

Fiber Lasers 2025: Technologies, Applications and Market Trends

BY ENABLING THE PROCESSING OF DIFFERENT TYPES OF MATERIALS, FIBER LASERS ARE ESSENTIAL INDUSTRIAL TOOLS

REPORT OUTLINE

- Title: Fiber Lasers 2025: Technologies, Applications and Future Trends
- 90+ slides (PDF)
- € 4990 - Multi users' license

KEY FEATURES OF THE REPORT

- Overview of the factors and trends that influence the global fiber lasers market
- Presentation of the most common fiber laser technologies and their applications
- Detailed technology breakdown for each application including revenues, ASPs and number of units sold
- Presentation of the sales of fiber laser sources by geographical region
- Detailed forecast of the different segments of fiber lasers for the period 2025-2030

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From the early 2000s and on, fiber laser technology advanced in a spectacular pace, not only in terms of output powers, that today are in the order of hundreds of kW, but also in terms of versatility. Fiber lasers operating both in CW but also in pulsed mode, that emit in a broad range of wavelengths from the UV to the IR, provide solutions to the industry, medicine, science, sensing and defense.

The main application of fiber lasers is for materials processing. High-power fiber lasers with output powers of several kW are used for cutting and welding thick metal sheets and for the SLM additive manufacturing of metal based components. Pulsed and ultrafast fiber lasers have become essential tools for the processing and micromachining of glass, ceramics, polymers, composites, semiconductors and thin metal sheets.

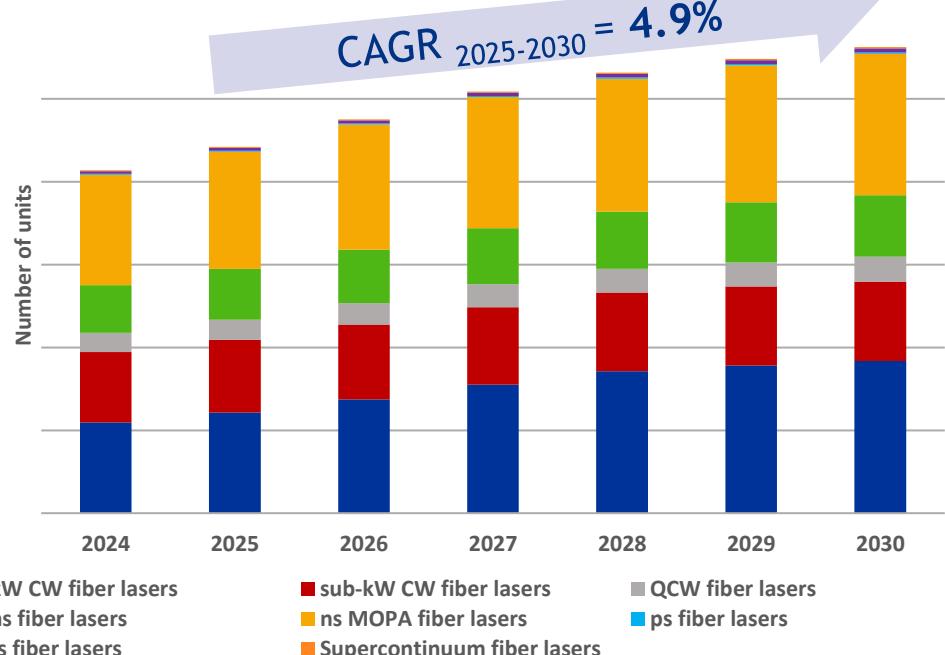
REPORT'S OBJECTIVES

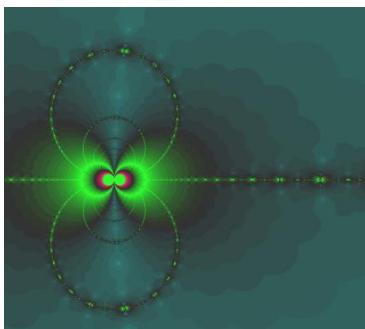
The objective of this report, is to present a comprehensive analysis of the global fiber lasers market for 2024. The market is broken down by commercially available technologies such as CW (kW and sub-kW), QCW, pulsed ns, ns MOPA, ps and fs ultrafast, and supercontinuum fiber lasers and their applications.

It examines the parameters that influenced the global fiber lasers market for 2024, including industrial and technological trends, challenges due to increased competition, as well as macroeconomic factors.

The report includes detailed figures of the fiber lasers market in terms of revenues, ASPs and number of units sold for 2024, a market breakdown for APAC, EMEA and Americas and a forecast for the period 2025-2030.

2025-2030 market forecast of Fiber Laser technologies



**INFORMATION SOURCES**

- In-house knowledge of fiber laser technologies, their applications and their markets.
- Market data based on financial & business information of 100+ fiber lasers manufacturers.
- Interviews with key companies and industry experts that are involved in the fiber lasers business including manufacturers and integrators.
- Literature research.
- Participation in international conferences and exhibitions in the universe of lasers.

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DESPITE NUMEROUS CHALLENGES, NEW MARKET OPPORTUNITIES EMERGED FOR FIBER LASERS IN 2024

Fiber lasers are well known for their applications in materials processing, but for many years now they have proven their superiority in other segments outside the industry. These unique devices offer the advantage of a compact and cost-effective design, with improved stability in mechanical and thermal shocks with respect to their DPSSLs counterparts. These characteristics make fiber lasers the light source of choice in harsh and demanding environments.

Fiber lasers equip optical fiber sensor systems, that are used for the detection of oil pockets in the sea floor and for the efficient exploitation of existing fossil fuels reservoirs. DAS is a fiber optic-based technique that is commonly used in oceanography, life sciences and pipe monitoring.

Communications is a segment with strong perspectives, as fiber lasers have already shown their potential for several applications such as in FSO and in high precision signal distribution systems.

In Medicine, Tm and Ho doped fiber lasers emitting near 2 µm, have applications in general surgery and in lithotripsy.

The sales of fiber lasers for military applications will experience a rapid growth the following years, as countries will increase their defense budgets due to ongoing global tensions.

The market of lasers for materials processing, including that of fibers, was affected by the weak performance of several industrial sectors, including semiconductors during 2023 and the automotive in 2024.

Following the progressive recovery of the industries that rely on them, the demand of fiber lasers increased but the market volume didn't follow the same growth rate, due to decreasing ASPs.

The global automotive industry showed signs of recovery during 2025 and this in combination with the demands from other heavy industrial sectors, such as shipbuilding and aerospace, will have a positive impact on the sales of high-power fiber lasers.

Additionally, In the following years the semiconductors industry is expected to see a fast growth due to massive investments for the development and expansion of infrastructure for AI applications. This growth will drive the sales of pulsed and ultrafast fiber lasers, as their demand will keep increasing for the processing of materials that are critical for the manufacturing of computer hardware

Although the sales of fiber lasers in terms of number of units will rapidly increase, revenues will not follow the same rate, as ASPs are expected to continue decreasing in the period 2025-2030, though at lower rates. According to some estimations, the ASPs of CW fiber lasers for high-power materials processing might drop below \$800/kW.

In order to adapt to the strong competition, fiber lasers companies worldwide are employing different strategies, including the continuous improvement of their products, investments on the development of intelligent manufacturing equipment and pivoting towards other sectors, such as medicine and defense.

AUTHORS



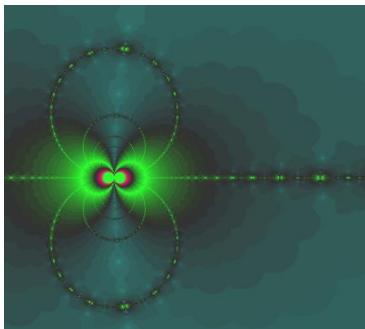
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2. FIBER LASER TECHNOLOGIES AND THEIR APPLICATIONS

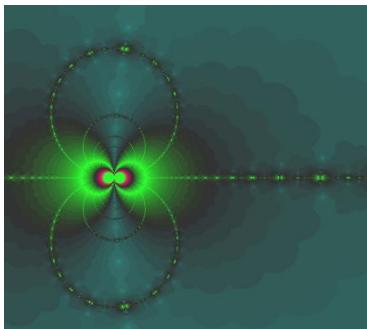
- CW fiber lasers
- QCW fiber lasers
- Nanosecond fiber lasers
- Nanosecond MOPA fiber lasers
- Ultrafast fiber lasers
- Supercontinuum fiber lasers

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SWIFT or BIC code: SOGEFRPP

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