

AlGaAs Infrared Laser Diode

ADL-85501TL

6-2D-LD85-005_Rev.00

850nm 50mW 5.6 φ TO-Type Laser Diode

• Features

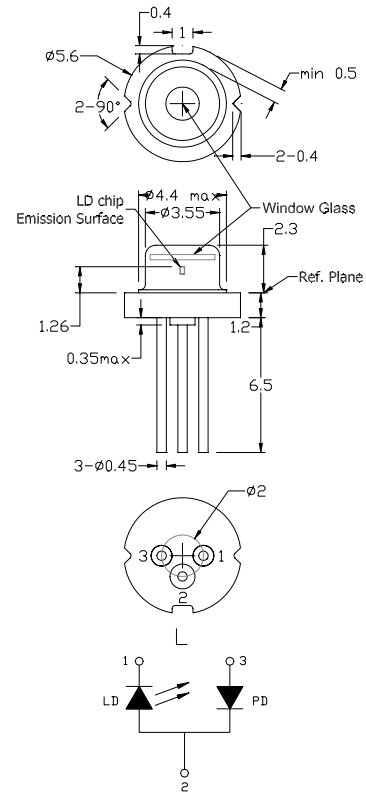
1. Low operation current
2. Cost effective

• Applications

1. Bar-code scanner
2. Laser printer
3. Military

• Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P _O	CW	50	mW
Reverse voltage (LD)	V _{RL}	-	3.5	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°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	830	845	850	nm	P _o =50mW
Threshold current	I _{th}	-	15	25	mA	
Operating current	I _{op}	-	75	95	mA	P _o =50mW
Operating voltage	V _{op}	-	1.8	2.4	V	P _o =50mW
Differential efficiency	η	0.7	0.8	1.0	mW/mA	P _o =40-50mW
Monitor current	I _m	0.2	0.5	1.0	mA	P _o =50mW, V _{RD} =0V
Parallel divergence angle	θ	9	12	15	degree	P _o =50mW
Perpendicular divergence angle	θ _⊥	26	30	35	degree	
Parallel FFP deviation angle	Δθ	-3	-	+3	deg	
Perpendicular FFP deviation angle	Δθ _⊥	-3	-	+3	deg	
Emission point accuracy	ΔxΔy	-80	-	+80	um	
	ΔZ	-40	-	+40	um	

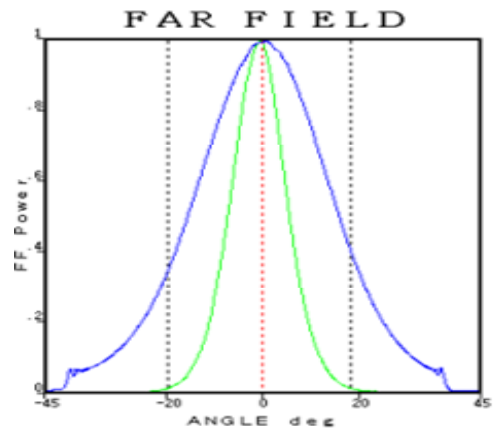
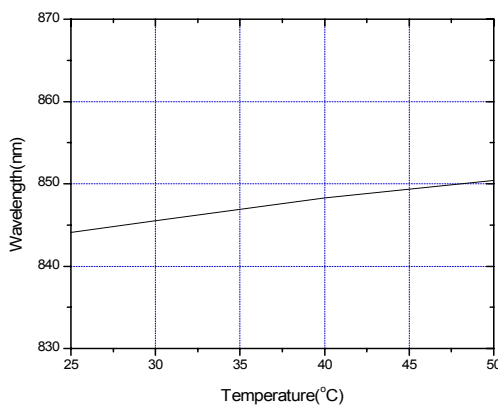
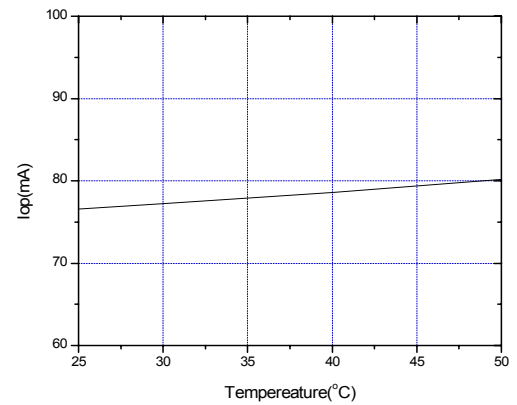
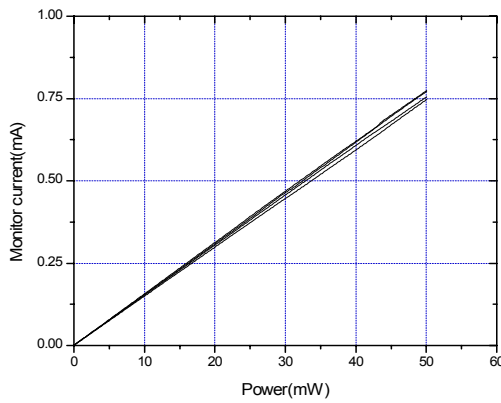
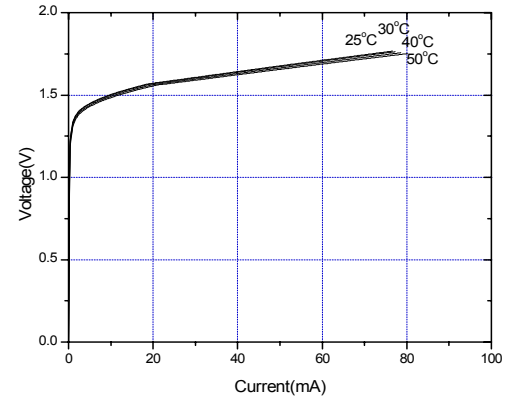
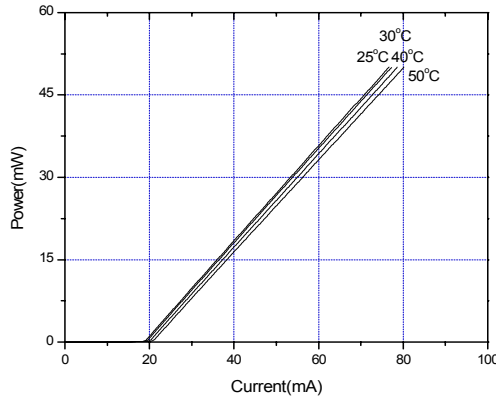
• Precautions

- 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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