

AlGaInP Visible Laser Diode

ADL-63501TL

T6-2D-LD63-016_Rev.00

635nm 50mW 50°C Reliable Operation

Features

- Higher output power: 50mW CW
- Small package: ϕ 5.6mm
- TM 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	50	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Case temperature	T_C	-	-10~+50	°C
Storage temperature	T_S	-	-40~+85	°C

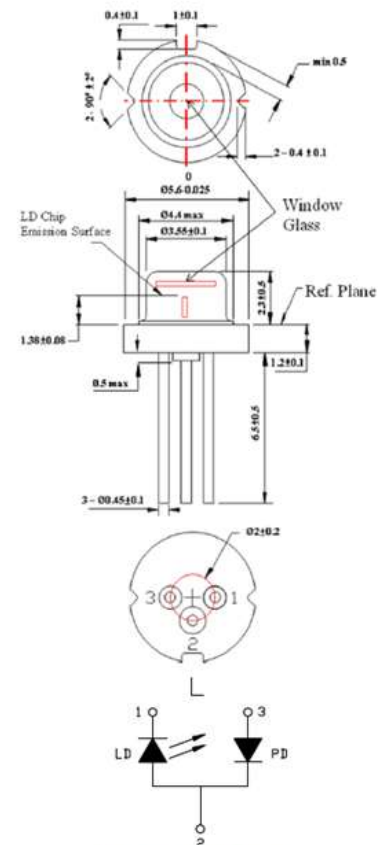
Electrical and optical characteristics ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	630	640	645	nm	$P_o=50\text{mW}$
Threshold current	I_{th}	-	50	60	mA	
Operating current	I_{op}	-	120	160	mA	
Operating voltage	V_{op}	-	2.2	2.7	V	
Differential efficiency	η	0.5	0.7	1	mW/mA	$P_o=45\text{-}50\text{mW}$
Monitor current	I_m	0.1	0.27	0.5	mA	$P_o=50\text{mW}$
Parallel divergence angle	$\theta_{//}$	5	8	12	deg.	
Perpendicular divergence angle	θ_{\perp}	25	30	35	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	um	

* Sufficient heat dissipation is required for CW operation.

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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