

The Summit™ NL-QD-Q1yzz-K package is a conductively cooled diode laser stack (of up to 8 bars) designed to operate at very high temperature. This diode laser bar array benefits from the latest advances in technology. It combines the highest efficiency available today with extremely reliable operation at very high junction temperatures.

The package has been optimized to reduce overall thermal resistance. NL-QD-Q1yzz-K stacks are ideal for applications under severe environmental conditions, such as pumping solid-state lasers in designators and illuminators. This compact and rugged design is well suited to defense and space applications requiring small footprint and high reliability.

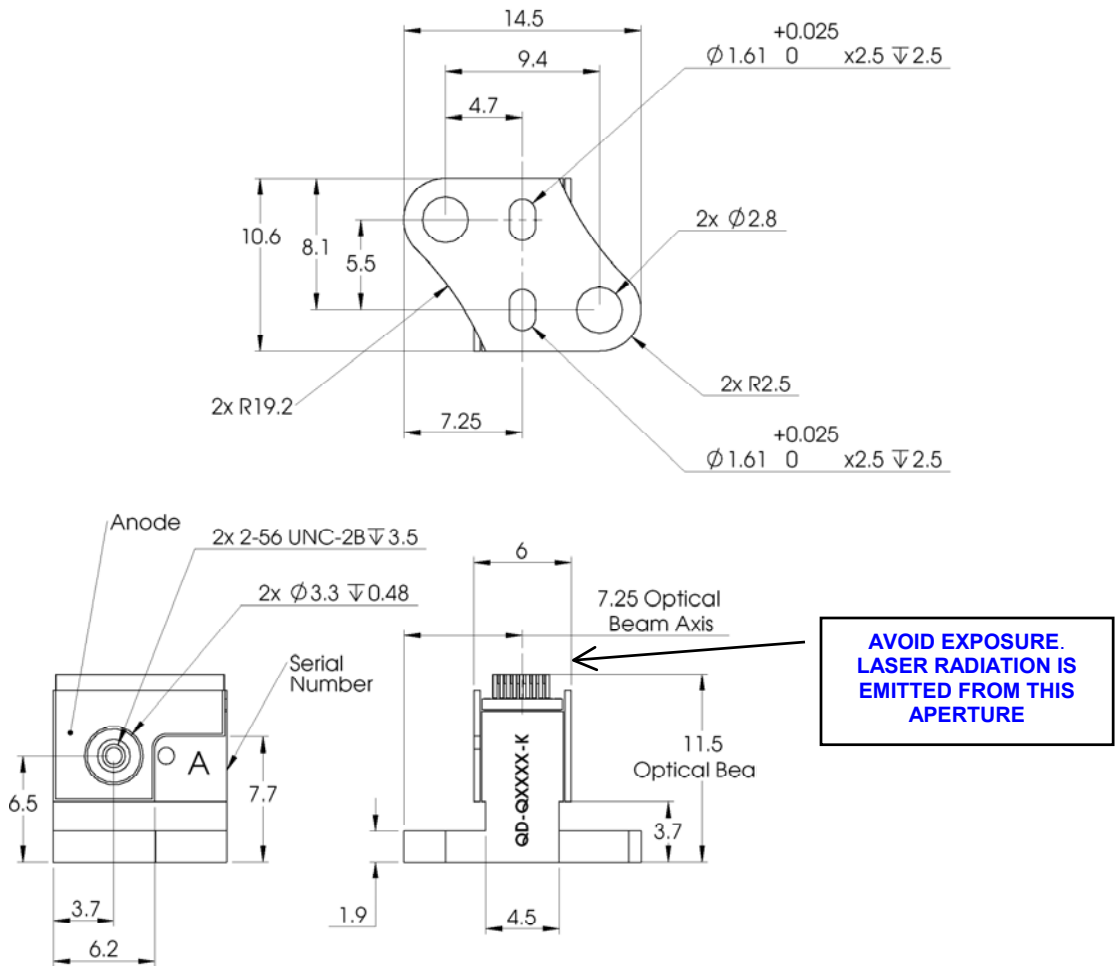
Features

- Highest Efficiency
- Highest Temperature Endurance
- Shock and Vibration Rugged
- Tested for Space Applications
- Low Thermal Resistance

Applications

- Target Designation
- Ranging
- LIDAR
- Space Environments
- Multi-Spectral Imaging
- Medical
- Ignition

Package Dimensions



Case temperature: +60°C

Quasi-continuous mode: pulse width = 200µs
repetition rate = up to 100Hz

Device Specifications	UNITS	NL-QD-Q1yzz-K		
Parameters				
Number of diode bars			zz = 2 to 8	
Pitch between diode bars	µm		400	
Emitting area	mm x mm		(zz - 1)* 0.4	
		y = 2	y = 3	y = 4
QCW Optical Power per Diode Bar	Watt	60	80	100
Threshold current	Amp.	19	19	19
Operating current	Typ. Amp.	70	88	105
	Max. Amp.	75	97	120
Operating voltage	Volt		< 2 / bar	
Total efficiency	Typ. %		48	
	Min. %		42	
Beam divergence (FWHM)	degree		10 x 40	

Note:

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.

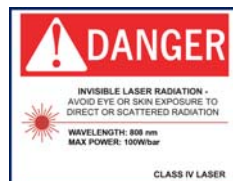
Other wavelength selections are available.

Pitch between diode bars is possible up to 500µm.

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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