

nLIGHT

HIGH-POWER SEMICONDUCTOR LASERS AND FIBERS

OPTOTOOLS™ INDUSTRIAL DL AIR COOLED SYSTEM

Preliminary datasheet



The Optotools™ industrial diode laser (DL) turnkey system delivers up to 100 Watts from a 200, 400 or 600 μm core fiber at 8xx or 9xx nm. This very compact system is equipped with a high-power air cooler that makes water redundant.

Quick modulation times, high reliability and an industrial design make the Optotools™ industrial DL air cooled system a perfect tool for many low power applications.

The integrated Pearl™ product family offers unparalleled reliability and efficiency by coupling nLIGHT's high-brightness nXLT™ single emitters with a proprietary optical design for efficient fiber coupling.

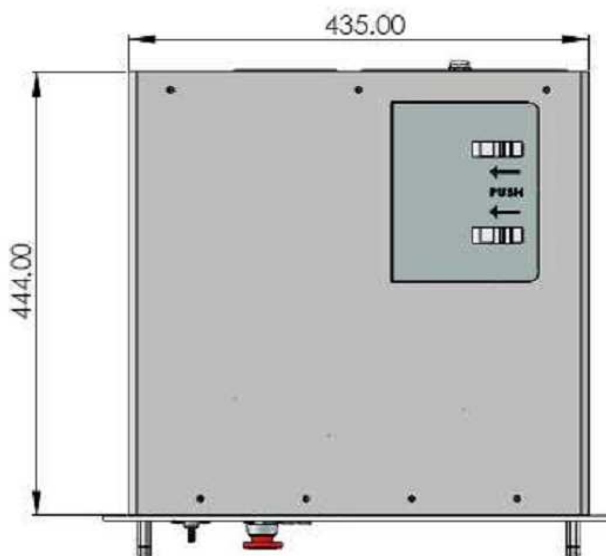
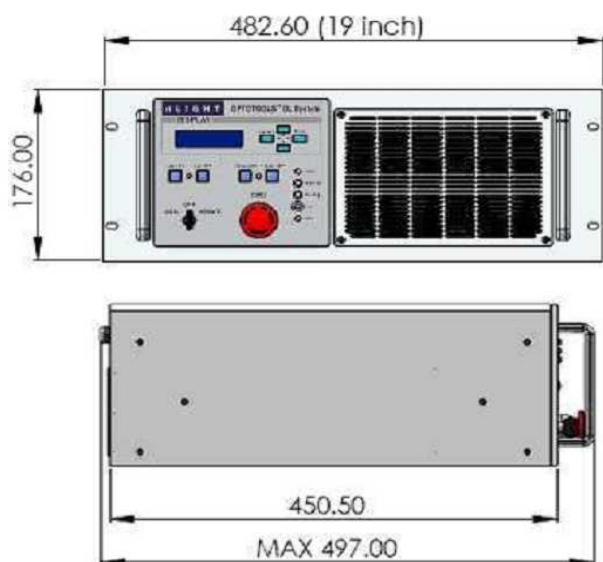
Applications

- Laser plastic welding
- Marking
- Selective soft soldering
- Heat treatment
- Illumination

Features

- Up to 100 W CW optical output power air cooled
- No water necessary
- Pointing laser integrated (optional)
- Robust, industrial design
- Easy to integrate

Package dimensions



nLIGHT

HIGH-POWER SEMICONDUCTOR LASERS AND FIBERS

Typical device performance

		DL-SYS-0030-0xx-T-R	DL-SYS-0050-0xx-T-R	DL-SYS-0100-0xx-T-R
Optical				
Optical output power	W	30	50	100
Short term stability (On/off, <10 sec)	%	< 5	< 5	< 5
Stability over 24 h (At same operating temperature)	%	± 1	± 1	± 1
Wavelength	nm	808 / 980	808 / 980	808 / 980
Wavelength tolerance	nm	± 3	± 3	± 3
Pilot laser				
Wavelength	nm	635	635	635
Output power	mW	< 1	< 1	< 1
Fiber parameters				
Fiber connector		SMA 905	SMA 905	SMA 905
Fiber length	m	5	5	5
Numerical aperture ¹	NA	0.22	0.22	0.22
Fiber core diameter	µm	200 / 400 / 600	200 / 400 / 600	200 / 400 / 600
Electrical parameters				
Operating voltage (+/-10% AC)	V	110 / 220	110 / 220	110 / 220
Frequency	HZ	50 / 60	50 / 60	50 / 60
Power consumption (Max. value)	KVA	0.7	0.7	0.7
Overall efficiency	%	> 14	> 14	> 14
Pulse mode parameters				
Rise/fall time	µs	< 10	< 10	< 10
Overshot	%	< 5	< 5	< 5
Operating frequency (Max. value)	KHZ	20	20	20
Thermal Parameters – non condensing conditions²				
Temperature ambient in operation (100% duty cycle)	°C	0 to 40	0 to 40	0 to 40
Storage temperature	°C	-20 to 50	-20 to 50	-20 to 50
Operating humidity	%	5 - 95	5 - 95	5 - 95
Temperature stability	°C	± 0.2	± 0.2	± 0.2
Mechanical				
Dimension (w x h x d)	mm ³	483 x 176 x 650	483 x 176 x 650	483 x 176 x 650
Weight	kg	< 25	< 25	< 25
Noise emission	dB (A)	< 70	< 70	< 70
User interface				
D-SUB9		RS232	RS232	RS232
D-SUB44		Analog interface	Analog interface	Analog interface
D-SUB9		Interl USB	Interl USB	Interl USB
Warm-up time	min	< 1	< 1	< 1

¹ Numerical aperture (NA) is the sine of the half-angle encircling 90% of the optical energy from the fiber.

² A non-condensing environment is required for storage and operation.

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-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.