

OptoTools DL modules provide robust, single-emitter based diode solutions for materials processing applications. Leveraging nLIGHT's patented Pearl™ diode laser modules, the system delivers industry leading efficiency and reliability.

High brightness DL modules provide the beam quality of lamp-pumped YAG lasers with benefits of improved reliability and efficiency. This high efficiency assists to significantly reduce Capex and Opex costs for many industrial applications.

## Features

- Superior beam quality - comparable with lamp-pumped YAG lasers
- Up to 30mm mrad beam quality
- *IntelliTech*™ interface software for simple, one-step management of system setup and consistent long-term performance

## Applications

- Plastic welding
- Soft soldering
- Thin metal welding
- Cladding and coating
- Material heating
- Laser hardening
- Hybrid applications

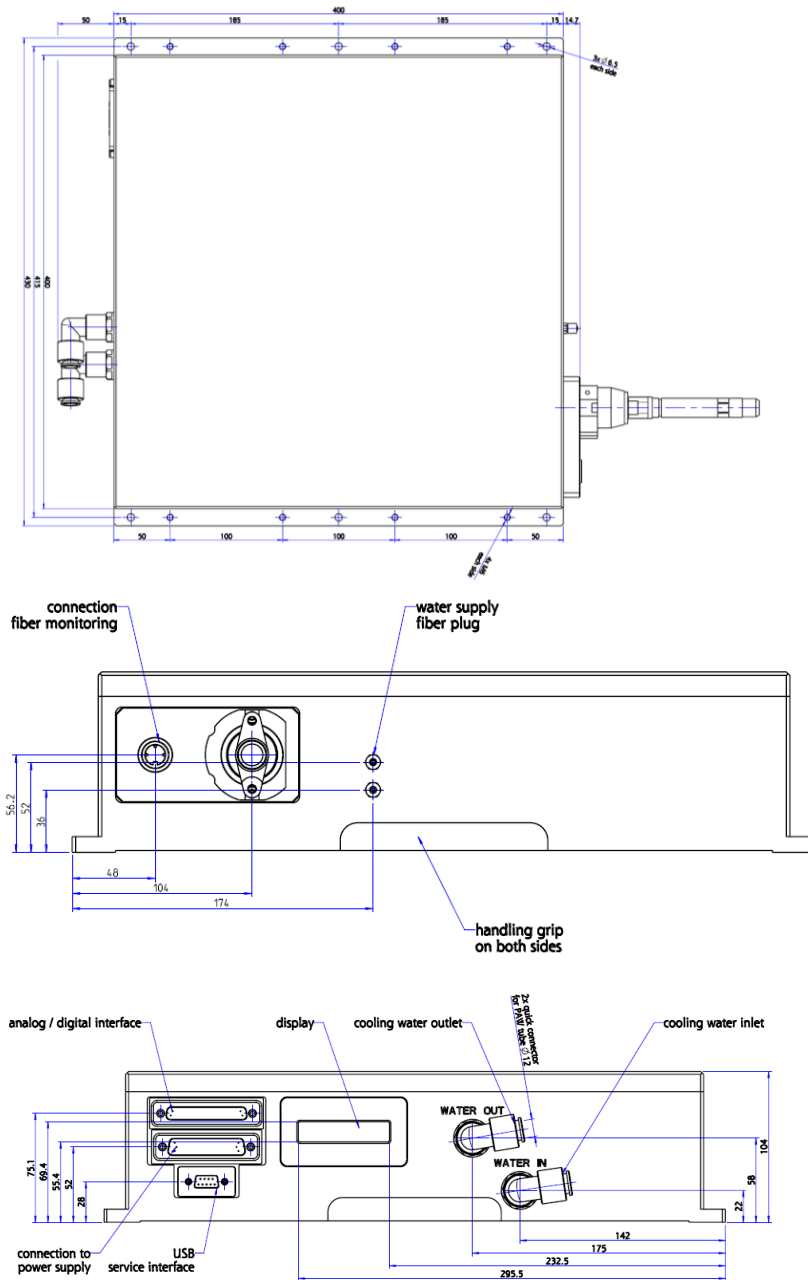
## Proven Performance

## Typical Device Performance

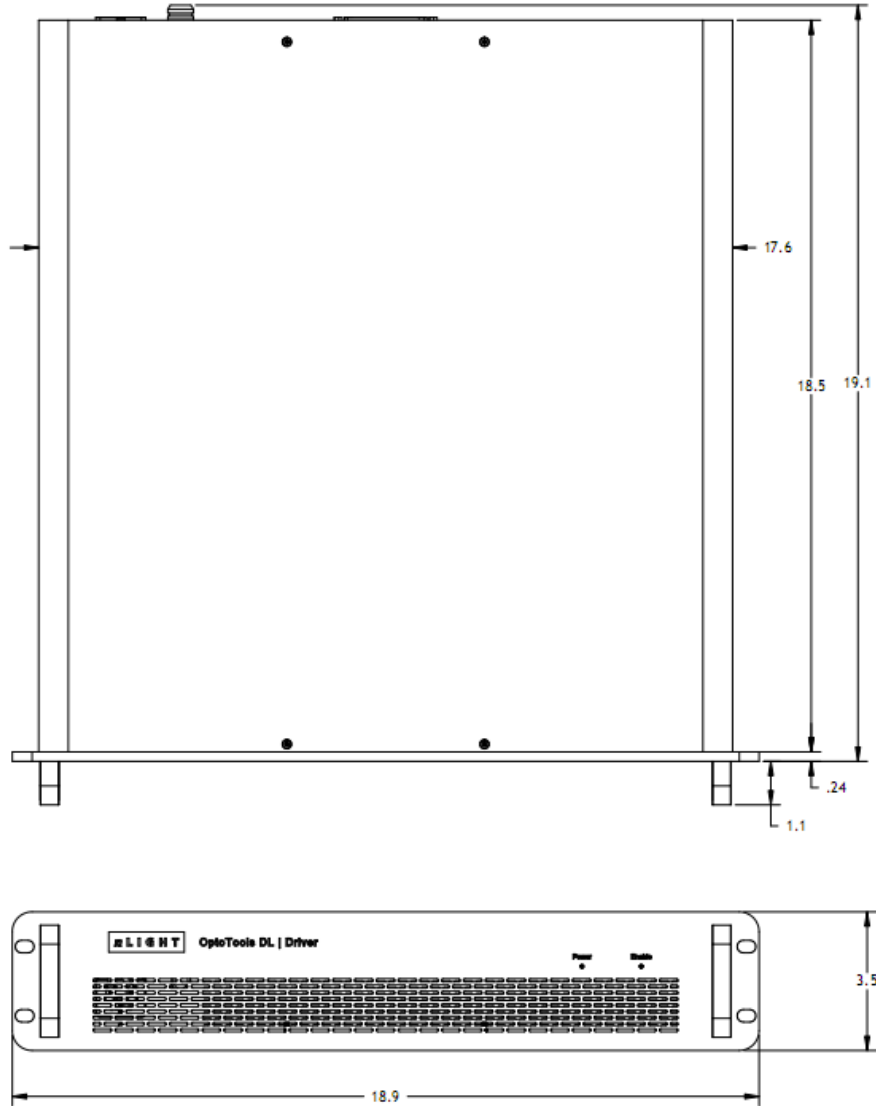
Optical					
Wavelength		808 ± 10		980 ± 10	
Optical output power	W	225	450	250	500
Short term stability (On/off, < 10 sec)	%	< 5			
Stability over 24 h (same operating temp.)	%	± 1			
Fiber					
Fiber connector		4 mm LLK-HP QBH	LLK-HP QBH	4 mm LLK-HP QBH	LLK-HP QBH
Fiber length	m	5			
Numerical aperture <sup>1</sup>	NA	0.1 or 0.2			
Beam parameter product	mm-mrad	60		30	
Electrical					
Input power	V <sub>AC</sub>	230			
Operating frequency	Hz	50-60			
Power conversion efficiency	%	> 35		>40	
Current	A	4.4	7.2	4.8	7.5
Thermal – non condensing conditions <sup>3</sup>					
Storage temperature	°C	-20 to 50			
Operating humidity	%	5 - 90			
Cooling power (Max. value)	W	350	750	450	850
Cooling water temperature	°C	20			
Temperature stability	°C	± 0.2			
Pressure drop ΔP (Max. value)	psi	14.5			
Flow rate (Min. value)	ltr/min	1	2	1	2
Particle filter size for external chiller	µm	100			
Water quality		Clean water – distilled water recommended			
Communication interface					
DB9		RS232			
DB44		Analog/Dig. interf.			
Accessories					
Aiming beam	nm	635			
Aiming beam output power	mW	<1			
Fiber		Customer defined fiber selection			

## Package Dimensions

### Head



**Driver**



**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.