

Single Mode Rackmount Fiber Lasers

Small form factor rackmount fiber lasers with power up to 1.2kW



The nLIGHT® 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 lasers 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.

Features

- 500W to 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.

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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	500W	700W	1kW	1.2kW
Power Tunability	5 – 100%			
Power Variation, 8-Hour	≤ 1%			
Modulation Frequency	≤ 100kHz			
Rise and Fall Times	≤ 5μs			
Beam Quality ¹	≤ 1.1M ²			
Wavelength	1070 ± 10nm			
Electrical Specifications				
Operating Voltage, Single-Phase	200 – 240VAC			
Operating Voltage Frequency	50/60Hz			
Control Interface	External hardware control/RS-232/Ethernet			
Mechanical Specifications				
Dimensions (W x D x H)	480 x 677 x 177mm			
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.



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