

LD-678-CoC-0.6W

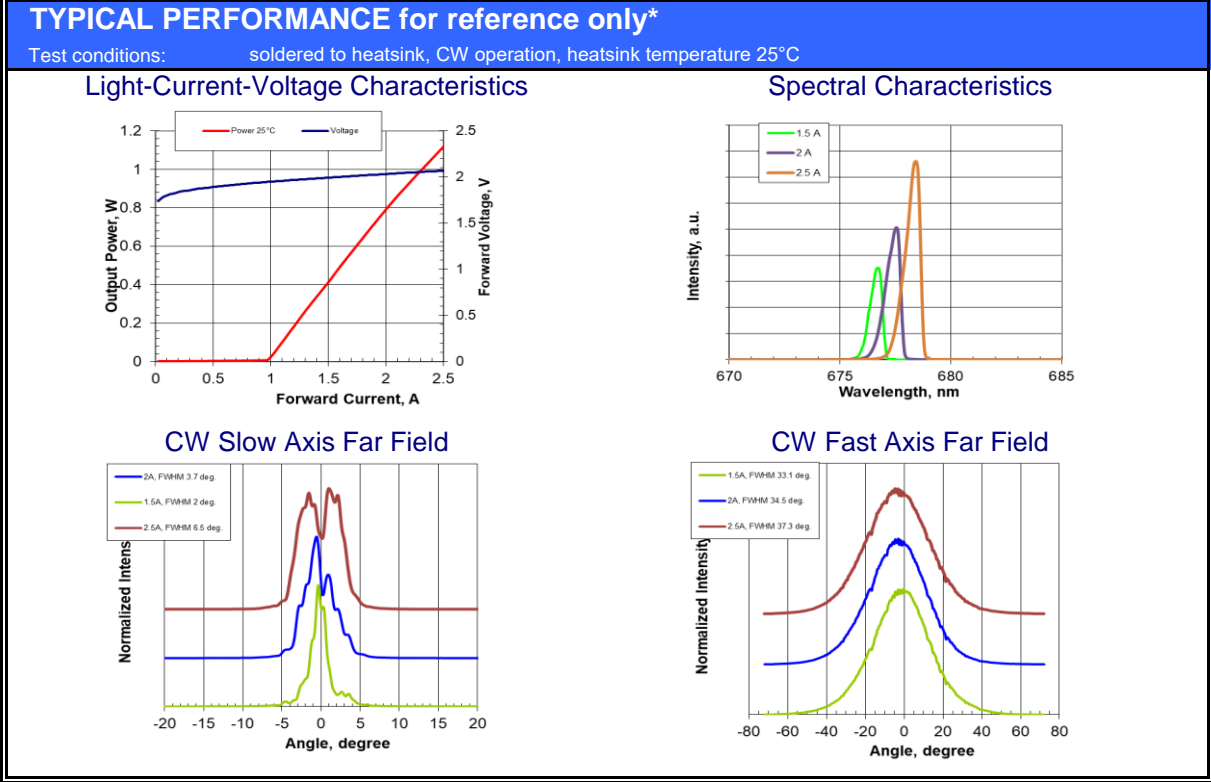
High Power Broad-Area Laser Diode on submount



Features:

- 0.6W output power at 678nm
- Proprietary mirror coating technology enabling high reliability
- RoHS compliance

| SPECIFICATIONS | | | | | |
|--|------------------|------|--------|------|---------|
| Test conditions: tightly clamped to 25°C heatsink | | | | | |
| Parameters | Symb. | Min. | Typ. | Max. | Unit |
| Operating output power | P _{out} | 0.6 | | | W |
| QCW output power (200µs pulse width, 1% duty cycle) | P _{qcw} | 1 | | | W |
| Central wavelength | λ | 668 | 678 | 688 | nm |
| Spectral width @ -3dB level at P _{out} | Δλ | | 0.6 | 1 | nm |
| Wavelength temperature tunability | Δλ/ΔT | 0.15 | 0.2 | 0.25 | nm/°C |
| Threshold current | I _{th} | | 950 | 1100 | A |
| Operating current at P _{out} | I _{op} | | 1750 | 1900 | A |
| Forward voltage at P _{out} | V _f | | 2 | 2.2 | V |
| Divergence parallel to p-n junction (FWHM) | Θ | 2 | 3 | 6 | deg. |
| Divergence perpendicular to p-n junction (FWHM) | Θ _⊥ | 30 | 35 | 40 | deg. |
| Aperture size | | | 90 × 1 | | µm × µm |



| ABSOLUTE MAXIMUM RATINGS | | | |
|--------------------------------|-----------------|-------------|------|
| Parameters | Min. | Max. | Unit |
| Laser Diode reverse voltage | - | 2 | V |
| Laser Diode CW forward current | - | 2.5 | A |
| Soldering temperature | | 250 (5sec.) | °C |
| Operating temperature range | above dew point | 60 | °C |
| Storage temperature range | -40 | 85 | °C |

DIMENSIONS (in mm)

Back side

- Ni/Au plating suitable for soldering
- no burrs and no chipping
- electrically isolated from top side



SAFETY AND OPERATING INSTRUCTIONS

The laser light emitted from this Device is invisible and will harmful to the human eye. Avoid looking directly into the fiber output or into the collimated beam along its optical axis when the device is in operation. Proper laser safety eyewear must be worn during operation. Absolute Maximum Ratings may be applied to the Device for short period of time only. Exposure to maximum ratings for extended period of time or exposure above one or more max ratings may cause damage or affect the reliability of the Device.

Operating the product outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the Device must be employed such that the maximum peak optical power cannot be exceeded. A proper heatsink for the Device on thermal radiator is required, sufficient heat dissipation and thermal conductance to the heatsink must be ensured by flux-free soldering.

The Device is an Open-Heatsink Diode Laser; it may be operated in cleanroom atmosphere or dust-protected housing only. Operating temperature and relative humidity must be controlled to avoid water condensation on the laser facets. Any contamination or contact of the laser facet must be avoided.

ESD PROTECTION – Electrostatic discharge is the primary cause of unexpected product failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces and rigorous antistatic techniques when handling the product.

LASER RADIATION
 AVOID EYE OR SKIN EXPOSURE TO
 DIRECT OR SCATTERED RADIATION
 CLASS 4 LASER PRODUCT

CAUTION
 STATIC SENSITIVE DEVICE
 OBSERVE PRECAUTIONS

DANGER

VISIBLE AND/OR INVISIBLE LASER RADIATION
 AVOID EYE OR SKIN EXPOSURE TO
 DIRECT OR SCATTERED RADIATION

DIODE LASER
 MAX POWER 20W
 WAVELENGTH 650 - 1400 nm
 CLASS IV LASER PRODUCT

Example of Part Number Identification

LD-678-CoC-0.6W -> 0.6W output power at mean wavelength 678nm

NOTE: Innolume product specifications are subject to change without notice