

# Photonics Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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## Abstracts

### Market Overview:

The global photonics market size reached US\$ 801.7 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 1,143.7 Billion by 2028, exhibiting a growth rate (CAGR) of 5.9% during 2023-2028.

Photonics represents a technology or an area of study that deals with the science of generating, detecting, controlling, and manipulating photons, radiant energies, and light. It is considered a subset of various optic disciplines, including geometrical, physical, and quantum. It includes a light-emitting diode (LED), imaging devices, laser, sensors, and detectors as standard product types. These photonics-enabled devices offer higher energy efficiency, a longer life span, better accuracy, and faster operations than their counterparts. Apart from this, photonics ensures data transmission, generates less heat, and minimizes energy consumption cost-effectively. Based on these properties, it finds extensive applications in displays, photovoltaics, machine vision, image processing, optical components, and medical technologies.

### Photonics Market Trends:

The widespread product adoption across various industrial verticals can be attributed to the need for photonic-enabled connected services and the extensive utilization of additive manufacturing (AM) to produce complex components and prototype tools. In line with this, significant enhancements in the healthcare infrastructure and the escalating demand for non-invasive disease detection have facilitated the uptake of photonics in imaging techniques and point-of-care technologies, which is acting as another growth-inducing factor. Such solutions are used in medical and biological

research for drug development, medical imaging, laser beam diagnostics, and optical coherence tomography (OCT) scanning to detect health conditions. Additionally, the extensive utilization of photonics in communication networks, integrated circuits (IC), computing systems, and next-generation sensors to transmit, generate, convert, and use data instantly is impelling the market growth. Apart from this, the large-scale product incorporation in residential security systems, amplifiers, switches, light modulation devices, light detection and ranging (LiDAR), and the integration of the Internet of Things (IoT) solutions are creating a positive outlook for the market.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global photonics market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on type, application and end user.

#### Breakup by Type:

- LED
- Lasers, Detectors, Sensors and Imaging Devices
- Optical Communication Systems and Components
- Others

#### Breakup by Application:

- Surveying and Detection
- Production Technology
- Data Communication
- Image Capture and Display
- Medical Technology
- Lighting
- Others

#### Breakup by End User:

- Building Construction
- Media, Broadcasting and Telecommunication
- Consumer Electronics
- Medical

Safety and Defense  
Industrial

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ams-OSRAM AG, Genia Photonics Inc., Hamamatsu Photonics, II-VI Incorporated, Infinera Corporation, Intel Corporation, IPG Photonics, Koninklijke Philips N.V., Ocean Insight (Halma plc) and Teem Photonics.

Key Questions Answered in This Report

1. What was the size of the global photonics market in 2022?
2. What is the expected growth rate of the global photonics market during 2023-2028?
3. What has been the impact of COVID-19 on the global photonics market?
4. What are the key factors driving the global photonics market?
5. What is the breakup of the global photonics market based on the application?
6. What are the key regions in the global photonics market?
7. Who are the key players/companies in the global photonics market?

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