

AlGaAs Infrared Laser Diode

ADL-78102TL

6-2D-LD78-028_Rev.00

780nm 10mW 70°C Reliable Operation

Features

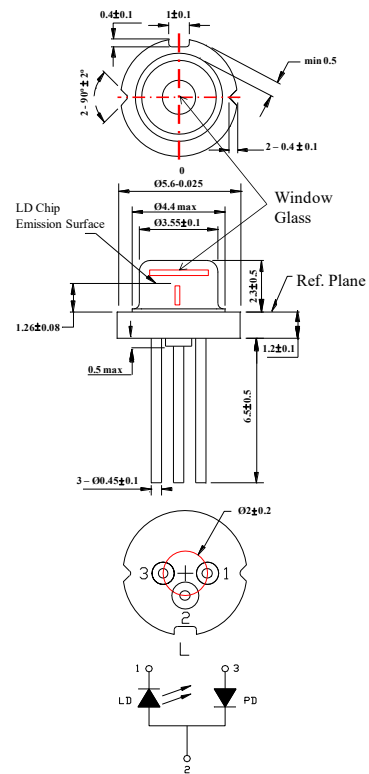
- Low operating current
- High efficiency
- Better power budget for optical design

Applications

Industrial Tools

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_o	CW	12	mW
Case temperature	T_c	—	-10 ~ +70	°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}	—	14	24	mA	
Operating current	I_{op}	—	25	38	mA	$P_o=10\text{mW}$
Operating voltage	V_{op}	—	1.7	2.2	V	$P_o=10\text{mW}$
Differential efficiency	η	0.4	0.8	1.2	mW/mA	$P_o=7-10\text{mW}$
Monitor current	I_m	0.1	0.3	1	mA	$P_o=10\text{mW}$
Parallel divergence angle	$\theta_{//}$	7	11	18	deg.	$P_o=10\text{mW}$
Perpendicular divergence angle	θ_{\perp}	23	27	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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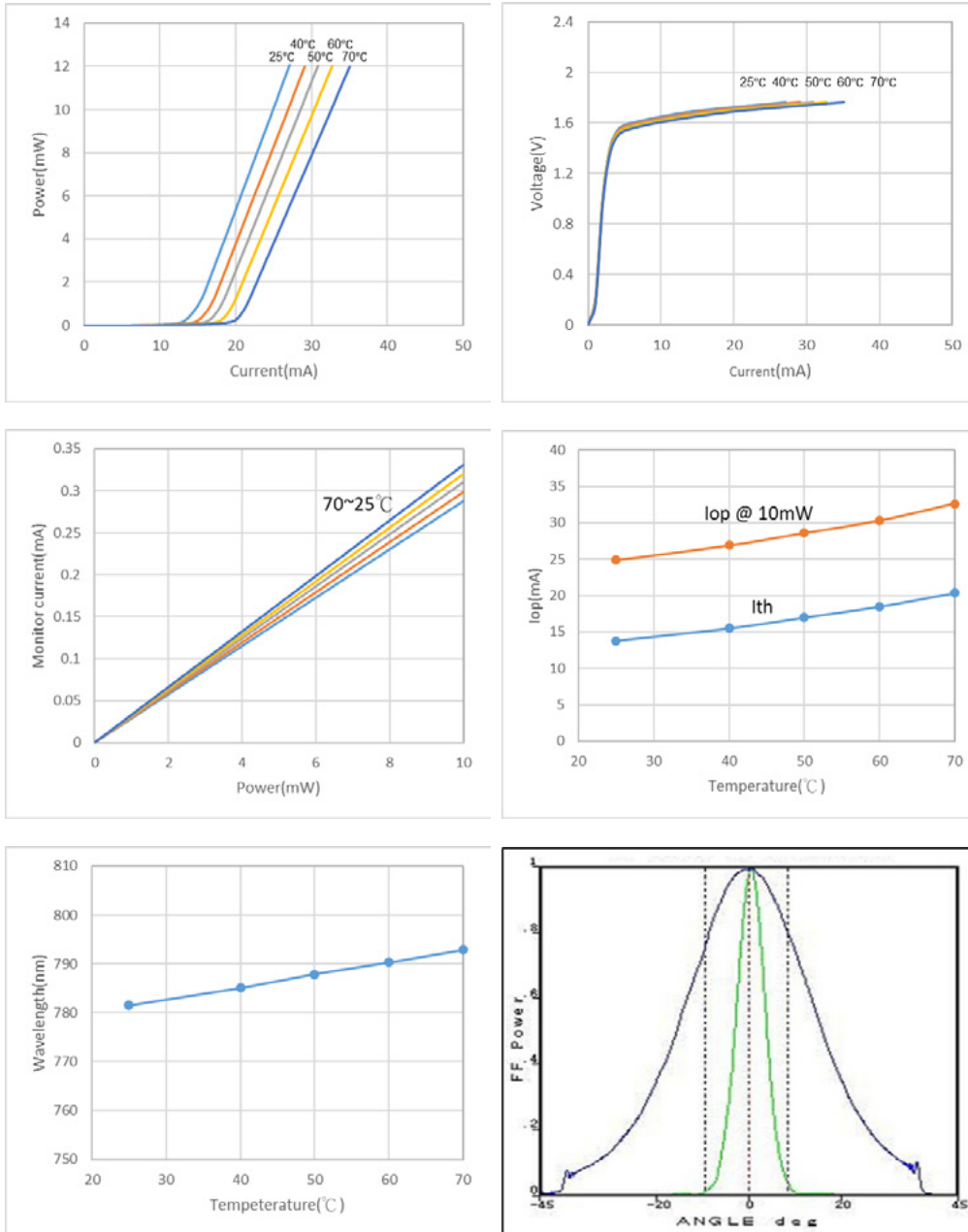


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