

## Fiber Optic Sensors: Global Markets

Market Research Report | 2024-06-27 | 170 pages | BCC Research

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## **Report description:**

Description

#### Report Scope

This study analyzes the many types of fiber optic sensors, including intrinsic and extrinsic sensors, as well as the many applications of these sensors, such as defense, energy, construction, transportation, security, telecommunication and medical. It analyzes the trends, drivers and regional dynamics of the global market. The report concludes by providing profiles of the leading sensor companies. The base year for the study is 2023, and projections for 2024 through 2029 included, along with projected compound annual growth rates (CAGRs) for the forecast period.

The report focusing on the key components of the sensors: transmitters and receivers, optical amplifiers, fiber optic cables and dispersion compensators; technologies such as fiber optic gyroscopes, coated fiber sensors, fiber Bragg grating (FBG), Raman scattering sensors and interferometric sensors. The report breaks down the global market into four regions: North America, Europe, Asia-Pacific and Rest of the World (RoW), which includes Latin America, the Middle East and Africa. Report Includes

- 60 data tables and 48 additional tables
- An overview of the global market for fiber optic sensors

- Analysis of global market trends, with historical revenue data for 2023, estimated figures for 2024, forecasts for 2025, 2027 and 2029, and projected CAGRs through 2029

- Identification of new opportunities, challenges, and technological changes in the industry
- Market share analysis by type, technology, component, application, and region
- Examination of the present and future strategies of fiber optic sensor companies
- Discussion of distributed sensing systems and miniaturization of sensors, and their applications
- Analysis of R&D activity, product launches and the regulatory scenario

- Analysis of the key companies' market shares, mergers & acquisitions, joint ventures, collaborations, and other market strategies

- Profiles of major market players, including Broadcom, Rockwell Automation, Hamamatsu Photonics, Sumitomo Electric Industries Ltd., and Yokogawa Electric Corporation

### **Executive Summary**

### Summary:

The global market for fiber optic sensors was valued at \$3.2 billion in 2023. The market is anticipated to grow from \$3.5 billion in 2024 to \$5.5 billion by 2029, at a compound annual growth rate (CAGR) of 9.5% from 2024 to 2029.

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Overview International Standards **Regional Regulations** Industry-specific Regulations **Environmental and Safety Compliance** Chapter 5 Emerging Technologies and Developments **Emerging Trends** AI **Emergence of Fiber Optic Biosensors Development of Hybrid Sensor Systems** Internet of Things (IoT) Miniaturization and Wearable Sensors **Distributed Sensing Technologies** Specialty Optical Fibers, Nanomaterials, and Functional Coatings Quantum Sensing Integrated Photonics and Chip-Scale Sensors Patent Analysis **Regional Patterns Key Findings** Chapter 6 Market Segmentation Analysis Segmentation Breakdown Market Breakdown by Product Type Overview Intrinsic Extrinsic Market Breakdown by Component Overview **Transmitters and Receivers Optical Amplifiers Fiber Optic Cables Dispersion Compensators** Other Components Market Breakdown by Technology Overview Fiber Optic Gyroscopes **Coated Fiber Sensors** Fiber Bragg Grating (FBG) Raman Scattering Sensors Interferometric Sensors Other Fiber Optic Sensor Technologies Market Breakdown by Application Overview Defense Energy Construction Transportation Security

Telecommunications Medical **Other Applications** Geographic Breakdown Market Breakdown by Region Overview North America Europe Asia-Pacific Rest of the World Chapter 7 Competitive Landscape Analysis of Leading Companies Chapter 8 Environmental, Social and Governance (ESG) Perspective Overview Environmental Social Governance Status of ESG in the Fiber Optic Sensor Industry Concluding Remarks from BCC **Chapter 9 Appendix Research Methodology** References Abbreviations **Company Profiles** AMPHENOL CORP. ANALOG DEVICES INC. BANNER ENGINEERING CORP. BAUMER BROADCOM CIENA CORP. COHERENT CORP. CORNING INC. EMCORE CORP. HALLIBURTON HAMAMATSU PHOTONICS K.K. KEYENCE CORP. LEUZE ELECTRONIC GMBH + CO. KG MOLEX OMRON CORP. PROXIMION AB (HEXATRONIC GROUP) **ROCKWELL AUTOMATION** SLB SENSURON SUMITOMO ELECTRIC INDUSTRIES LTD. TE CONNECTIVITY YOKOGAWA ELECTRIC CORP.



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