

Industrial Lasers - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The Industrial Lasers Market size is estimated at USD 6.06 billion in 2024, and is expected to reach USD 7.76 billion by 2029, growing at a CAGR of 5.10% during the forecast period (2024-2029).

Key Highlights

The industrial lasers market is anticipated to witness robust growth during the forecast period owing to several factors, like rising demand for these lasers in medical and dental applications, space exploration, and industrial applications. Material processing is a prominent application for lasers in industries. Optical fiber lasers, followed by direct diode lasers, are majorly used for material processing.

Industrial lasers are used in various biomedical instruments for medical imaging, laser surgery, and photodynamic therapy applications. They are commonly used in multiple soft tissue oral surgery, such as frenectomy, epulis fissuratum, fibroma removal, facial pigmentation treatment, and vascular lesion treatment. The diode laser's ability to transmit energy to cells can be used for tasks like warming, welding, coagulation, protein denaturation, drying, vaporization, and carbonization.

The market is witnessing various innovations and partnerships as vendors are looking to launch new solutions regularly for the aerospace and defense industry. For instance, in March 2022, Ultisense launched the LRF 6042, a 25 km rangefinder module with advanced fiber laser technology. The LRF 6042 is the newest addition to the Ultisense portfolio of high-performance fiber laser rangefinders and builds on Vectronix's experience in developing military rangefinders. The compact LRF 6042 measures up to 8 km on 2.3 m x 2.3 m targets and boasts a maximum range performance of up to 25

km. Compared to other systems that have to charge and cool between pulses, the LRF 6042 measures continuously without interruption. It can achieve repetition rates of up to 10 Hz. This is ideal for tracking (e.g., people, vehicles) over an extended period.

Enterprises adopting laser solutions as part of their manufacturing process are subject to various government safety regulations. In addition, the equipment is comparatively costlier than their conventional counterparts, thus challenging their adoption in the industrial space.

Moreover, inflation significantly impacts manufacturing, leading to higher manufacturing costs. This can be due to various factors, such as higher prices for raw materials, increased shipping costs, and labor costs and shortages. As a result, manufacturers may be forced to raise their prices to maintain profitability, ultimately decreasing product demand. ??In addition, inflation can also lead to contract constraints, shifts in labor, and input issues for manufacturers. The rising inflation could restrain the growth of the market studied.??

Industrial Lasers Market Trends

Consumer Electronics to Witness Major Growth

In the consumer electronics industry, laser marking aids product recognition and identification of components like switches, plugs, connectors, capacitor housings, and packaging. Electronic connectors and flame-retardant plastics used for electronic components can be laser-marketed for traceability using UV lasers. Lasers above 300W are used in brazing, thin metal welding, and sheet metal cutting applications for manufacturing consumer electronic components.

Modern chips used in consumer electronics are manufactured using photolithography, a hi-tech use of stencils and lasers, to print complex chip circuits in a repeatable way.

However, the growing 5G network and the introduction of new products with advanced technologies and features fuel the adoption of smartphones, tablets, and DSLR cameras. Leading vendors in the smartphone market are continuously announcing new features and smartphones with better camera quality, which creates demand for industrial lasers.

According to Ericsson, the number of smartphone subscriptions in Western Europe may reach 459 million by 2028. There were approximately 440 million smartphone

subscriptions in Western Europe as of 2022.

The expanding market for mixed reality headsets is aiding the market studied. For instance, in June 2023, Apple introduced Vision Pro, a mixed-reality headset with a 3D camera to help users capture spatial photos and videos in 3D.

Asia-Pacific Expected to Witness Major Growth

Asia-Pacific is home to some of the world's largest manufacturing economies, including China, Japan, South Korea, and Taiwan. The ongoing expansion of manufacturing industries in sectors such as automotive, electronics, aerospace, and medical devices creates a significant demand for industrial lasers to support various machining, cutting, welding, and marking applications.

The Asia-Pacific region houses some important players in the market, such as Han's Laser Technology Industry Group. The region is known for its capabilities in the automotive and medical industries, which are expected to drive the region's market growth. Also, various players have invested in driving their growth and development, as the Asia-Pacific region is expected to witness the highest growth rate in the market.

Initiatives by emerging countries like India to expand their manufacturing footprint and become self-reliant further propel the market growth. Manufacturing emerged as one of India's high-growth sectors. The 'Make in India' program places India on the global map as a manufacturing hub and globally recognizes the Indian economy. According to IBEF, India can export goods worth USD 1 trillion by 2030 and is on the road to becoming a significant global manufacturing hub.

The automotive industry in the region is moving toward electrification and miniaturization while requiring high rigidity, design flexibility, and productivity. Blue lasers with high optical absorption efficiency are in high demand in the field of copper fabrication for automotive motors and batteries. The highly productive processing requires a laser beam source with high output power and high beam quality.

Industrial Lasers Industry Overview

The industrial lasers market is semi-consolidated as the significant vendors in the market are also expanding regionally and increasingly involved with ecosystem players, thus exploring new applications of ultrafast lasers. Some of the players include ACSYS Lasertechnik Inc., Han's Laser Technology Industry Group Co. Ltd, Clark-MXR Inc., Newport Corporation (MKS Instruments Inc.), and Lumibird SA.

January 2024 - ACSYS Lasertechnik GmbH (Kornwestheim) presented various technological innovations at this year's "World Money Fair" from February 1-4, 2024. At Stand D4, Hall 2, the supplier of high-precision standards and special machines in the field of laser technology, presented innovative solutions for flexible, resource-saving de-coating, engraving, and polishing in the Mint industry, among other things.

November 2023 - IPG Photonics Corporation and Miller Electric Mfg. LLC, a manufacturer of arc welding products, announced a strategic partnership with a goal to promote laser solutions for handheld welding applications further. Both companies bring unique expertise to develop specific solutions to address customer challenges, and together, they will further advance and bring to market products that are easy to learn and operate while offering unmatched benefits.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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