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LD850A200A16
850nm 200mW 60°C CW Laser Diode in ⌀3.3mm TO-Can Package

Description

The Lasermate LD850A200A16 is an 850nm, 200mW laser diode in a ⌀3.3mm, TO-can package and with operating temperature of 60°C. The laser diode is suitable as compact light source for many applications.

Features

- 850nm Infrared laser diode
- Optical output power: 200mW CW
- Operating temperature: +60°C
- Single transverse/TE mode
- Package: TO-33 (dia. 3.3mm)

Applications

- Motion recognition sensor
- Industrial optical module

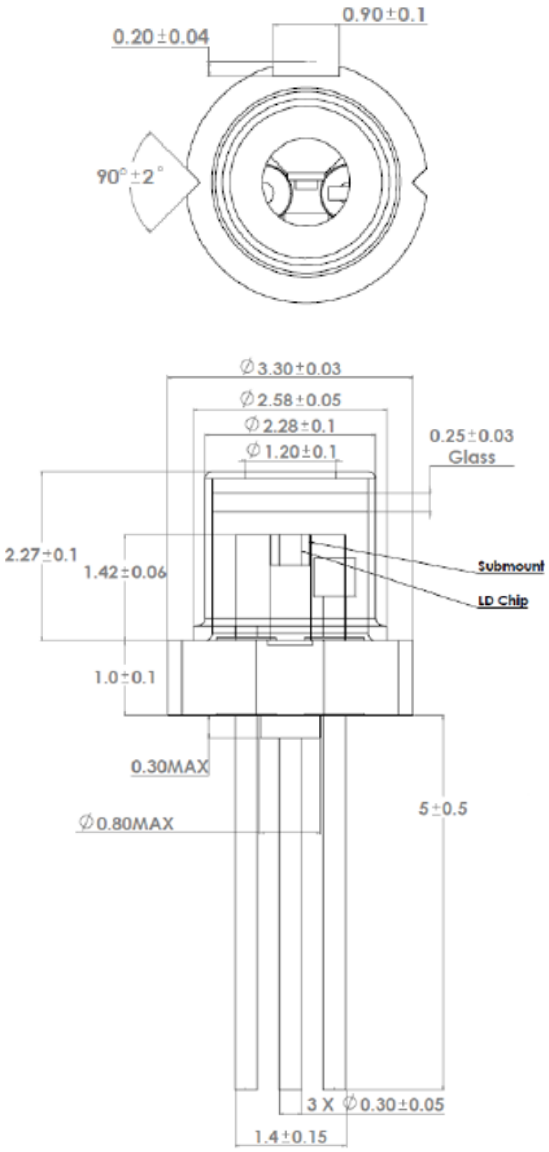
Absolute Maximum Ratings

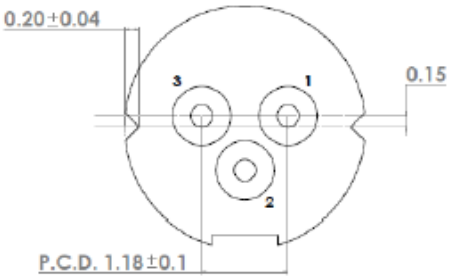
Parameter	Symbol	Rating	Unit
Optical output power	P_O	200	mW
Reverse voltage (LD)	V_{RL}	2	V
Reverse voltage (PD)	V_{RD}	30	V
Operating temperature	T_{opr}	-10 to +60	°C
Storage temperature	T_{stg}	-40 to +85	°C

Electrical and Optical Characteristics (T_C = 25 °C)

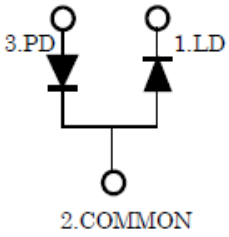
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	840	850	860	nm	P_O = 200mW
Threshold current	I_{th}	-	60	90	mA	-
Operating current	I_{op}	180	210	240	mA	P_O = 200mW
Operating voltage	V_{op}	1.8	2.4	2.7	V	P_O = 200mW
Slope efficiency	η	0.8	1.2	1.6	mW/mA	P_O = 200mW
Monitor current	I_m	0.1	0.25	1.2	mA	P_O = 200mW
Parallel divergence angle	$\Theta_{//}$	5	9	12	deg	P_O = 200mW FWHM
Perpendicular divergence angle	$\Theta_{\perp}$	13	18	23	deg	P_O = 200mW FWHM
Parallel FFP deviation angle	$\Delta\Theta_{//}$	-3	-	+3	deg	P_O = 200mW
Perpendicular FFP deviation angle	$\Delta\Theta_{\perp}$	-3	-	+3	deg	P_O = 200mW
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.