

## AlGaAs Infrared Laser Diode

## ADL-85301TL

6-2D-LD85-008\_Rev.01

### 850nm 30mW 5.6φ TO-Type Laser Diode

#### Features

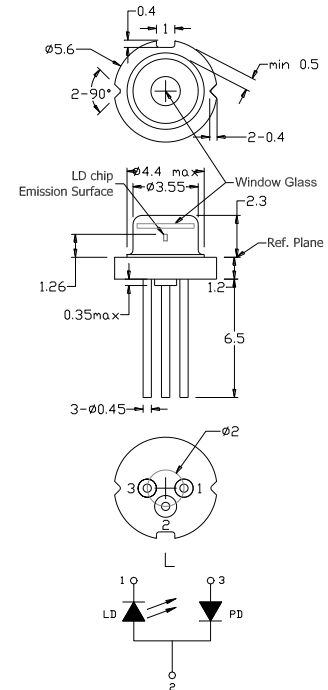
Low operation current  
Cost effective

#### Applications

Bar-code scanner  
Laser printer  
Sensing

#### Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	$P_O$	CW	30	mW
Reverse voltage (LD)	$V_{RL}$	-	2	V
Reverse voltage (PD)	$V_{RD}$	-	30	V
Forward current (PD)	$I_{FD}$	-	10	mA
Case temperature	$T_C$	-	-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	$\lambda$	840	850	860	nm	$P_o=30\text{ mW}$
Threshold current	$I_{th}$	-	25	30	mA	
Operating current	$I_{op}$	-	65	75	mA	
Operating voltage	$V_{op}$	-	1.8	2.2	V	$P_o=20\text{-}30\text{ mW}$
Differential efficiency	$\eta$	0.7	0.75	1.0	mW/mA	
Monitor current	$I_m$	0.2	0.35	0.6	mA	$P_o=30\text{mW}, V_{RD}=5\text{V}$
Parallel divergence angle	$\theta_{//}$	6	9	13	deg	$P_o=30\text{ mW}$
Perpendicular divergence angle	$\theta_{\perp}$	26	30	35	deg	
Parallel divergence angle	$\Delta\theta_{//}$	-3	-	+3	deg	
Perpendicular divergence angle	$\Delta\theta_{\perp}$	-3	-	+3	deg	
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	-	+80	um	

#### • 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.

For reference only. Contents above are subject to change without notice.