essential framework for organisations seeking to make informed and strategic decisions in an increasingly complex and rapidly evolving business environment. By investing in our market research reports, you can ensure your organisation remains agile, proactive, and poised for success in today's competitive market.

Don't miss the opportunity to elevate your business intelligence and fortify your strategic planning. Secure your organization's future success by acquiring one of our Expert Market Research reports today.

\*We at Expert Market Research always strive to provide you with the latest information. The numbers in the article are only indicative and may be different from the actual report.

## Table of Contents:

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

- 1 Preface
- 2 Report Coverage - Key Segmentation and Scope
- 3 Report Description
  - 3.1 Market Definition and Outlook
  - 3.2 Properties and Applications
  - 3.3 Market Analysis
  - 3.4 Key Players
- 4 Key Assumptions
- 5 Executive Summary
  - 5.1 Overview
  - 5.2 Key Drivers
  - 5.3 Key Developments
  - 5.4 Competitive Structure
  - 5.5 Key Industrial Trends
- 6 Market Snapshot
  - 6.1 Global
  - 6.2 Regional
- 7 Opportunities and Challenges in the Market
- 8 Global Silicon Photonics Market Analysis
  - 8.1 Key Industry Highlights
  - 8.2 Global Silicon Photonics Historical Market (2018-2022)
  - 8.3 Global Silicon Photonics Market Forecast (2023-2028)
  - 8.4 Global Silicon Photonics Market by Product
    - 8.4.1 Optical Multiplexers
      - 8.4.1.1 Market Share
      - 8.4.1.2 Historical Trend (2018-2022)
      - 8.4.1.3 Forecast Trend (2023-2028)
    - 8.4.2 Active Optical Cable
      - 8.4.2.1 Market Share
      - 8.4.2.2 Historical Trend (2018-2022)
      - 8.4.2.3 Forecast Trend (2023-2028)
    - 8.4.3 Fibre Optical Switches
      - 8.4.3.1 Market Share
      - 8.4.3.2 Historical Trend (2018-2022)
      - 8.4.3.3 Forecast Trend (2023-2028)
    - 8.4.4 Transceiver
      - 8.4.4.1 Market Share
      - 8.4.4.2 Historical Trend (2018-2022)
      - 8.4.4.3 Forecast Trend (2023-2028)
    - 8.4.5 Others
  - 8.5 Global Silicon Photonics Market by Component
    - 8.5.1 Photodetectors
      - 8.5.1.1 Market Share
      - 8.5.1.2 Historical Trend (2018-2022)
      - 8.5.1.3 Forecast Trend (2023-2028)
    - 8.5.2 Laser
      - 8.5.2.1 Market Share

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

- 8.5.2.2 Historical Trend (2018-2022)
- 8.5.2.3 Forecast Trend (2023-2028)
- 8.5.3 Modulators
  - 8.5.3.1 Market Share
  - 8.5.3.2 Historical Trend (2018-2022)
  - 8.5.3.3 Forecast Trend (2023-2028)
- 8.5.4 Others
- 8.6 Global Silicon Photonics Market by Application
  - 8.6.1 Data Centre and High-Performance Computing
    - 8.6.1.1 Market Share
    - 8.6.1.2 Historical Trend (2018-2022)
    - 8.6.1.3 Forecast Trend (2023-2028)
  - 8.6.2 Telecommunications
    - 8.6.2.1 Market Share
    - 8.6.2.2 Historical Trend (2018-2022)
    - 8.6.2.3 Forecast Trend (2023-2028)
  - 8.6.3 Others
- 8.7 Global Silicon Photonics Market by Region
  - 8.7.1 North America
    - 8.7.1.1 Market Share
    - 8.7.1.2 Historical Trend (2018-2022)
    - 8.7.1.3 Forecast Trend (2023-2028)
  - 8.7.2 Europe
    - 8.7.2.1 Market Share
    - 8.7.2.2 Historical Trend (2018-2022)
    - 8.7.2.3 Forecast Trend (2023-2028)
  - 8.7.3 Asia Pacific
    - 8.7.3.1 Market Share
    - 8.7.3.2 Historical Trend (2018-2022)
    - 8.7.3.3 Forecast Trend (2023-2028)
  - 8.7.4 Latin America
    - 8.7.4.1 Market Share
    - 8.7.4.2 Historical Trend (2018-2022)
    - 8.7.4.3 Forecast Trend (2023-2028)
  - 8.7.5 Middle East and Africa
    - 8.7.5.1 Market Share
    - 8.7.5.2 Historical Trend (2018-2022)
    - 8.7.5.3 Forecast Trend (2023-2028)
- 9 North America Silicon Photonics Market Analysis
  - 9.1 United States of America
    - 9.1.1 Market Share
    - 9.1.2 Historical Trend (2018-2022)
    - 9.1.3 Forecast Trend (2023-2028)
  - 9.2 Canada
    - 9.2.1 Market Share
    - 9.2.2 Historical Trend (2018-2022)
    - 9.2.3 Forecast Trend (2023-2028)

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

- 10 Europe Silicon Photonics Market Analysis
  - 10.1 United Kingdom
    - 10.1.1 Market Share
    - 10.1.2 Historical Trend (2018-2022)
    - 10.1.3 Forecast Trend (2023-2028)
  - 10.2 Germany
    - 10.2.1 Market Share
    - 10.2.2 Historical Trend (2018-2022)
    - 10.2.3 Forecast Trend (2023-2028)
  - 10.3 France
    - 10.3.1 Market Share
    - 10.3.2 Historical Trend (2018-2022)
    - 10.3.3 Forecast Trend (2023-2028)
  - 10.4 Italy
    - 10.4.1 Market Share
    - 10.4.2 Historical Trend (2018-2022)
    - 10.4.3 Forecast Trend (2023-2028)
  - 10.5 Others
- 11 Asia Pacific Silicon Photonics Market Analysis
  - 11.1 China
    - 11.1.1 Market Share
    - 11.1.2 Historical Trend (2018-2022)
    - 11.1.3 Forecast Trend (2023-2028)
  - 11.2 Japan
    - 11.2.1 Market Share
    - 11.2.2 Historical Trend (2018-2022)
    - 11.2.3 Forecast Trend (2023-2028)
  - 11.3 India
    - 11.3.1 Market Share
    - 11.3.2 Historical Trend (2018-2022)
    - 11.3.3 Forecast Trend (2023-2028)
  - 11.4 ASEAN
    - 11.4.1 Market Share
    - 11.4.2 Historical Trend (2018-2022)
    - 11.4.3 Forecast Trend (2023-2028)
  - 11.5 Australia
    - 11.5.1 Market Share
    - 11.5.2 Historical Trend (2018-2022)
    - 11.5.3 Forecast Trend (2023-2028)
  - 11.6 Others
- 12 Latin America Silicon Photonics Market Analysis
  - 12.1 Brazil
    - 12.1.1 Market Share
    - 12.1.2 Historical Trend (2018-2022)
    - 12.1.3 Forecast Trend (2023-2028)
  - 12.2 Argentina
    - 12.2.1 Market Share

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

- 12.2.2 Historical Trend (2018-2022)
- 12.2.3 Forecast Trend (2023-2028)
- 12.3 Mexico
  - 12.3.1 Market Share
  - 12.3.2 Historical Trend (2018-2022)
  - 12.3.3 Forecast Trend (2023-2028)
- 12.4 Others
- 13 Middle East and Africa Silicon Photonics Market Analysis
  - 13.1 Saudi Arabia
    - 13.1.1 Market Share
    - 13.1.2 Historical Trend (2018-2022)
    - 13.1.3 Forecast Trend (2023-2028)
  - 13.2 United Arab Emirates
    - 13.2.1 Market Share
    - 13.2.2 Historical Trend (2018-2022)
    - 13.2.3 Forecast Trend (2023-2028)
  - 13.3 Nigeria
    - 13.3.1 Market Share
    - 13.3.2 Historical Trend (2018-2022)
    - 13.3.3 Forecast Trend (2023-2028)
  - 13.4 South Africa
    - 13.4.1 Market Share
    - 13.4.2 Historical Trend (2018-2022)
    - 13.4.3 Forecast Trend (2023-2028)
  - 13.5 Others
- 14 Market Dynamics
  - 14.1 SWOT Analysis
    - 14.1.1 Strengths
    - 14.1.2 Weaknesses
    - 14.1.3 Opportunities
    - 14.1.4 Threats
  - 14.2 Porter's Five Forces Analysis
    - 14.2.1 Supplier's Power
    - 14.2.2 Buyer's Power
    - 14.2.3 Threat of New Entrants
    - 14.2.4 Degree of Rivalry
    - 14.2.5 Threat of Substitutes
  - 14.3 Key Indicators for Demand
  - 14.4 Key Indicators for Price
- 15 Value Chain Analysis
- 16 Competitive Landscape
  - 16.1 Market Structure
  - 16.2 Company Profiles
    - 16.2.1 Cisco Systems, Inc.
      - 16.2.1.1 Company Overview
      - 16.2.1.2 Product Portfolio
      - 16.2.1.3 Demographic Reach and Achievements

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

- 16.2.1.4 Certifications
  - 16.2.2 Intel Corporation
    - 16.2.2.1 Company Overview
    - 16.2.2.2 Product Portfolio
    - 16.2.2.3 Demographic Reach and Achievements
    - 16.2.2.4 Certifications
  - 16.2.3 IBM Corporation
    - 16.2.3.1 Company Overview
    - 16.2.3.2 Product Portfolio
    - 16.2.3.3 Demographic Reach and Achievements
    - 16.2.3.4 Certifications
  - 16.2.4 NeoPhotonics Corporation
    - 16.2.4.1 Company Overview
    - 16.2.4.2 Product Portfolio
    - 16.2.4.3 Demographic Reach and Achievements
    - 16.2.4.4 Certifications
  - 16.2.5 Hamamatsu Photonics K.K.
    - 16.2.5.1 Company Overview
    - 16.2.5.2 Product Portfolio
    - 16.2.5.3 Demographic Reach and Achievements
    - 16.2.5.4 Certifications
  - 16.2.6 STMicroelectronics N.V.
    - 16.2.6.1 Company Overview
    - 16.2.6.2 Product Portfolio
    - 16.2.6.3 Demographic Reach and Achievements
    - 16.2.6.4 Certifications
  - 16.2.7 Others
- 17 Key Trends and Developments in the Market

**Global Silicon Photonics Market Report and Forecast 2023-2028**

Market Report | 2023-03-31 | 178 pages | EMR Inc.

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scott's-international.com

**ORDER FORM:**

Select license	License	Price
	Single User License	\$2799.00
	Five User License	\$3999.00
	Corporate License	\$4999.00
		VAT
		Total

\*Please circle the relevant license option. For any questions please contact support@scott's-international.com or 0048 603 394 346.

\*\* VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-03-11"/>
		Signature	<input type="text"/>

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scott's-international.com

www.scott's-international.com