



LASERMATE GROUP, INC.

The Friend of Lasers

Model No. LD850G15A16
850nm 15mW 60°C Laser Diode in TO-33 Ø3.3mm Package

FEATURES

- 850nm 15mW CW GaAs Laser Diode
- Package: TO-33 (dia. 3.3mm)
- TE mode oscillation
- Single transverse mode
- Attractive light source

APPLICATIONS

- Sensor
- Industrial optical module

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
OPTICAL OUTPUT POWER	P_O	CW	18	mW
REVERSE VOLTAGE (LD)	V_{RL}	-	10	V
OPERATING TEMPERATURE	T_{opr}	-	-10 to +60	°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	845	850	855	nm	$P_O = 15\text{mW}$
SPECTRAL WIDTH	$\Delta\lambda$	-	2	3	nm	$P_O = 15\text{mW}$
THRESHOLD CURRENT	I_{th}	-	30	40	mA	
OPERATING CURRENT	I_{op}	-	45	55	mA	$P_O = 15\text{mW}$
DIFFERENTIAL EFFICIENCY	η	0.8	1.0	1.2	mW/mA	
OPERATING VOLTAGE	V_{op}	-	2.2	2.4	V	$P_O = 15\text{mW}$
MONITOR CURRENT	I_m	0.05	0.15	0.4	mA	$P_O = 15\text{mW}$
PARALLEL DIVERGENCE ANGLE	$\Theta_{//}$	6	8	12	deg	$P_O = 15\text{mW}$
PERPENDICULAR DIVERGENCE ANGLE	$\Theta_{\perp}$	16	19	24	deg	$P_O = 15\text{mW}$
PARALLEL FFP DEVIATION ANGLE	$\Delta\Theta_{//}$	-3	0	+3	deg	$P_O = 15\text{mW}$
PERPENDICULAR FFP DEVIATION ANGLE	$\Delta\Theta_{\perp}$	-3	0	+3	deg	$P_O = 15\text{mW}$
POLARIZATION	P_{pr}	-	Fast axis (TE)	-	-	
MODULATION FREQUENCY	F_M	200	-	-	MHz	
EMISSION POINT ACCURACY	$\Delta x \Delta y \Delta z$	-60	0	+60	um	

Note: The above specifications are subject to change without notice.



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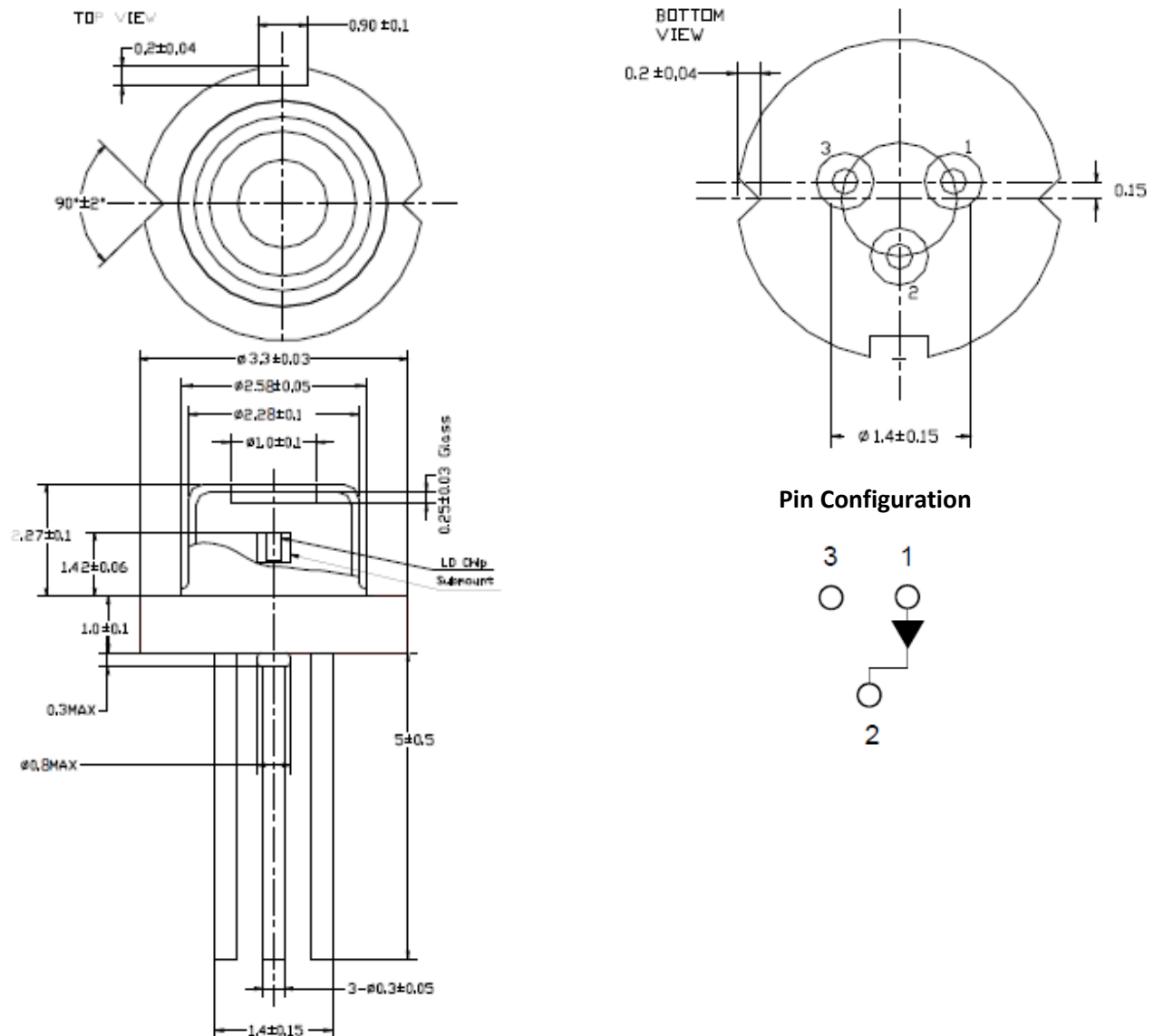
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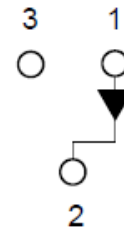
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MECHANICAL OUTLINE (unit: mm)



Pin Configuration



PRECAUTIONS

- 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.

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