



The Summit™ NL-QD-Q1yzz-L2 Dual Stacked Array packages two conductively cooled diode laser stacks side by side. Each stack is built with up to 6 diode bars (60W QCW to 150W QCW per bar) designed to operate over a broad temperature range.

The diode laser bar array benefits from a fully mastered technology, and is designed for improved efficiency and reliable operation at very high junction temperatures. The packaging and heat exchanger have been optimized to reduce overall thermal resistance. The NL-QD-Q1yzz-L2 stack is ideal for many different applications, such as pumping either rods or slabs in solid-state lasers. Its compact and rugged design allows reliable operation under severe environmental conditions.

Features

- Side by Side Package
- High Efficiency
- Low Thermal Resistance
- Highest Power

Applications

- Target Designation
- Ranging
- LIDAR
- Multi-Spectral Imaging
- Medical

Typical Device Performance

Package		NL-QD-Q1yzz-L2				
Parameters						
Number of Diode Bars per Stack		zz = 2 to 6				
Pitch between Diode Bars	µm	400				
Emitting Area	mm x mm	20.4 x 2 (zz=6)				
QCW Output Power per Diode Bar	Watt	60	80	100	125	150
Operating Current	Amp.	66	84	100	120	140
Operating Current (Maximum)	Amp.	74	95	115	135	165
Operating Voltage	Volt	< 2 / Bar			< 2.2 / Bar	
Total Efficiency	%	48		50		54
Total Efficiency (Minimum)	%	42		44		46
Beam Divergence (FWHM)	Degree	10 x 40				

Variation of wavelength is approximately 0.26 to 0.3 nm/°C.

Standard wavelength is 808nm.

Spectral width is ≤ 4 nm FWHM.

Tolerance on wavelength is +/- 3nm.

Other wavelengths 9xx nm available.

Possibility of pitch between diode bars of 500 µm

Specifications are for nominal lifetime 10⁹ pulses (for 200µs pulse width).

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 contact your nLIGHT sales representative.

Copyright © 2008 nLIGHT. All rights reserved.

