

High-Power Compact Fiber Laser

Compact and reliable for increasing efficiency and maximizing capability



The all-new nLIGHT® CFL-12000 and CFL-15000 are the highest power fiber lasers available in this form factor, allowing for better utilization of your shop floor. Compact and versatile, these lasers were designed with trusted and durable components for high operating efficiency in a wide range of materials processing applications. Based on nearly two decades of high-power laser innovation, this fiber laser features the latest in optical technology, allowing for exceptional, consistent part quality and increasing the capability of different metals and thicknesses that can be cut by the job shop.

Features

- **12-15kW**
Delivers excellent productivity for more parts per day and increased profits.
- **Back-Reflection Protection**
Hardware-based back-reflection protection allows uninterrupted processing of even the most reflective metals with no damage to the laser.
- **Unparalleled Serviceability**
Modular design simplifies repairs and maximizes uptime.
- **Designed for Rugged Durability**
Ensures continuous operation in harsh manufacturing environments.
- **Advanced Electronic Design**
Provides faster piercing and processing of fine features with smaller heat-affected zones.
- **Multiple Fiber Options**
Choice of feed fiber sizes from 100-200µm enables a diverse range of applications.

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nLIGHT 12-15kW High Power Fiber Laser Specifications

Models	CFL-12000	CFL-15000
Optical Specifications		
Mode of Operation	CW/Modulated	
Polarization	Random	
Maximum Average Power, CW	12kW	15kW
Power Tunability	5 – 100%	
Power Variation, 8-Hour	≤ 1%	
Modulation Frequency	≤ 20kHz	
Rise and Fall Times	≤ 10μs	
Beam Quality	100μm fiber ≤ 5mm-mrad 200μm fiber ≤ 11.0mm-mrade	
Wavelength	1070 ± 10nm	
Electrical Specifications		
Supply Voltage	400 – 480VAC 3P+PE, 50/60Hz	
Control Interface, Standard	External hardware control, analog power control, analog monitors, Ethernet control, GUI, and API	
Control Interface, Optional	EtherCAT, EtherNet/IP, DeviceNet, Profinet, Profibus	
Mechanical Specifications		
Dimensions (W x D x H)	1004 x 804 x 701mm	
Optical Fiber	10, 15, 20m, QD connector standard	
Cooling Method	Water	
Environmental Specifications		
Operating Temperature ¹	+10 to +40°C	
Storage Temperature	-10 to +60°C	
Relative Humidity	10 to 80%	

¹ Non-condensing or with use of CDA.



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