CORELIGHT® SERIES

Industrial Fiber Laser Systems

For high-speed cutting, welding, and additive manufacturing
High-quality cutting beams require low beam parameter product (BPP). Higher cutting quality leads to faster processing which in turn improves throughout.

**Superior Beam Quality of Lumentum Fiber Lasers**

- **50 µm, Pseudo-Gaussian**
- **4.0 kW cw output**
- **20 m feed fiber**
- **BPP = 1.22 mm mrad**
With more than 10 years of experience in kilowatt fiber laser technology and 30 years of producing class-leading laser pumps, Lumentum has successfully deployed thousands of lasers in systems worldwide. This has fostered a deep understanding of system-integrator and end-user requirements—all while building valuable customer relationships.

Lumentum is dedicated to providing products of the highest quality. We strive to continuously improve our products with proactive, data-driven, quality-first systems and processes.

Leveraging its photonics expertise and capabilities, Lumentum high-performance kW fiber lasers are used in manufacturing within key markets including automotive, aerospace, consumer, military, infrastructure, and general industrial.

Fiber Laser Applications
Key kW fiber laser applications are cutting and welding. More and more, high-volume metal-component manufacturers are adopting kW fiber lasers due to their ease of use and advantages over traditional processing methods. Flexibility, performance, and reliability are just a few of the inherent benefits of fiber laser systems.

Other applications for kW fiber lasers include additive manufacturing, brazing, cladding, surface treatment, and drilling,
Welding

High beam quality allows for a smaller focal point that achieves very narrow and deep welds in thick cross-section welding.

Additive Manufacturing

Low BPP allows for a better contained beam and longer beam focal distance—ideal for multilayer additive manufacturing processes.
Lumentum Fiber Laser Systems

Lumentum CORELIGHT Series fiber laser systems are based on our next-generation high-reliability engines. The laser systems offer straightforward integration with new and existing machine tools and are optimized for performance and cost efficiency. With 3 kW and 4 kW fiber laser modules, Lumentum fiber laser systems require fewer fiber combiners to generate maximum output power and resultant lower BPP.

Key features include
- Power 3 kW, 4 kW, 6 kW, and 8 kW
- Industry-leading BPP
- Strong back-reflection immunity
- Compact and rugged design

Wafer Fab to Fiber Laser Vertical Integration

Our dedication to customer satisfaction and quality products has driven Lumentum to control the entire supply chain for fiber laser manufacturing. This enables us to create truly vertically integrated solutions that exceed customer expectations.

SYSTEMS
Lumentum fiber laser systems benefit from strong vertical integration and provide customers a true value.

MODULES
Up to 4 kW modules allow for less beam combining and generates an industry-leading BPP.

MULTI-EMITTER FIBER-COUPLED DIODE LASERS
High power, packaged fiber-coupled diode lasers in a robust and compact design enable excellent beam quality.

CHIP-ON-SUBMOUNT
Diodes are mounted on a low thermal-resistance, electrically isolated submount, allowing for easy integration into user systems.

INTERNAL WAFER FAB
Global leader in diode laser wafer fabrication stemming from decades of telecom expertise.

FIBER INTEGRATION
World-Class Laser Manufacturing Capabilities

Lumentum’s world-class laser manufacturing allows for the utmost cost benefit for our customers while maintaining the highest level of quality standards in the industry.

Applications Labs

Lumentum leverages expertise from application teams and customers to design and manufacture industry-leading lasers. We also work closely with customers to help the laser selection process.

Our labs are equipped with high-quality laser sources, tools to shape and direct the laser beams, and analysis equipment to optimize multiple interrelated parameters. We have a wide range of motion controls for fast and accurate scanning, multiwavelength and beam-shaping optics.
Customer-Tailored Service

Lumentum provides flexible services that ensure the effective installation and commissioning, availability, predictive analytics, and thorough understanding of our industrial fiber laser portfolio. Lumentum offers customers access to a global network of service centers that provide warranty and non-warranty repair services. We understand that unscheduled downtime costs time and money, and negatively impacts your business and reputation. For the best customer experience and outcomes, Lumentum offers customer-tailored service to accommodate your unique requirements.
Global Presence

Lumentum maintains global operations-excellence centers close to our customers.

**North America**
San Jose, California USA  
(Corporate headquarters)  
Ottawa, Canada

**EMEA**
Škofljica, Slovenia  
Zurich, Switzerland

**APAC**
Tokyo, Japan  
Seoul, Korea  
New Taipei, Taiwan  
Shenzhen, China  
Shanghai, China  
Pathumthani, Thailand