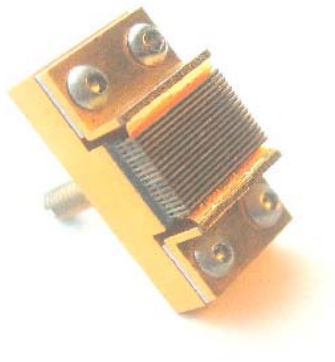
Summit™ QCW Package Series

G Package High Temperature Stacked Array



The Summit™ NL-QD-Q1yzz-G package is a conductively cooled diode laser stack designed to operate at very high temperatures and high QCW optical power. These stacks are built with diode bars of 60W QCW to 200W QCW.

This diode laser bar array benefits from a fully mastered technology and is designed to offer the highest efficiency and most reliable operation at very high junction temperatures.

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

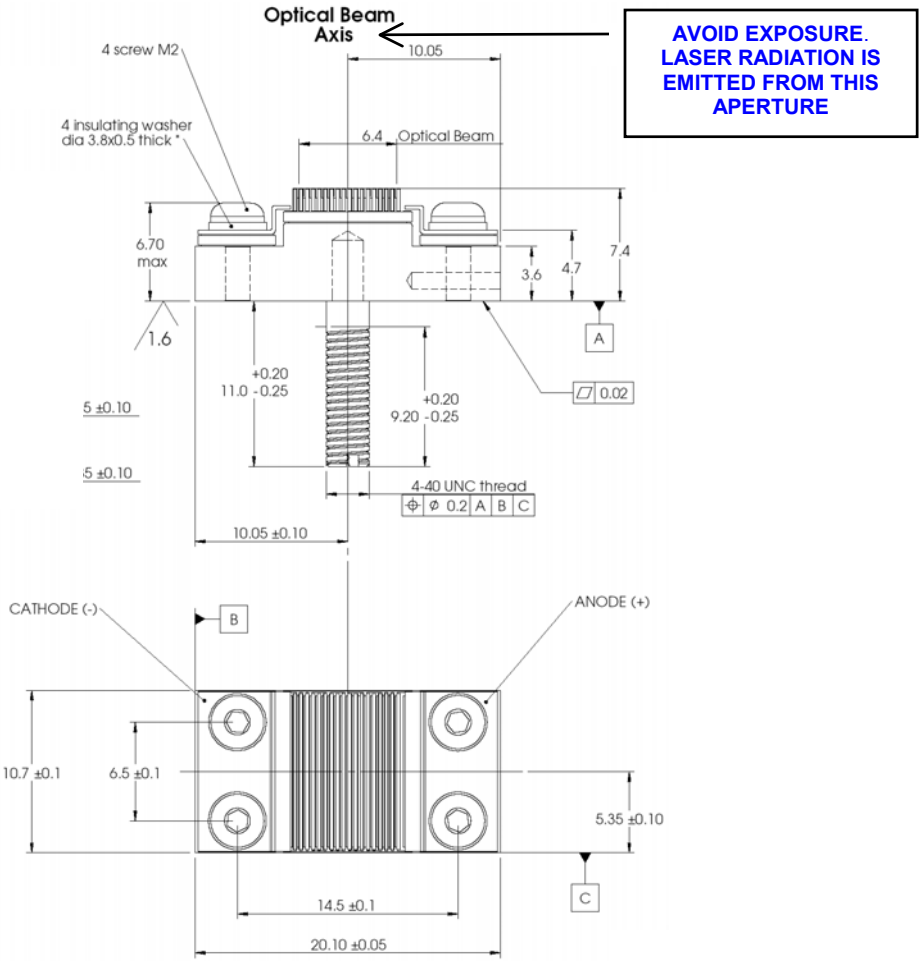
Features

- Highest Efficiency
- Highest Temperature Endurance
- Shock and Vibration Rugged
- Tested for Space Applications
- Low Thermal Resistance
- Case Temperature up to 75°C
- Rear Mount Stud

Applications

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

Package Dimensions



G Package High Temperature Stacked Array

Case temperature: +60°C

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

Device Specifications		UNITS	NL-QD-Q1yzz-G			
Parameters						
Number of diode bars			zz = 5 to 17			
Pitch between diode bars		µm	400			
Emitting area		mm x mm	(zz –1)* 0.4			
			y = 2	y = 3	y = 4	y = 6
QCW Optical Power per Diode Bar		Watt	60	80	100	150
QCW Optical Power		Watt	zz * 60	zz * 80	zz * 100	zz * 150
Operating current	Typ.	Amp.	70	88	105	150
	Max.	Amp.	75	97	120	165
Operating voltage		Volt	< 2 / bar			
Total efficiency	Typ.	%	50			
	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.
Possibility of pitch between diode bars of 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. *n*LIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, *n*LIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please check with your *n*LIGHT sales representative.

*n*LIGHT Corporation
5408 NE 88th Street, Bldg E
Vancouver, Washington 98565
United States of America
Phone: 866.202.4488
360.566.4460
Fax: 360.546.1960
E-mail: sales@nlight.net
Web: www.nLight.net