www.lasermate.com

LD808x1WD15
808nm 1000mW 50°C CW Laser Diode in ⌀9.0mm TO-5 Package

Description

The Lasermate LD808x1WD15 is an 808nm, 1000mW laser diode in a ⌀9.0mm, TO-can package and with operating temperature of 50°C. The laser diode is suitable as compact light source for many applications.

Features

- 808nm Infrared laser diode
- Optical output power: 1000mW CW
- Operating temperature: +50°C
- High reliability
- Low operating current
- Low divergence angle
- Package: TO-9, ⌀9.0mm

Applications

- Motion sensor
- Medical application
- Pumping source for solid state laser
- Infrared illumination
- Industrial application

Absolute Maximum Ratings (T_C = 25 °C)

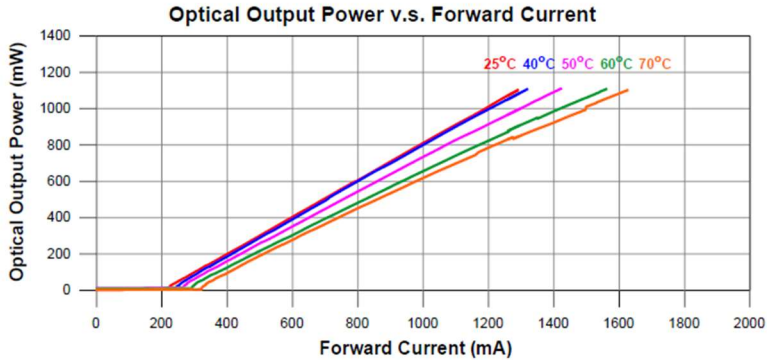
Parameter	Symbol	Rating	Unit
Optical output power	P_O	1100	mW
Reverse voltage (LD)	V_{RL}	2	V
Operating temperature	T_{opr}	-10 to +50	°C
Storage temperature	T_{stg}	-10 to +85	°C

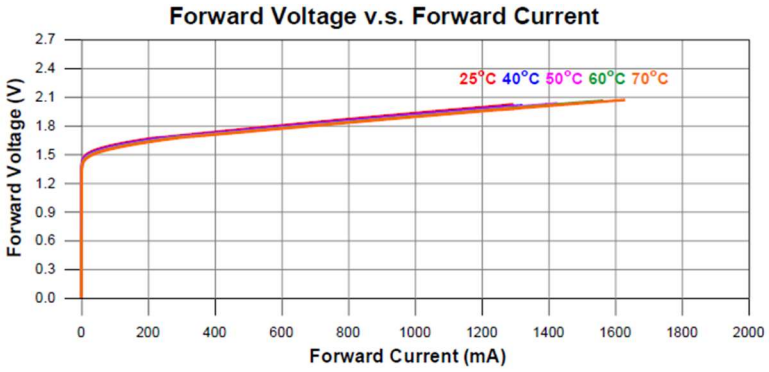
Electrical and Optical Characteristics (T_C = 25 °C)

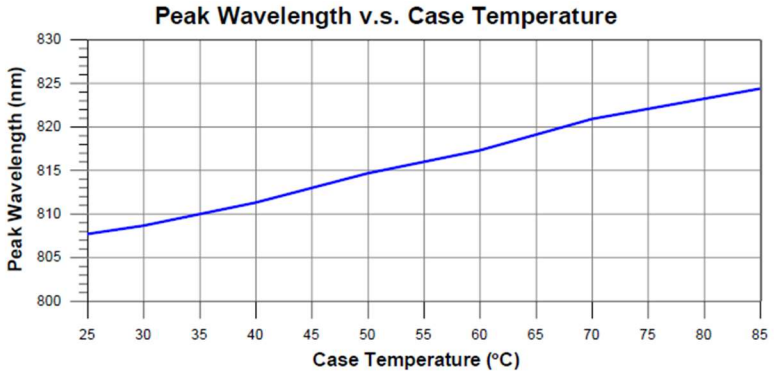
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	803	808	813	nm	P_O = 1W
Threshold current	I_{th}	-	220	-	mA	P_O = 1W
Operating current	I_{op}	-	1200	1500	mA	P_O = 1W
Operating voltage	V_{op}	-	2.0	2.2	V	P_O = 1W
Slope efficiency	η	0.95	1.1	-	mW/mA	P_O = 250-750mW
Parallel divergence angle	$\Theta_{//}$	-	8	-	deg	P_O = 1W
Perpendicular divergence angle	$\Theta_{\perp}$	-	28	-	deg	P_O = 1W
Monitor current	Im		0.9		mA	P_O = 1W

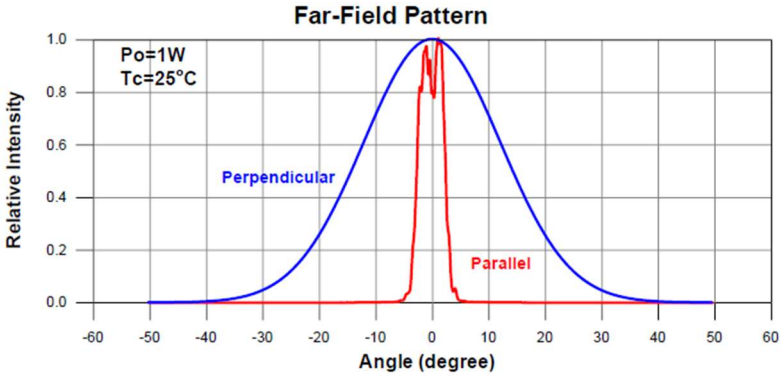
* $\Theta_{//}$ and $\Theta_{\perp}$ are defined as the angle within which the intensity is 50% of the peak value.

Typical Characteristics

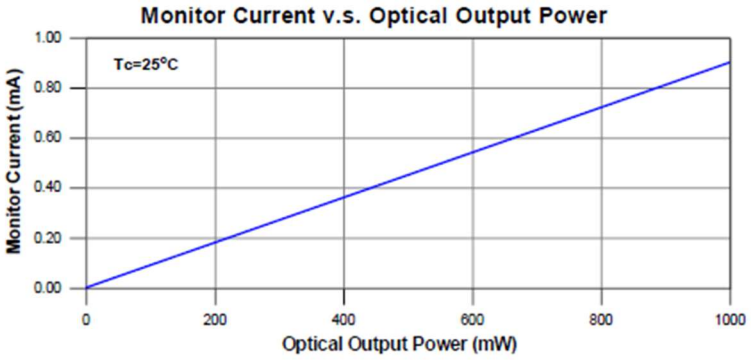


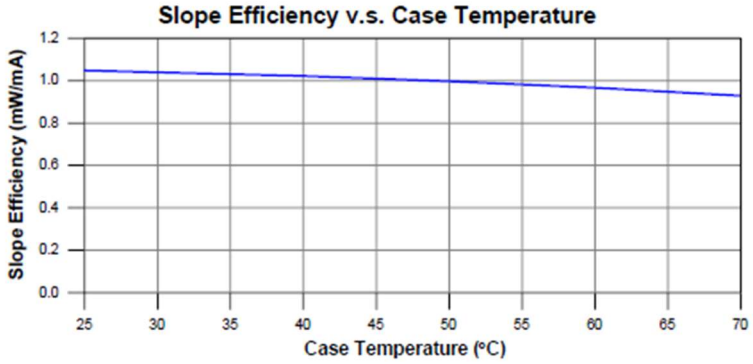


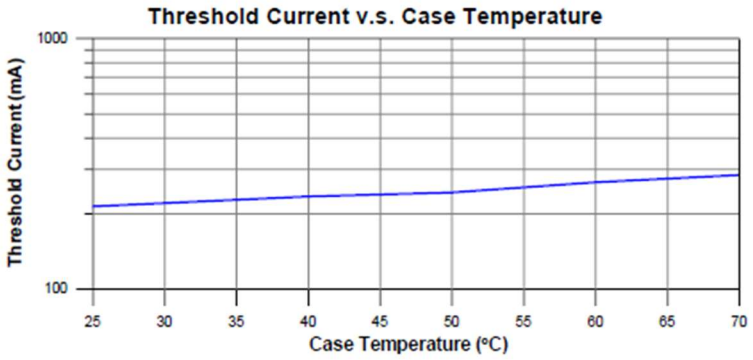




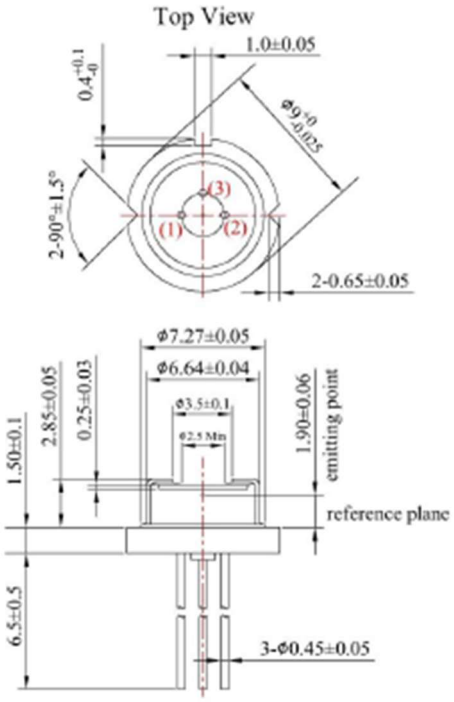
Typical Characteristics (Continued)

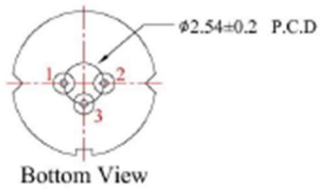


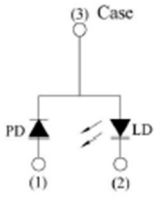




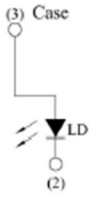
Mechanical Outline (unit: mm)







LD808A1WD15



LD808F1WD15

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.