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LD808A500D15
808nm 500mW 50°C CW Laser Diode in ⌀9mm TO-5 Can Package

Description

The Lasermate LD808A500D15 is an 808nm, 500mW laser diode in a ⌀9.0mm, TO-5 can package and with operating temperature of 50°C. The laser diode is suitable as compact light source for many applications.

Features

- 808nm Infrared Fabry-Perot cavity semiconductor laser
- Optical output power: 500mW CW
- Operating temperature: +50°C
- Low operating current
- High efficiency
- Package: TO-5, ⌀9.0mm

Applications

- Pumping for solid-state lasers
- Medical use

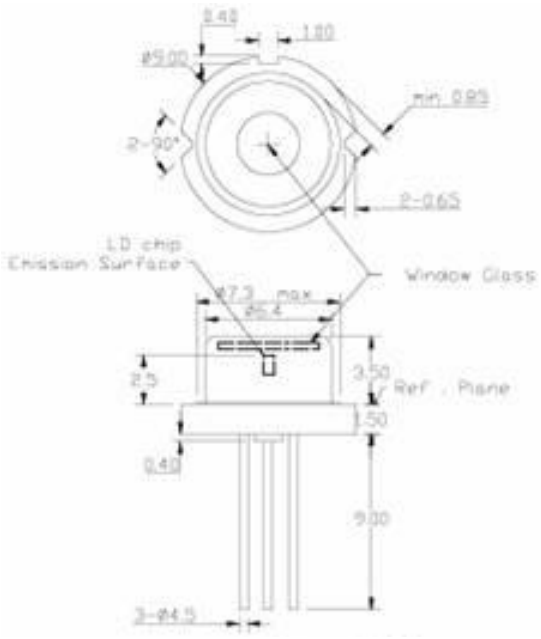
Absolute Maximum Ratings

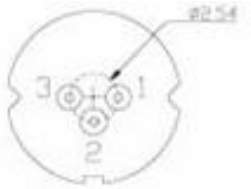
Parameter	Symbol	Rating	Unit
Optical output power	P_O	500	mW
Reverse voltage (LD)	V_{RL}	2	V
Reverse voltage (PD)	V_{RD}	30	V
Forward current (PD)	I_{FD}	10	mA
Operating temperature	T_{opr}	-10 to +50	°C
Storage temperature	T_{stg}	-40 to +85	°C

Electrical and Optical Characteristics (T_C = 25 °C)

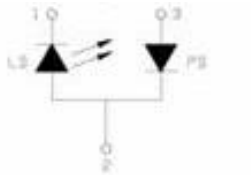
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	805	808	811	nm	P_O = 500mW
Threshold current	I_{th}	-	150	200	mA	
Operating current	I_{op}	-	600	700	mA	P_O = 500mW
Operating voltage	V_{op}	-	1.8	2.5	V	P_O = 500mW
Differential efficiency	η	0.8	1.0	-	mW/mA	P_O = 3-5mW
Monitor current	I_m	0.15	0.8	3	mA	P_O = 500mW, V_{RD}=0V
Parallel divergence angle	$\Theta_{//}$	-	10	15	deg	P_O = 500mW
Perpendicular divergence angle	$\Theta_{\perp}$	-	44	48	deg	P_O = 500mW
Emission point accuracy	Δx Δy Δz	-80		+80	um	P_O = 500mW

Mechanical Outline (unit: mm)





PIN CONFIGURATION



Additional Notes

- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in the event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.