

650nm 7mW 70°C Reliable Operation

Features

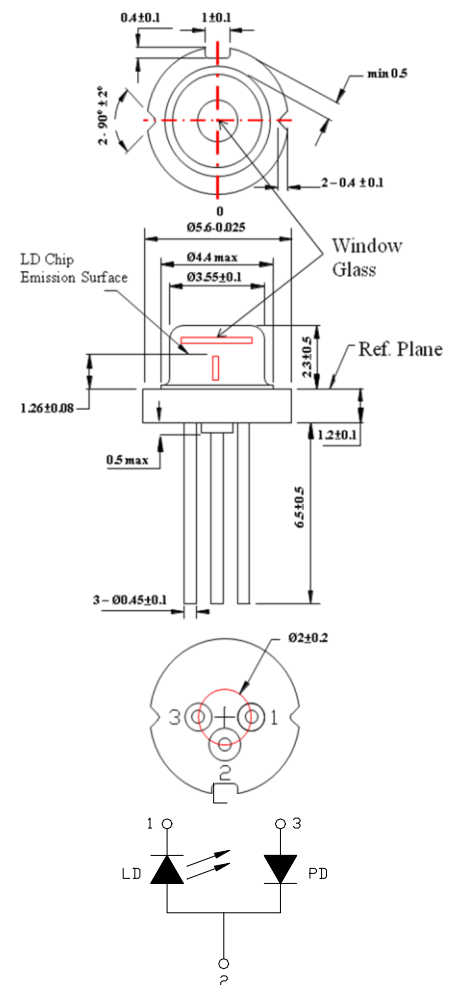
High Output Power : 7mW CW
 Small Package : $\Phi 5.6\text{mm}$
 TE mode
 Single Transverse/Longitudinal Mode

Applications

Construction Tools
 High Definition Laser Displays
 Medical Applications

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	10	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse voltage (PD)	V_{RD}	-	30	V
Forward current (PD)	I_{FD}	-	10	mA
Case temperature	T_C	-	-30~+70	$^{\circ}\text{C}$
Storage temperature	T_S	-	-40~+85	$^{\circ}\text{C}$



Electrical and optical characteristics ($T_c=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	645	650	660	nm	$P_O=7\text{ mW}$
Threshold current	I_{th}	-	20	25	mA	
Operating current	I_{op}	-	27	35	mA	$P_O=7\text{ mW}$
Operating voltage	V_{op}	-	2.2	2.5	V	$P_O=7\text{ mW}$
Differential efficiency	η	0.7	1.0	1.2	mW/mA	$P_O=3\text{-}5\text{mW}$
Monitor current	I_m	0.1	0.15	0.3	mA	$P_O=7\text{mW}, V_{RD}=5\text{V}$
Parallel divergence angle	$\theta_{//}$	6	9	12	deg.	$P_O=7\text{ mW}$
Perpendicular divergence angle	θ_{\perp}	25	28	32	deg.	
Parallel FFP deviation angle	$\Delta\theta_{//}$	-3	0	+3	deg.	
Perpendicular FFP deviation angle	$\Delta\theta_{\perp}$	-3	0	+3	deg.	
Emission point accuracy	$\Delta x\Delta y\Delta z$	-80	0	+80	μm	

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 the 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 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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