

nLIGHT's medium power QCWFL provides a robust, high-brightness solution specifically designed for rigors of the material processing industry.

The QCWFL platform integrates the best of nLIGHT's industry-leading technologies to deliver a highly effective, medium power fiber laser solution:

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

## Features

- Power up to 400W Peak power and 200W Average power
- WPE 25%
- *Powered by Pearl™* SE diode laser engine
- Liekki™ DND fiber technology
- Simple, plug and play integration
- 19" rack mountable

## Applications

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

## Proven Performance

## Typical Device Performance

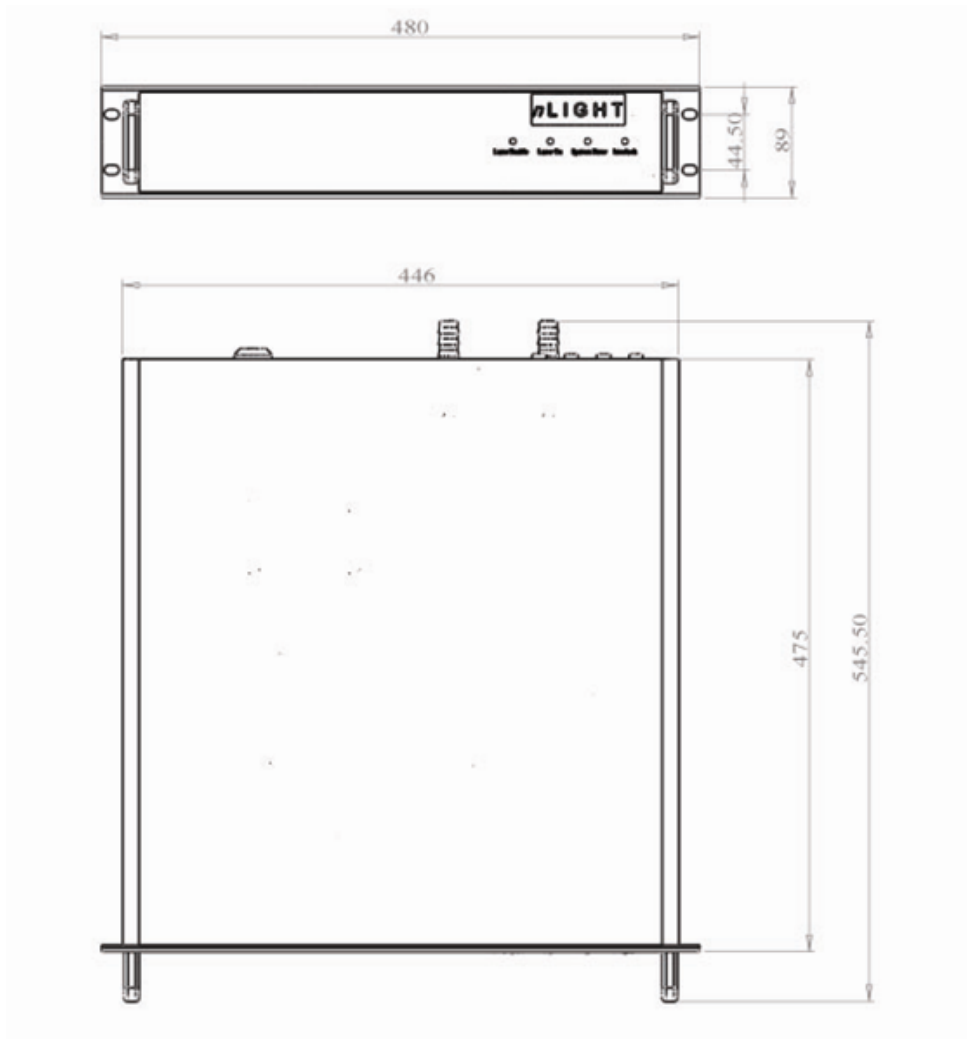
Optical		NL-QCWL-200-1090	NL-QCWL-400-1090
Mode of operation		CW/QCW	
Polarization		Random	
Wavelength	nm	1090 $\pm$ 5	
Emission line width (FWHM)	nm	<5	
Average power	W	100	200
Peak power	W	200	400
Output power range	%	10-100	
Output power stability	%	<1	
Beam quality	M <sup>2</sup>	<1.1	
<b>Electrical</b>			
Operating voltage	VDC	< 34	
Operating current	A	< 20	<40
Power consumption (at 20°C)	W	< 750	<1500
Fast Modulation			
Rise/Fall time	µs	≥5	
Modulation Frequency	kHz	0-20	
Slow Modulation			
Rise/Fall time	µs	>100	
Modulation Frequency	kHz	0-5	
Duty ratio	%	0-50	
AC/DC converter available upon request			
<b>Mechanical</b>			
Dimensions		2U	
Output fiber connection**		nLIGHT Beam Delivery	nLIGHT Beam Delivery
Output fiber length**	m	5-10	
Minimum fiber cable bend radius	mm	> 80	
Weight	kg	18	
Cooling method***		Conduction cooled components on non-DI water-cooled heat sink	
<b>General condition</b>			
Operating temperature**	°C	+5 to +50	
Storage temperature***	°C	-10 to +60	
Cooling water temperature**	°C	20 $\pm$ 5	
Relative Humidity**	%	5 to 95	

\*May be customized

\*\* A non-condensing environment is required for storage and operation. Therefore, the cooling water temperature must be higher than the ambient dew point.

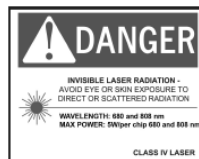
\*\*\*All cooling water must be drained for storage/shipping

## Package Dimensions

**CFR Regulation**

These components do not comply with the federal regulation (Title 21 CFR, Chapter 1, Subchapter J) as administered by the Center for Device and Radiological Health. Purchaser acknowledges that their products must comply with these regulations before they can be sold to an end-use.

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**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.