www.lasermate.com

Data Sheet

Rev 01.1220

830nm 350mW 60°C Laser Diode in ⌀5.6mm TO-18 Package

LD830A350C16

Description

The Lasermate LD830A350C16 is an 830nm, 350mW laser diode in a ⌀5.6mm, TO-can package and with wide operating temperature range of up to 60°C. The laser diode is suitable as compact light source for many applications.

Features

- 830nm Infrared laser diode
- Optical output power: 350mW CW
- Operating temperature: +60°C
- Single transverse/TE mode
- Package: TO-18 (dia. 5.6mm)

Applications

- Motion recognition sensor
- Industrial optical module

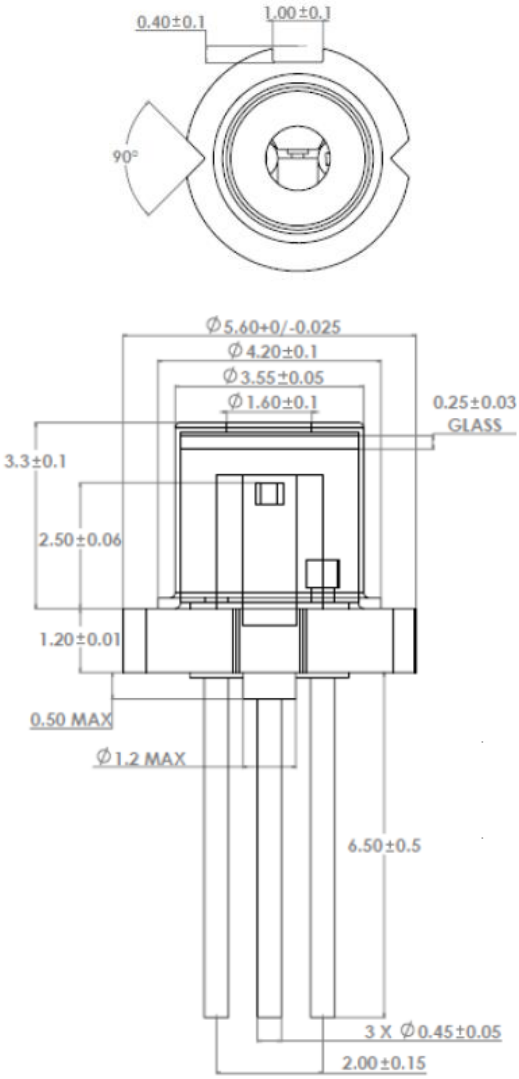
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Optical output power	P_O	350	mW
Reverse voltage (LD)	V_{RL}	2	V
Reverse voltage (PD)	V_{RD}	30	V
Operating temperature	T_{opr}	-10 to +60	°C
Storage temperature	T_{stg}	-40 to +85	°C

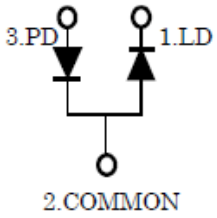
Electrical and Optical Characteristics (T_C = 25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	820	830	840	nm	P_O = 350mW
Threshold current	I_{th}	-	70	120	mA	-
Operating current	I_{op}	-	450	520	mA	P_O = 350mW
Operating voltage	V_{op}	1.7	2.2	2.6	V	P_O = 350mW
Slope efficiency	η	0.7	0.9	1.3	mW/mA	P_O = 350mW
Monitor current	I_m	0.2	0.5	1.2	mA	P_O = 350mW
Parallel divergence angle	$\Theta_{//}$	5	9	13	deg	P_O = 350mW FWHM
Perpendicular divergence angle	$\Theta_{\perp}$	12	18	24	deg	P_O = 350mW FWHM
Parallel FFP deviation angle	$\Delta\Theta_{//}$	-3	-	+3	deg	P_O = 350mW
Perpendicular FFP deviation angle	$\Delta\Theta_{\perp}$	-3	-	+3	deg	P_O = 350mW
Optical distance	Δx Δy Δz	-80	-	+80	um	

Mechanical Outline (unit: mm)



Pin Configuration



*Other pin configurations may be available upon request.

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.

Lasermate Group, Inc.
19608 Camino De Rosa
Walnut, CA 91789 USA
Tel: (909)718-0999
Fax: (909)718-0998
sales@lasermate.com
www.lasermate.com