



LD905A100C17

905nm 100mW 70°C CW Laser Diode in ø5.6mm TO-18 Can Package

Description

The Lasermate LD905A100C17 is an 905nm, 100mW laser diode in a ø5.6mm, TO-can package and with operating temperature of 70°C. The laser diode is suitable as compact light source for many applications.

Features

- 905nm Infrared laser diode
- Optical output power: 100mW CW
- Operating temperature: +70°C
- Single transverse / TE mode
- Package: TO-18 (dia. 5.6mm)

Applications

- Sensor
- Industrial optical module

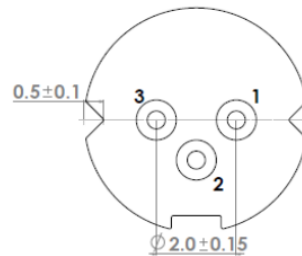
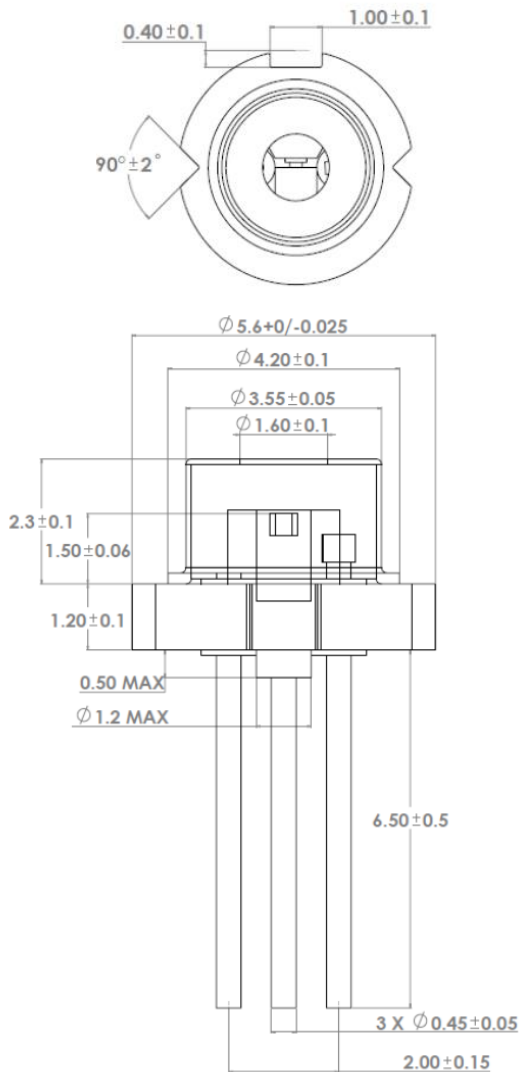
Absolute Maximum Ratings

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
Optical output power	P_O	CW	100	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse Voltage (PD)	V_{RD}	-	30	V
Operating temperature	T_{opr}	-	-10 to +70	°C
Storage temperature	T_{stg}	-	-40 to +85	°C

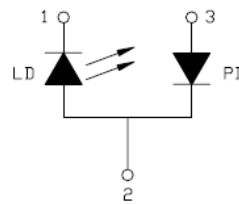
Electrical and Optical Characteristics ($T_c = 25^\circ\text{C}$)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Lasing wavelength	λ_p	895	905	915	nm	$P_O = 100\text{mW}$
Threshold current	I_{th}	-	25	50	mA	-
Operating current	I_{op}	-	130	170	mA	$P_O = 100\text{mW}$
Monitor Current	I_m	0.1	0.3	0.8	mA	$P_O = 100\text{mW}$
Differential Efficiency	η	0.8	1.0	1.4	mW/mA	$P_O = 100\text{mW}$
Operating voltage	V_{op}	-	1.9	2.4	V	$P_O = 100\text{mW}$
Parallel divergence angle	$\Theta_{//}$	6	9	12	deg	$P_O = 100\text{mW FWHM}$
Perpendicular divergence angle	Θ_{\perp}	15	20	25	deg	$P_O = 100\text{mW FWHM}$
Parallel FFP deviation angle	$\Delta \Theta_{//}$	-3	-	+3	deg	$P_O = 100\text{mW}$
Perpendicular FFP deviation angle	$\Delta \Theta_{\perp}$	-3	-	+3	deg	$P_O = 100\text{mW}$
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+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.