

# AlGaAs Infrared Laser Diode

## ADL-78052TU

6-2D-LD78-032\_Rev.00

### 780nm 5mW 70°C Reliable Operation

#### Features

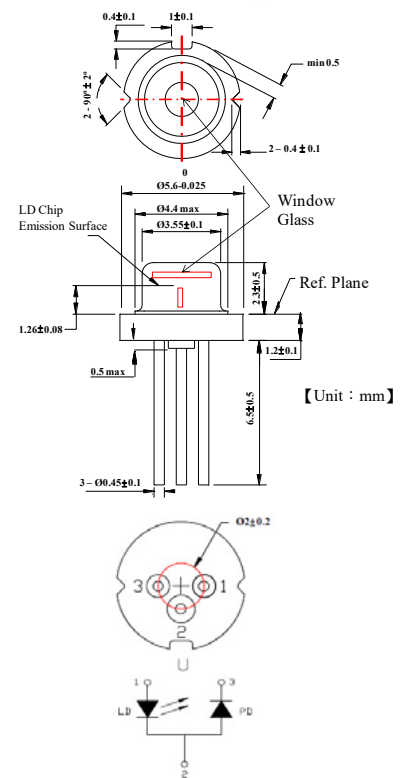
- Low operating current
- High efficiency
- Better power budget for optical design

#### Applications

- Laser printer light source

#### Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	$P_o$	CW	6	mW
Reverse voltage (LD)	$V_{RL}$	—	2	V
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	$\lambda$	770	785	795	nm	$P_o=5\text{mW}$
Threshold current	$I_{th}$	—	15	25	mA	
Operating current	$I_{op}$	—	20	35	mA	$P_o=5\text{mW}$
Operating voltage	$V_{op}$	—	1.9	2.2	V	$P_o=5\text{mW}$
Differential efficiency	$\eta$	0.7	0.9	1.2	mW/mA	$P_o=3\sim 5\text{mW}$
Monitor current	$I_m$	0.1	0.15	1	mA	$P_o=5\text{mW}$
Parallel divergence angle	$\theta_{//}$	7	11	18	deg.	$P_o=5\text{mW}$
Perpendicular divergence angle	$\theta_{\perp}$	23	27	32	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	

#### • 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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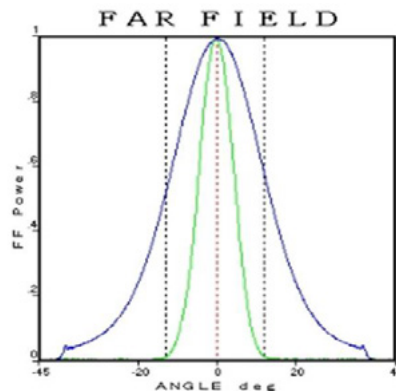
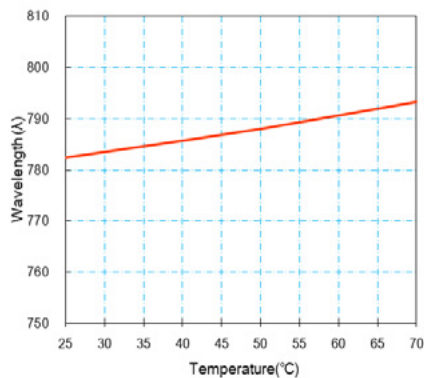
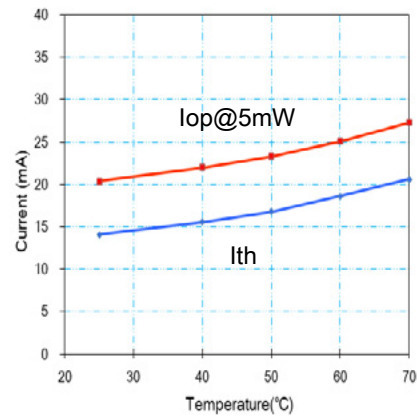
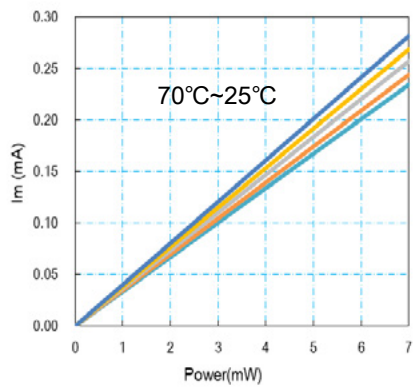
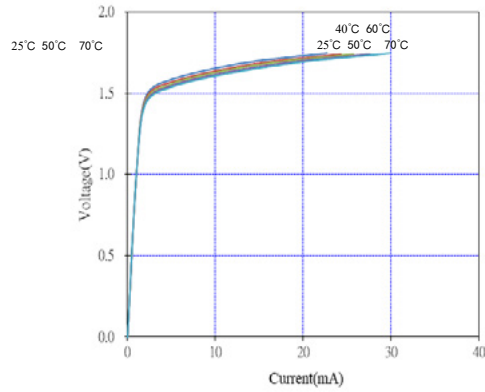
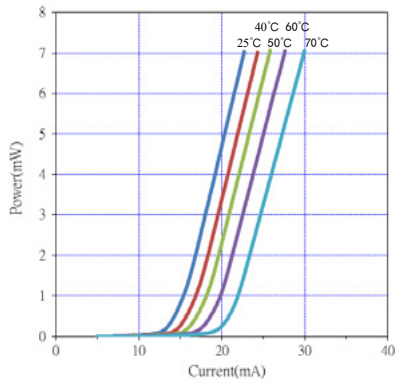


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