670nm 5mW 60°C Laser Diode in TO-18 ϕ5.6mm Package

Part No. LD670A5C16

FEATURES

- 670nm 5mW CW Gain-guided InGaAlP Diode
- Package: TO-18 (dia. 5.6mm)
- Built-in photodiode for monitoring laser diode

APPLICATIONS

- Laser module
- Optical leveler
- Bar code reader

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Rating	Unit
Optical output power	P_O	CW	7	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_p	660	673	680	nm	P_O = 5mW
Threshold current	I_{th}	-	37	60	mA	-
Operating current	I_{op}	-	44	70	mA	P_O = 5mW
Monitor Current	I_m	0.1	0.3	0.5	mA	P_O = 5mW
Operating voltage	V_{op}	-	2.2	2.6	V	P_O = 5mW
Parallel divergence angle	$\Theta_{//}$	8	10	15	deg	P_O = 5mW
Perpendicular divergence angle	$\Theta_{\perp}$	24	28	35	deg	P_O = 5mW
Parallel FFP deviation angle	$\Delta\Theta_{//}$	-1.5	0	+1.5	deg	P_O = 5mW
Perpendicular FFP deviation angle	$\Delta\Theta_{\perp}$	-2.5	0	+2.5	deg	P_O = 5mW
Astigmatism	As		30		um	
Emission point accuracy	Δx Δy Δz	-60	0	+60	um	

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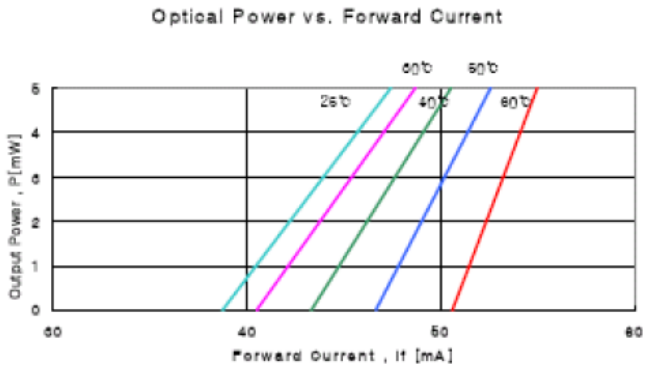
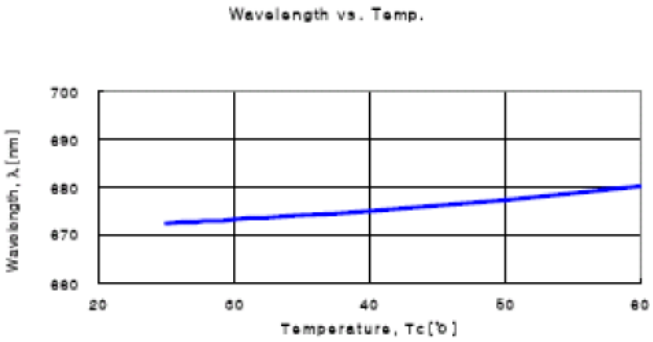
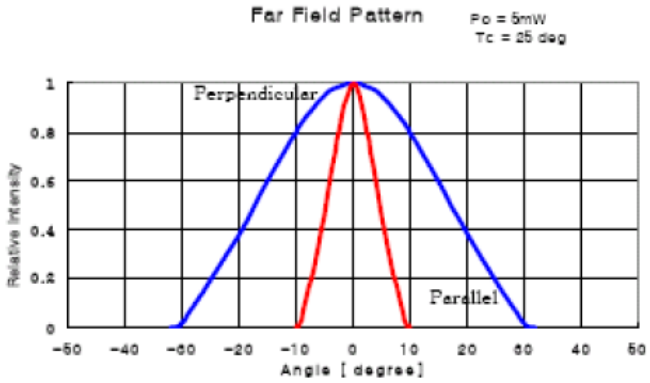
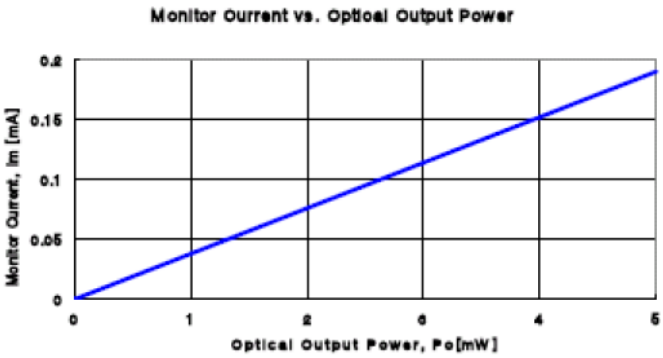
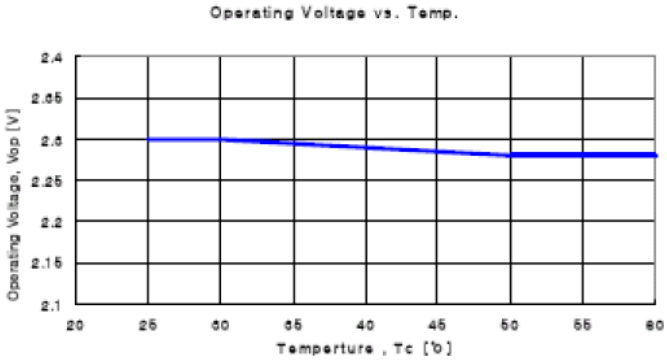
TYPICAL CHARACTERISTICS

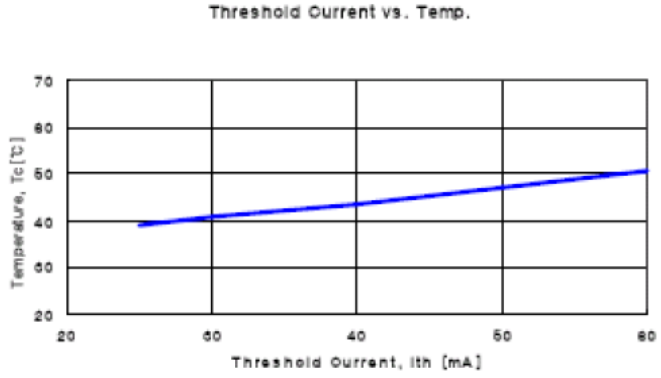












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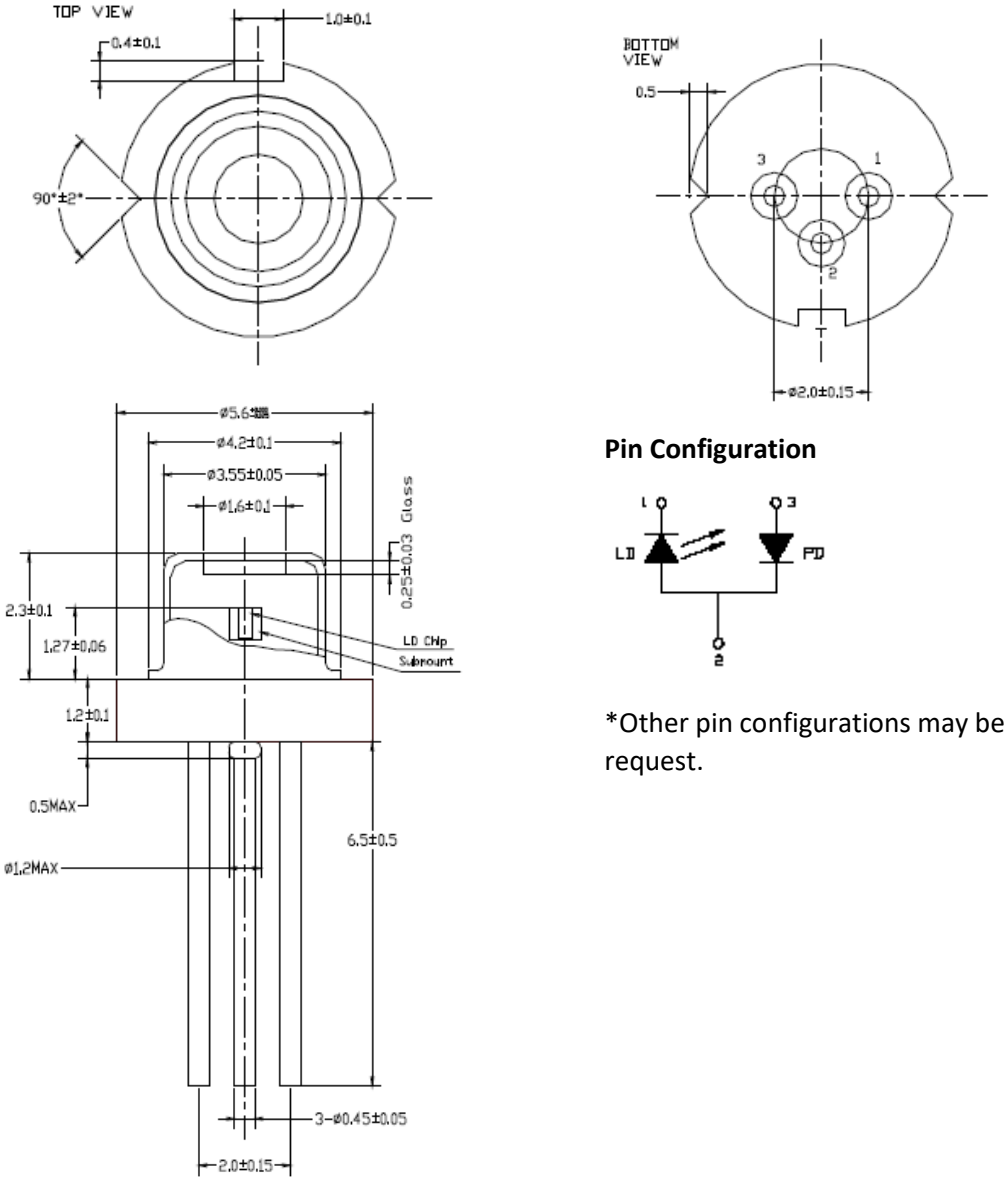
MECHANICAL OUTLINE (unit: mm)



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.

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