

nLIGHT Single Mode Rackmount Fiber Lasers

Small form factor rackmount fiber laser with 1.2 kW power.



The nLIGHT® family of single mode rackmount fiber lasers deliver power outputs from 500 to 1200W with beam quality of $M^2 \leq 1.1$ for advanced cutting, welding and additive manufacturing. The small size of these laser facilitates easy integration into machine tools.

nLIGHT rackmount fiber lasers feature true hardware-based back reflection protection, easy onsite servicing and reliable operation in even the harshest manufacturing environments.

Key Features & Benefits

- 500W – 1200W models and beam quality of $M^2 \leq 1.1$ supports a range of applications.
- Hardware-based back reflection protection allows uninterrupted, failsafe processing of even the most reflective metals with no damage to the laser.
- Durable design ensures continuous operation in manufacturing environments.
- Easy onsite serviceability maximizes uptime and productivity.
- Advanced electronics allow faster piercing and processing of fine features along with smaller affected heat zones.

nLIGHT Single Mode Rackmount Fiber Laser Specifications

Models	CFL-500	CFL-700	CFL-1000	CFL-1200
Optical Specifications				
Mode of Operation	CW/Modulated			
Polarization	Random			
Maximum Average Power, CW	500 W	700 W	1 kW	1.2 kW
Power Tunability	5 – 100%			
Power Variation, 8-Hour	≤ 1%			
Modulation Frequency	≤ 100 kHz			
Rise and Fall Times	≤ 5 μs			
Beam Quality ¹	≤ 1.1 M ²			
Wavelength	1070 ± 10 nm			
Electrical Specifications				
Operating Voltage, Single-Phase	200 – 240 VAC			
Operating Voltage Frequency	50/60 Hz			
Control Interface	External hardware control/RS-232/Ethernet			
Mechanical Specifications				
Dimensions (W x D x H)	480 x 677 x 177 mm			
Optical Fiber ²	5 and 10 m, QBH connector standard			
Cooling Method	Water			
Environmental Specifications				
Operating Temperature ³	+10 to +40 °C			
Storage Temperature	-10 to +60 °C			
Relative Humidity	10 to 80%			

¹ Measured using 86.5% Power in a Bucket.

² Custom length selections may be available upon request.

³ 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.



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