808nm 200mW High-Power Low-Cost Laser Diode
LD-808-200A

Data Sheet

Description

The Lasermate LD-808-200A is an 808nm, 200mW laser diode in a ⌀5.6mm, TO-can package and with operating temperature of 50ºC. The laser diode is suitable as a compact light source for many applications.

Features

- 808nm Infrared Laser Diode
- Optical output power: 200mW CW
- Operating temperature: +50ºC
- Built-in monitoring PD
- Low operation current
- Estimated MTTF >9,000 hrs
- Cost effective
- Package: TO-18, ⌀5.6mm

Applications

- Pumps for solid state lasers
- Miniature low power green laser
- Medical use

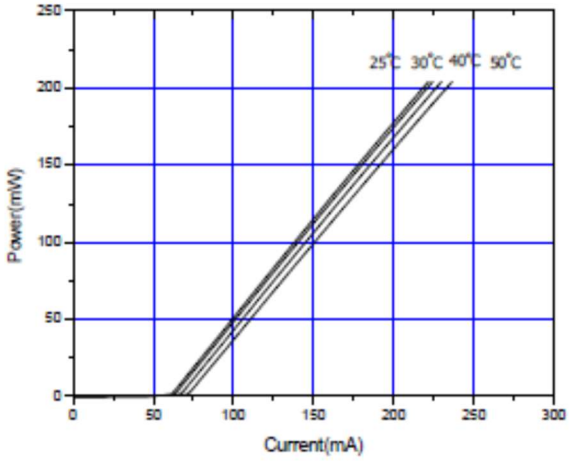
Absolute Maximum Ratings

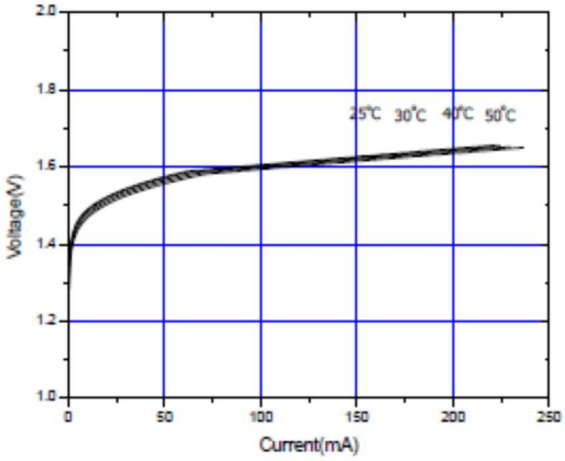
Parameter	Symbol	Condition	Rating	Unit
Light output power	P_o	CW	220	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Case temperature	T_C	-	-10 to +50	ºC
Storage temperature	T_S	-	-40 to +85	ºC

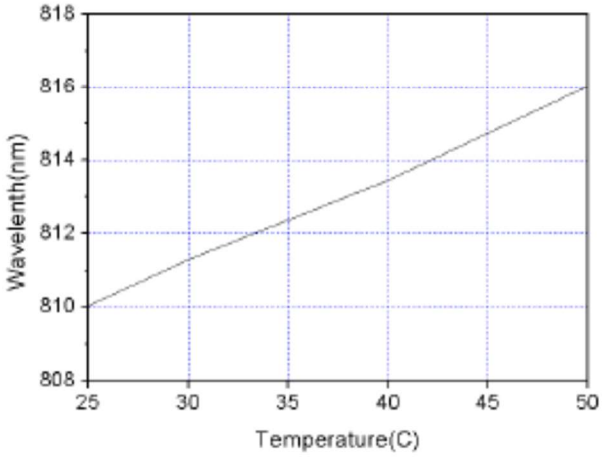
Electrical and Optical Characteristics (T_C = 25 ºC)

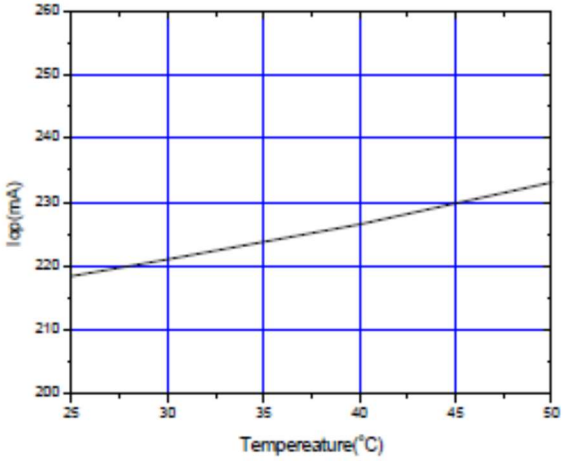
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	802	808	814	nm	P_o = 200mW
Threshold current	I_{th}	-	60	75	mA	
Operating current	I_{op}	-	260	300	mA	
Operating voltage	V_{op}	-	1.7	1.9	V	
Differential efficiency	η	0.8	1.0	-	mW/mA	P_o = 150-200mW
Monitor current	I_m	1.0	1.8	2.5	mA	P_o = 200mW
Parallel divergence angle	$\Theta_{//}$	-	9	15	deg	
Perpendicular divergence angle	$\Theta_{\perp}$	-	41	48	deg	
Parallel FFP deviation angle	$\Delta\Theta_{//}$	-3	0	+3	deg	
Perpendicular FFP deviation angle	$\Delta\Theta_{\perp}$	-5	0	+5	deg	
Emission point accuracy	Δx Δy Δz	-80	0	+80	um	

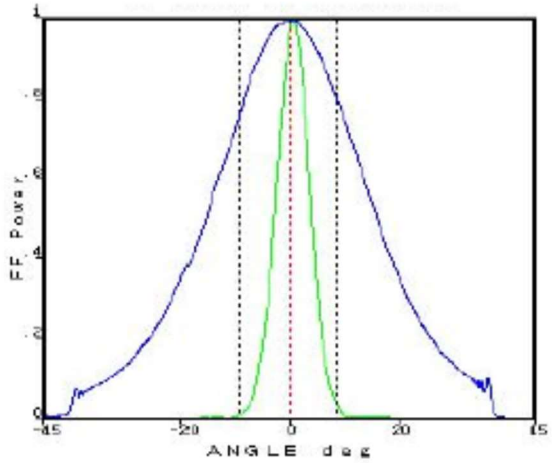
Typical Characteristics



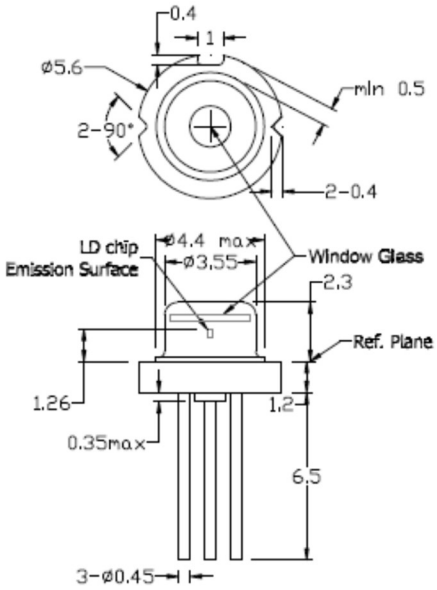


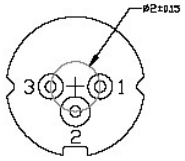




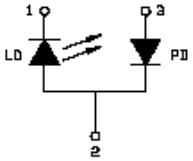


Mechanical Outline (unit: mm)





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.