

Features

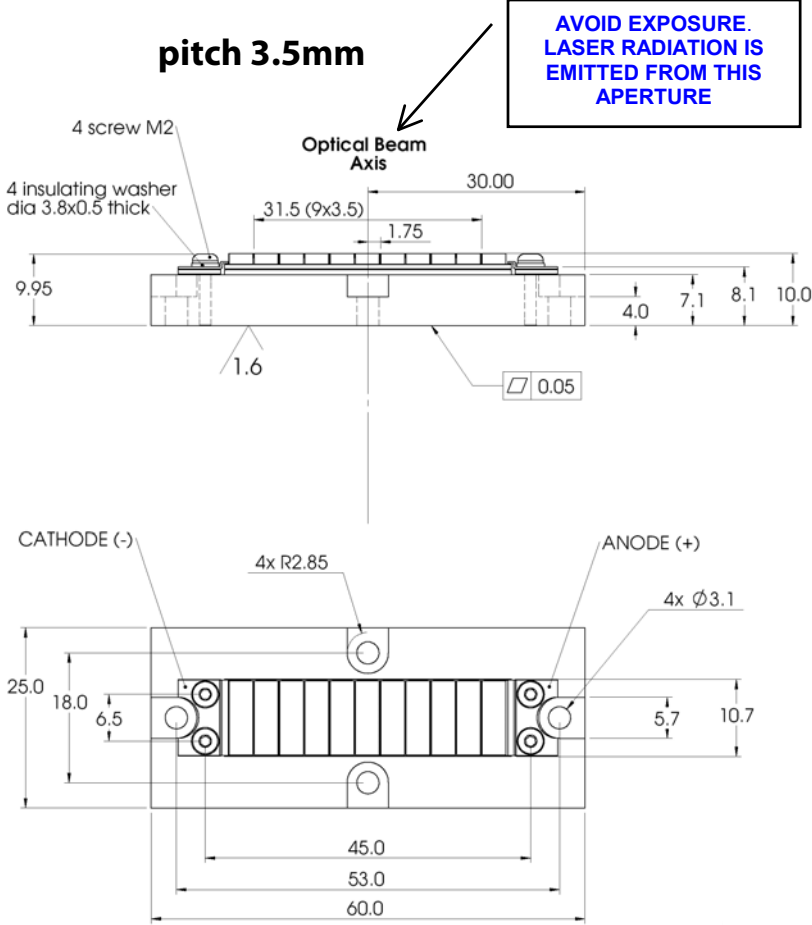
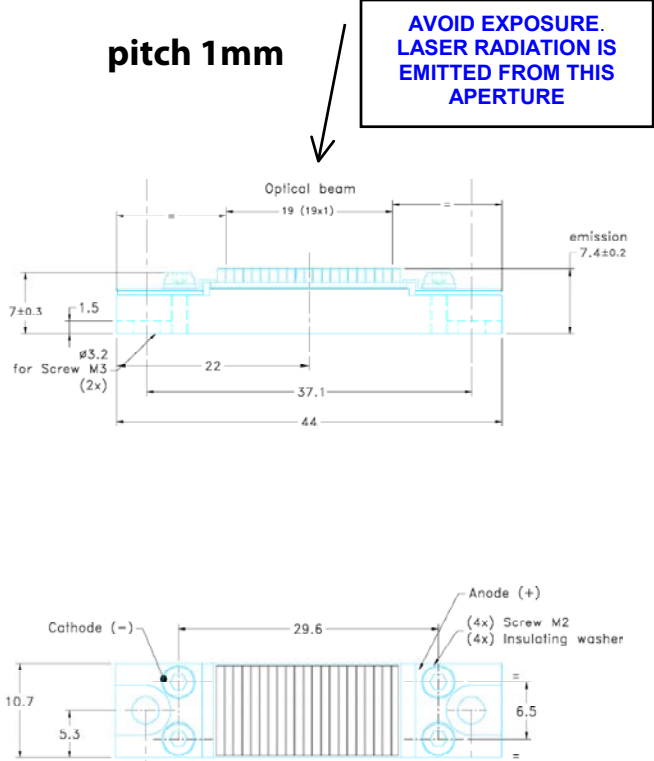
- Single Or Multi-Wavelength
- High Efficiency
- Shock and Vibration Rugged
- Tested for Space Applications
- Low Thermal Resistance

Applications

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

The Summit™ NL-QD-Q1yzz-BSS package is a conductively cooled stacked diode laser array designed to operate at very high duty cycle. This new design features an enlarged pitch between laser diode bars to reduce thermal resistance. Pitch can be customized from 1mm to 3.5mm. The number of diode bars per stack, 'yy', depends on the pitch. Up to 20 bars per stack can be designed with about 1mm pitch on a "stretched" heat sink. This compact and rugged design is ideal where space is at a premium and high reliability is required.

Package Dimensions



Summit™ QCW Package Series

B Package HD High Duty Cycle Conductively Cooled Stack

Case temperature: +25 °C

Quasi-continuous mode:

Pulse width = 200µs

| Device Specifications | UNITS | NL-QD-Q1x20-BSS | NL-QD-Q1x10-BSS |
|--------------------------------|-----------|-----------------|-----------------|
| Parameters | | | |
| Number of diode bars | | yy = 20 | yy = 10 |
| Pitch between diode bars | mm | 1 | 3.5 |
| QCW output power per diode bar | Watt | 60 to 150 | 60 to 150 |
| Duty cycle | | Up to %4 | Up to 10% |
| Emitting area | mm x mm | 10 x 19 | 10 x 31.5 |
| Threshold current | Typ. Amp. | | 18 |
| Operating current | Typ. Amp. | | 66 @ 60W/bar |
| | | | 100 @ 100W/bar |
| | | | 145 @ 150W/bar |
| 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.

Other wavelengths 9xx nm available.

Spectral width is ≤ 4 nm FWHM.

Tolerance on wavelength is +/- 4nm.

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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