

Features

- High Conversion Efficiency
- Mechanically Robust
- Shock and Vibration Resistant
- Passively Cooled Package

Applications

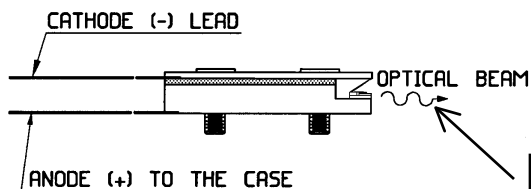
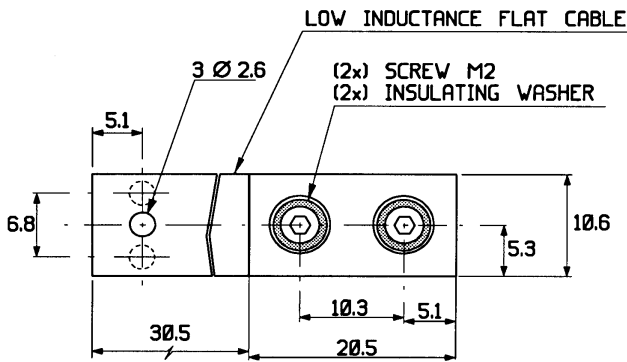
- Pumping
- LIDAR
- Illumination
- Mapping

The Summit™ NL-QD-Qxy01-A1 and NL-QD-Qxy01-T packages are high power diode lasers for quasi-CW operation. The 'x' designates the wavelength window, while 'y' characterizes the optical power of each bar, from a minimum of 60W QCW up to 200W QCW.

This product is based on a highly efficient and highly reliable 1cm diode laser bar. Its compact and rugged design facilitates connection to a heat exchanger isolated from electrical connections. The design is optimized to allow very good temperature control.

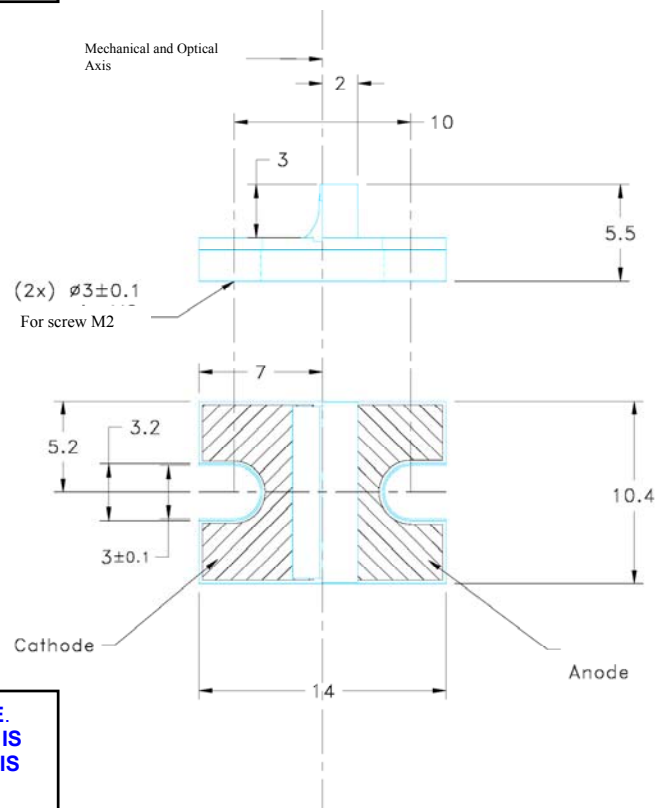
Package Dimensions

'A1' Package



AVOID EXPOSURE.
LASER RADIATION IS
EMITTED FROM THIS
APERTURE

'T' Package



AVOID EXPOSURE.
LASER RADIATION IS
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Case temperature : 25 °C

Quasi-continuous mode : Pulse width = 200µs
 repetition rate = 100Hz

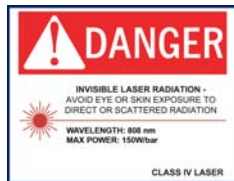
Device Specifications	UNITS	NL-QD-Q1201-A1	NL-QD-Q1301-A1	NL-QD-Q140-A1	NL-QD-Q1501-A1	NL-QD-Q1601-A1
		NL-QD-Q1201-T	NL-QD-Q1301-T	NL-QD-Q1401-T	NL-QD-Q1501-T	NL-QD-Q1601-T
Parameters						
QCW output power	Watt	60	80	100	125	150
Peak Wavelength	nm	808	808	808	808	808
Wavelength Tolerance	nm	±4	±4	±4	±4	±4
Operating Current (Iop),	Typ. Amp.	66	84	100	120	140
	Max. Amp.	74	95	115	135	160
Operating Voltage	Volt	<2	<2	<2	<2	<2
Slope Efficiency	W/A	1.22	1.22	1.22	1.22	1.22
Total Efficiency,	Typ. %	50	52	53	53	53
	Min. %	43	44	44	44	44
Beam divergence (FWHM)	degree	10 x 40	10 x 40	10 x 40	10 x 40	10 x 40
Spectral Width (FWHM)	nm	< 3	< 3	< 3.5	< 4	< 4

Note:

- Variation of wavelength with temperature $\Delta\lambda/\Delta T \sim 0.26 \text{ nm}/^\circ\text{C}$.
- Other wavelengths available upon request in the 915nm to 980nm range.
- Can operate at high temperature (up to +60°C).
- Can operate at larger pulse width (up to few ms).
- Can operate at higher duty cycles (@ 100W QCW up to 20% on A1 and 10% on T).
- Operating at higher power or higher temperature will accelerate component aging, increase threshold current, and decrease slope efficiency.

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 check with your nLIGHT sales representative.



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