

German Fiber Optic Sensor System Manufacturer



Overview

Our optical sensor technology systems are developed and manufactured to the highest quality standards at our facilities in Germany.

Key Takeaways

Leading German fiber optic sensor manufacturers include FiSens GmbH, Heracle GmbH, FIBERTEC, fibrisTerre Systems, and FOS Inon Optics, each specializing in advanced sensing technologies for industrial, medical, and structural applications.

Key Manufacturers and Their Specialties



FiSens GmbH develops and manufactures fiber Bragg grating (FBG) sensor arrays and fiber-integrated spectrometers. Their sensors are highly precise, compact, and reliable, suitable for applications ranging from smart fan blades to structurally monitored bridges and tactile medical instruments. FiSens emphasizes high multiplexing capability and robustness in harsh environments, and their technology is widely used in industry and research. The company recently merged with 5lo.Tech, enhancing its strategic capabilities in fiber optic sensing . Heracle GmbH specializes in custom-designed specialty optical fibers and off-the-shelf fiber products. They support OEM device manufacturers in industrial, medical, and optical sensor applications, providing development, manufacturing, and testing services for glass fibers and preforms. Heracle focuses on translating specific customer requirements into innovative fiber solutions . FIBERTEC produces fiber optic assemblies, sensors, and components for industrial and medical applications. They offer medical cold light cables, high-temperature fiber optics, and vacuum sensors, with all products developed and manufactured in Germany according to DIN ISO 9001:2015 standards. FIBERTEC emphasizes short delivery times, high quality, and customized solutions for sensor technology . fibrisTerre Systems GmbH is a leading manufacturer of distributed fiber optic sensing systems using Brillouin Optical Frequency Analysis (BOFDA). Their technology continuously monitors strain and temperature over long distances, providing structural health insights for geotechnics, renewable energy, transportation, pipelines, and power cables. The company is based in Berlin and has a strong focus on structural monitoring and industrial applications . FOS Inon Optics offers custom-tailored fiber optic solutions, including multimode fibers, precision fiber bundles, and optical sensors for medical, industrial, and analytical applications. They specialize in high-precision manufacturing with eccentricity deviations below 15 µm, ensuring minimal light loss. Their products are used in spectroscopy, laser applications, process analytics, and industrial quality assurance, emphasizing durability, chemical resistance, and long service life .

Applications

These German manufacturers serve a wide range of applications:

- Industrial monitoring: Process control, temperature and strain sensing, inline measurements.
 - Structural health monitoring: Bridges, pipelines, tunnels, and renewable energy infrastructure.
 - Medical technology: Cold light cables, diagnostic sensors, and precision fiber assemblies.
 - Scientific and analytical instruments: Spectroscopy, microscopy, and laser systems.
- These companies collectively represent Germany's expertise in high-quality, precise, and reliable fiber optic sensor technology, supporting both standard and highly customized solutions for global markets.

Article Content

Top 100 Optical Sensor Manufacturers in Germany (2026) | ensun

Understanding these dynamics will provide valuable insights for anyone looking to enter or invest in the Optical Sensor industry in

fionec fiber optics – Optical Sensor Technology

fionec GmbH is technology leader when it comes to innovative precision optical fiber measurement systems and tailor-made fiber

Cutting-Edge Fiberoptic Sensing | FiSens GmbH

FiSens develops, manufactures, and markets accurate fiberoptic sensor solutions based on fiber Bragg grating (FBG) sensor arrays

Optical Sensor Technology | FOS Inon Fiber Optics

Our optical sensor technology systems are developed and manufactured to the highest quality standards at our facilities in Germany.

We offer fiber optic light guides for customized solutions in sensor ...

We are your partner for fiber optic solutions in industry, sensor technology and medical technology. We work closely with our

Luna Innovations | Fiber Optic Sensing and Measurement Systems

At Luna Innovations we are leveraging our novel fiber-optic sensing technology to unlock new possibilities in geotechnical and civil

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MSO GmbH develops, manufactures, and sells sensors for speed and distance measurement as well as for the detection of bulk

Optical Sensor Technology

PreSens is a world leader in the field of optical sensor technology. We develop, manufacture and distribute sensor systems for

Sensorlines | Distributed Fiber Optic Sensing Technology

Company Overview Engineering the Future of Infrastructure Intelligence Sensorlines is a leading distributed fiber optic sensing

Fiber optic Manufacturer/producer Germany

507 suppliers for fiber-optic Manufacturer/Producer Find wholesalers and contact them directly B2B marketplace Find companies now!

What is Distributed Fiber Optic Sensing?

Distributed Brillouin sensing (DTSS) The nerves of your structure – Traditional measurement systems comprise a device plus copper

Fiber optic sensors and fiber optics | Baumer international

A fiber optic sensor and two fiber optics made of plastic or glass fibers make up a fiber optic system. The sensor contains a light

Development of fiber optic sensor technology

Development of fiber optic sensor technology In industrial manufacturing, especially in automotive, microsystems and medical

18 Fiber Optic Sensor Manufacturers in 2026

18 Fiber Optic Sensor Manufacturers in 2026 This section provides an overview for fiber optic sensors as well as their applications

Optical Sensors companies from Germany ⇒ chemeurope

Manufacturer, Laboratory analysis / Laboratory measurement technology, Herrsching, Germany Hamamatsu Photonics is a leading

Optical Fiber Sensors: High Resolution Fiber Optic Sensing

Sensuron Optical Fiber Sensors Overview Sensuron's Optical Fiber Sensors enable engineers to collect and analyze material and

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Top Fiber Optic Cable Manufacturers in Germany

How does ensun find these Fiber Optic Cable Manufacturers? ensun uses an advanced search and ranking system capable of sifting

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