

LD-1470-CM-1.0W-00

High Power Diode Laser



Features:

- 1.0W output power
- Reliable Au-Sn solder bonding of chip to open heatsink
- RoHS compliance

Applications:

- Bio Medical
- PDT, Photodynamic Therapy
- Laser Hair Removal
- Scientific Research

ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
Reverse current	-	25	μ A
Continuous forward current	-	3.0	A
Lead soldering temperature		250 (5sec.)	$^{\circ}$ C
Reverse Humidity	5%	95%	
Operating temperature range	15	40	$^{\circ}$ C
Storage temperature range	-40	80	$^{\circ}$ C

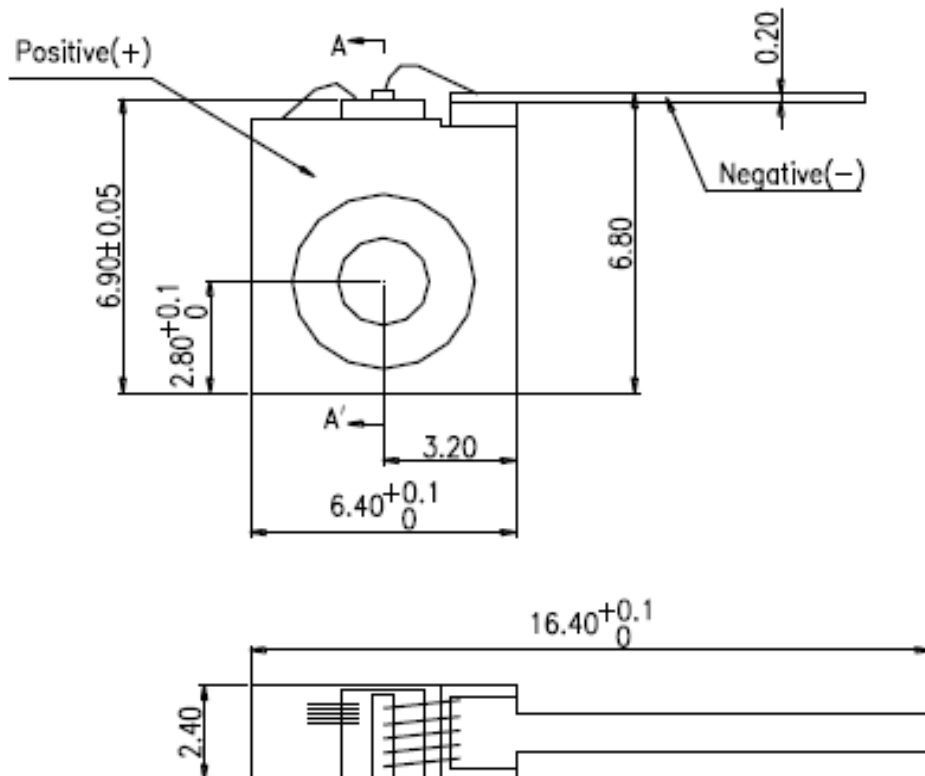
SPECIFICATIONS

Test conditions: heatsink temperature 25 $^{\circ}$ C

Parameters	Symb.	Min.	Typ.	Max.	Unit
Operating output power	Pout	1.0			W
Range of available wavelength	λ	1450.0	1470.0	1490.0	nm
Spectral width @ FWHM	$\Delta\lambda$			10.0	nm
Wavelength temperature tunability	$\Delta\lambda/\Delta T$			\sim 0.7	nm/ $^{\circ}$ C
Threshold current	Ith		0.3	0.4	A
Operating current at Pout	Iop		2.5		A
Forward voltage at Pout	Vf		1.2	1.4	V
Power conversion efficiency	η		35%		
Slope efficiency	η		0.45		W/A
Parallel beam divergence	θ_{\parallel}		8.0	-	deg.
Perpendicular beam divergence	θ_{\perp}		36.0	-	deg.
Aperture size	-		90*1		μ m \times μ m

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DIMENSIONS (in mm)



SAFETY AND OPERATING INSTRUCTIONS

The laser light emitted from this Device is invisible and will be 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.

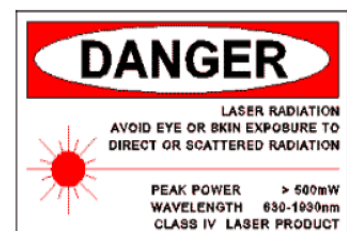
Absolute Maximum Ratings may be applied to the Device for short period of time only. Exposure to maximum ratings for extended period of time or exposure above one or more max ratings may cause damage or affect the reliability of the Device. Operating the product outside of its maximum ratings may cause 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.

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.



NOTE: Product specifications are subject to change without notice