

AlGaAs | Visible Laser Diode

ADL-78101TU

6-2D-LD78-013_Rev.04

780nm 10mW 60°C Reliable Operation

Features

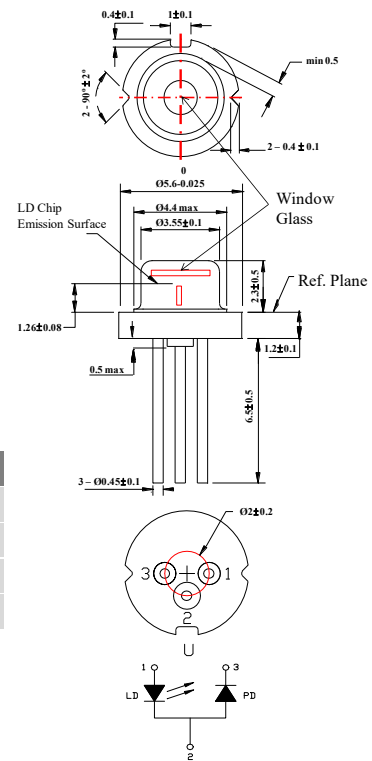
Low operating current
High efficiency
Better power budget for optical design

Applications

Industrial Tools

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_o	CW	12	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Case temperature	T_c	-	-10 ~ +60	°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	770	780	790	nm	$P_o=10\text{ mW}$
Threshold current	I_{th}	-	15	25	mA	
Operating current	I_{op}	-	30	40	mA	$P_o=10\text{ mW}$
Operating voltage	V_{op}	-	1.9	2.2	V	$P_o=10\text{ mW}$
Differential efficiency	η	0.4	0.6	0.8	mW/mA	$P_o=7-10\text{ mW}$
Monitor current	I_m	0.2	0.6	1.2	mA	$P_o=10\text{ mW}, V_{RD}=5\text{V}$
Parallel divergence angle	$\theta_{//}$	7	11	15	deg.	$P_o=10\text{ mW}$
Perpendicular divergence angle	$\theta_{\perp}$	24	28	32	deg.	
Parallel FFP deviation angle	$\Delta\theta_{//}$	-2	0	+2	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	

• 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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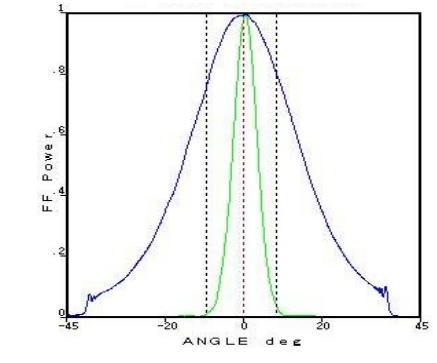
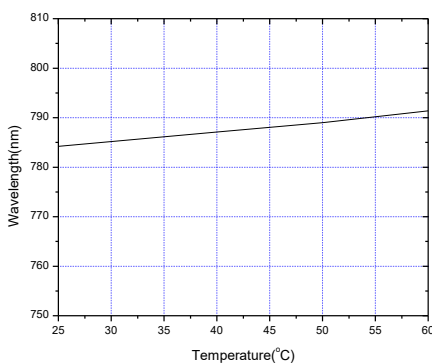
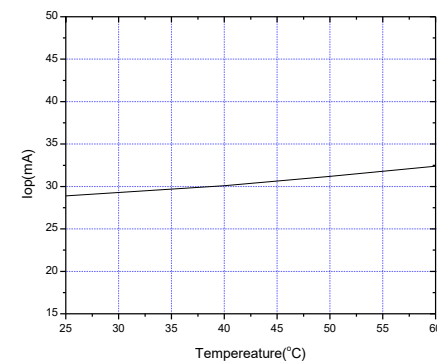
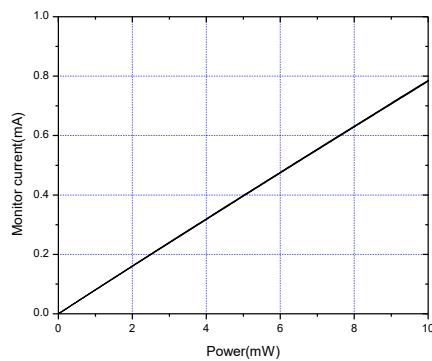
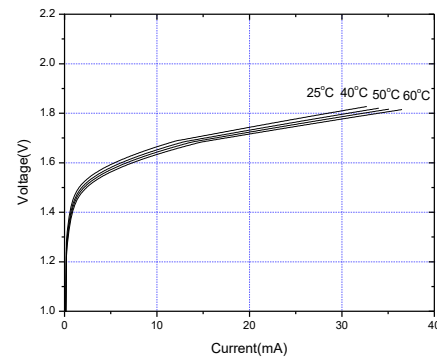
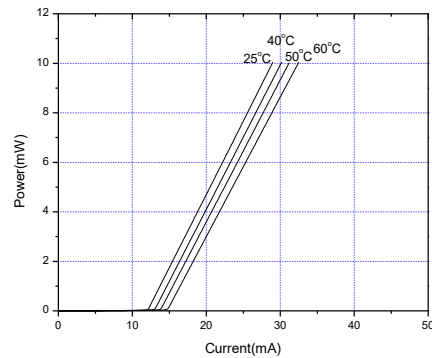
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