

AlGaAs Infrared Laser Diode

ADL-85Y51TL

850nm 250mW High Power Operation

T6-2D-LD85-004_Rev.00

Features

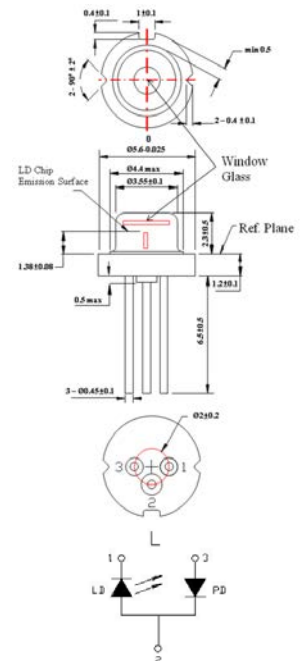
Higher output power: 250mW CW
Small package: ϕ 5.6mm
Small far field angle

Applications

Light source for sensing device
LIDAR (light detection & ranging)
3D Sensing with Laser

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_o	CW	270	mW
Reverse voltage (PD)	V_{RD}	-	5	V
Forward current (PD)	I_{FD}	-	10	mA
Case temperature	T_C	-	-10~+60	$^{\circ}C$
Storage temperature	T_S	-	-40~+85	$^{\circ}C$



※Dimensions are in mm.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	840	850	860	nm	$P_o=250mW$
Threshold current	I_{th}	-	65	90	mA	
Operating current	I_{op}	-	310	360	mA	
Operating voltage	V_{op}	-	1.9	2.4	V	
Differential efficiency	η	0.90	1.00	-	mW/mA	$P_o=200-250mW$
Monitor current	I_m	0.5	1.1	1.8	mA	$P_o=250mW, V_{RD}=5V$
Parallel divergence angle	$\theta_{//}$	6	8	13	deg.	$P_o=250mW$
Perpendicular divergence angle	θ_{\perp}	12	17	22	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	

* 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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