nLIGHT High Power Fiber Lasers

Leading fiber lasers with 6kW and 8kW of power ideal for thick metal processing.

nLIGHT® 6kW and 8kW high power fiber lasers deliver the output needed to support heavy materials processing. Designed to meet the performance and reliability requirements for industrial applications, these lasers feature several advancements in fiber laser technology.

A modulation rate up to 100 kHz and rise and fall times of less than 5 µs provide improved cutting and welding performance. This laser also features true hardware-based back reflection protection, easy onsite servicing and reliable operation in harsh manufacturing environments.

Key Features & Benefits

- Up to 8kW output power delivers consistent performance for advanced cutting and welding.
- Hardware-based back reflection protection allows uninterrupted, failsafe processing of even the most reflective metals with no damage to the laser.
- Easy onsite serviceability maximizes uptime and productivity.
- Durable design ensures continuous operation in manufacturing environments.
- Advanced electronics allow faster piercing and processing of fine features along with smaller affected heat zones.

nLIGHT 6-8kW High Power Fiber Laser Specifications

Models	CFL-6000	CFL-8000
Optical Specifications		
Mode of Operation	CW/Modulated	
Polarization	Random	
Maximum Average Power, CW	6kW	8kW
Power Tunability	5 – 100%	
Power Variation, 8-Hour	≤ 1%	
Modulation Frequency	≤ 100 kHz	
Rise and Fall Times	≤ 5 µs	
Beam Quality 100 µm fiber 200 µm fiber 300 µm fiber	 ≤ 5 mm-mrad ≤ 11 mm-mrad ≤ 17 mm-mrad	
Wavelength	1080 ± 10 nm	
Electrical Specifications		
Operating Voltage, Three-Phase	380 – 480 VAC	
Operating Voltage Frequency	50/60 Hz	
Control Interfaces, Standard	External Hardware Control (HD-26 female, DB-25 male), Analog Power Control (DB-15 female), ASCII Command Line (DB-9 female), GUI and API (RJ-45)	
Control Interfaces, Optional	Ethercat, Ethernet/IP, DeviceNet, ProfiNet, ProfiBus	
Mechanical Specifications		
Dimensions, W x D x H	813 x 1336 x 1637 mm	
Optical Fiber	10, 20, 30 m, QBH 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.

Laser Safety
This laser product does NOT comply with IEC 60825-1 or 21CFR1040.10/21CFR1040.11 and is solely intended to be integrated into a laser product certified by the Purchaser. The Purchaser acknowledges their product must comply with application regulations before it can be sold to an end user.

nLIGHT continually improves its products to provide customers outstanding quality and reliability. The information contained herein is subject to change without notice. nLIGHT, Inc. shall not be liable for technical or editorial errors or omissions contained herein. Warranties are set forth in express warranty statements accompanying products. Nothing herein should be construed as constituting an additional warranty. For details, please contact your nLIGHT sales representative.

sales@nlight.net | www.nlight.net