



nLIGHT's medium power M100™ CW/QCW Fiber Laser outputs a near diffraction limited CW or QCW 1090nm beam. Designed to meet maintenance-free 24/7 industrial operation, the air-cooled system offers a high brightness solution to meet the rigors of the laser material processing industry.

The CW/QCW Fiber Laser platform integrates the best of nLIGHT's industry-leading technologies to deliver a highly reliable cost-effective, medium power fiber laser solution:

- Powered by nLIGHT Pearl™ single-emitter diode laser modules, which set the standard of excellence in high-brightness, high-reliability diode lasers
- Incorporates nLIGHT LIEKKI™ active fiber with proprietary Direct Nano-particle Deposition (DND) technology that provides high efficiency and minimizes photodarkening

Features

- Power up to 400W peak power and 100W average power
- QCW modulation frequency up to 65kHz
- 19" rack mountable
- Aircooled

Applications

- Cutting
- Welding
- Scribing and drilling
- Soldering and bonding
- Annealing
- Sintering
- Micro-machining
- Scientific research

Proven Performance

Typical Device Performance

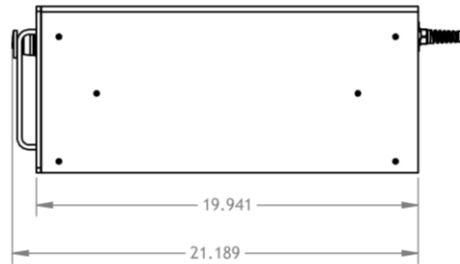
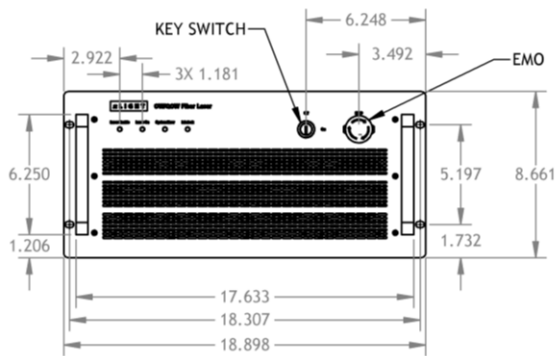
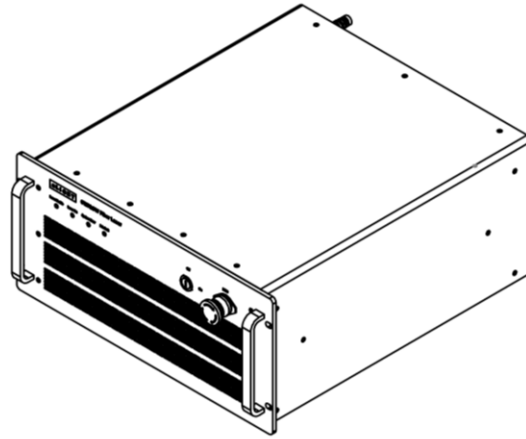
Optical		NL-M100-200-QCW-A	NL-M100-400-QCW-A
Mode of operation		CW/QCW	
Polarization		Random	
Wavelength	nm	1090 ± 5	
Emission line width (FWHM)	nm	< 5	
Nominal output power	W	100	
Maximum peak power	W	200	400
Output power range	%	10 – 100	
Output power stability (8hrs)	%	< 3	
Beam diameter	mm	5	
Beam quality (single mode)	M ²	< 1.1	
Electrical			
Operating voltage	VAC	100 – 240	
Operating voltage frequency	Hz	50 – 60	
Power consumption (at 20°C)	W	< 600	
Modulation mode			
Rise/Fall time	µs	5	
Modulation Frequency	kHz	0.1 – 65	
Duty ratio	%	0 – 50	0 – 25
Mechanical			
Dimensions		5U	
Output fiber connection*		nLIGHT Beam Delivery	
Output Collimator Dimensions*	mm	Φ25 × 120	
Output fiber cable length*	m	3	
Minimum fiber cable bend radius	mm	> 80	
Weight	kg	31	35
Cooling method		Air	
General condition			
Operating temperature**	°C	+10 to +30***	
Storage temperature	°C	-10 to +60	
Relative Humidity**	%	10 to 80	

*May be customized

** A non-condensing environment is required for storage and operation.

*** High temperature limit can be extended by reducing laser output power.

Package Dimensions




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 that their product must comply with the applicable regulations before it can be sold to an end user.

Notice


nLIGHT continually improves its products to provide our customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.



**INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT**

MAX. AVERAGE OUTPUT POWER: 110 W
 MAX. PEAK OUTPUT POWER: 220 W
 PULSE DURATION: 0.001 – 500 ms
 PULSE REPETITION RATE: 0 – 65 kHz
 WAVELENGTH RANGE: 900 – 1250 nm

This laser does NOT comply with IEC 60825-1 or 21 CFR 1040 for complete laser products and is solely intended to be integrated into a certified laser product.



**INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
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CLASS 4 LASER PRODUCT**

MAX. AVERAGE OUTPUT POWER: 110 W
 MAX. PEAK OUTPUT POWER: 440 W
 PULSE DURATION: 0.001 – 250 ms
 PULSE REPETITION RATE: 0 – 65 kHz
 WAVELENGTH RANGE: 900 – 1250 nm

This laser does NOT comply with IEC 60825-1 or 21 CFR 1040 for complete laser products and is solely intended to be integrated into a certified laser product.