

AIGaAs Infrared Laser Diode

830nm 150mW High Power Operation

ADL-83Z51TL

6-2D-LD85-020_REV.00

• Features

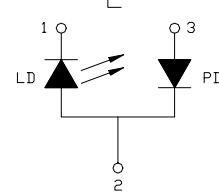
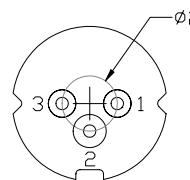
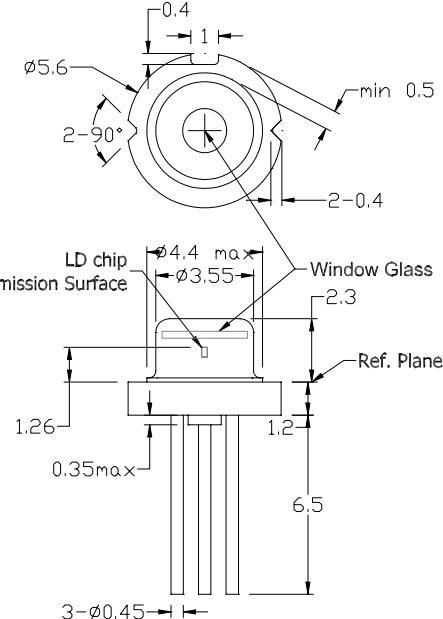
1. High temperature operation
2. Small far field angle

• Applications

1. Light source for sensor
2. Industry

• Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P _O	CW	160	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~+60	°C
Storage temperature	T _S	-	-40~+85	°C



• Electrical and optical characteristics ($T_c=25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions (CW)
Peak wavelength		820	830	840	nm	
Threshold current	I _{th}	-	70	90	mA	
Operating current	I _{op}	-	230	260	mA	P _O =150mW
Operating voltage	V _{op}	-	2.2	2.5	V	
Differential efficiency		0.7	0.9	-	mW/mA	
Monitor current	I _m	0.15	0.9	2.15	mA	P _O =150mW, V _{RD} =0V
Parallel divergence angle	//	5	7	12	deg	P _O =150mW
Perpendicular divergence angle		-	14	20	deg	
Parallel FFP deviation angle	//	-3	0	+3	deg	P _O =150mW
Perpendicular FFP deviation angle		-3	0	+3	deg	
Emission point accuracy	x y 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

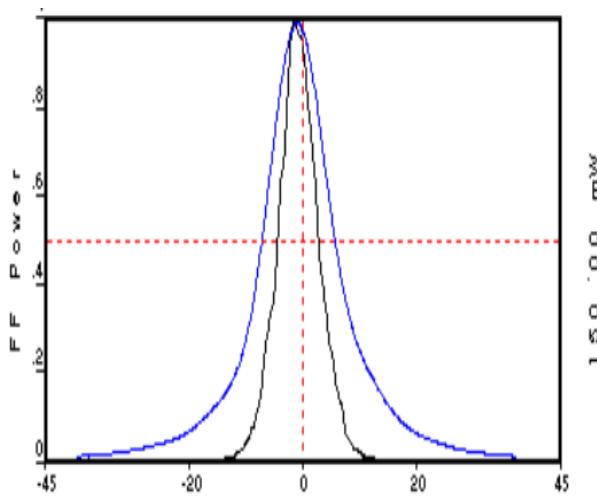
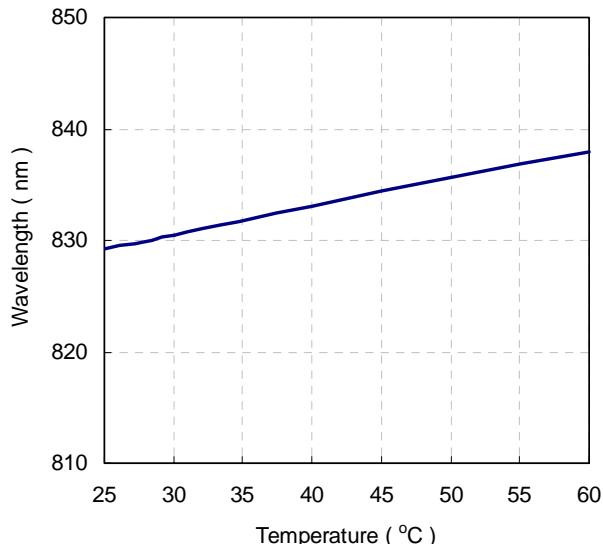
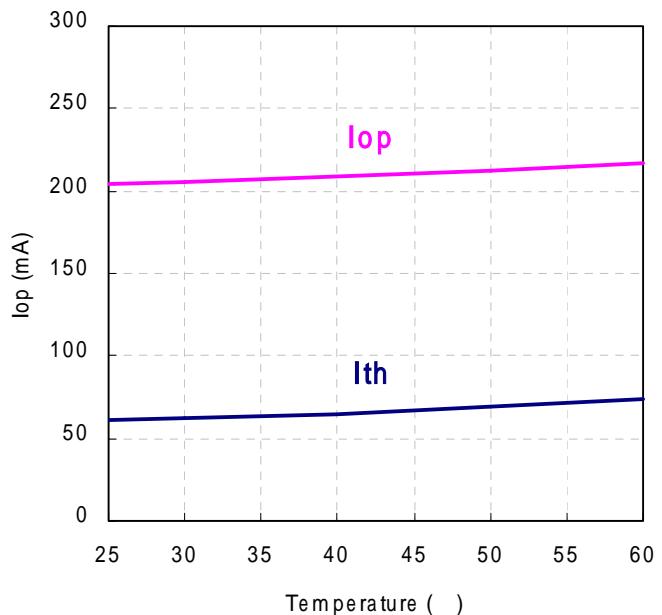
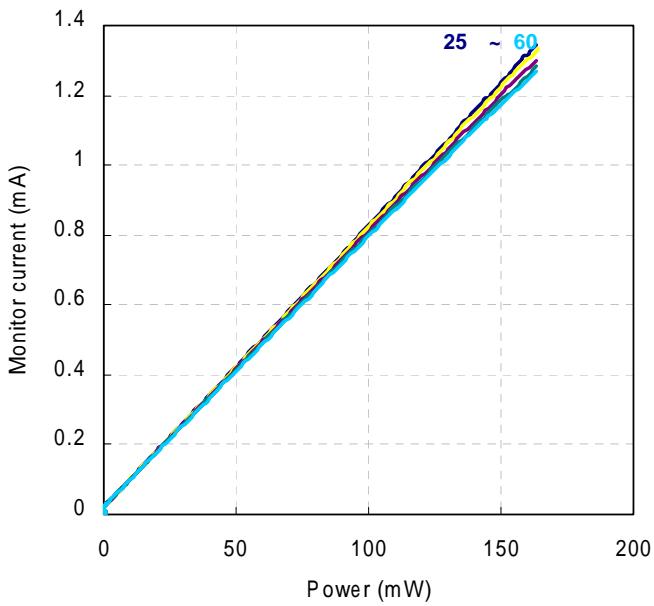
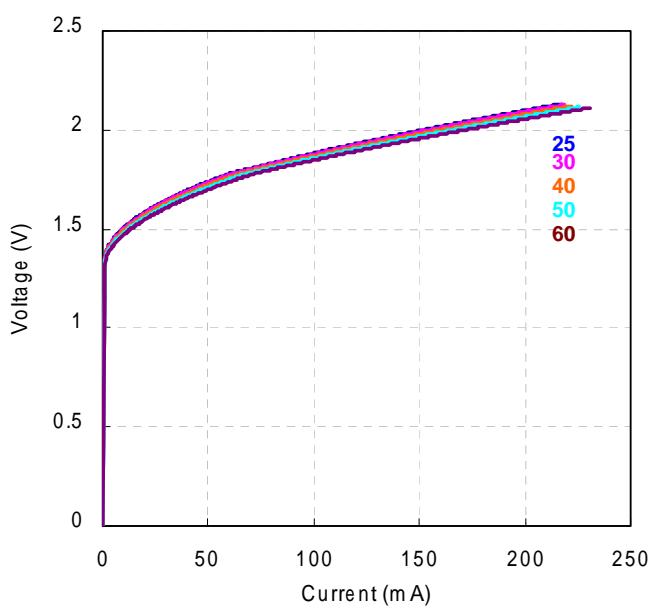
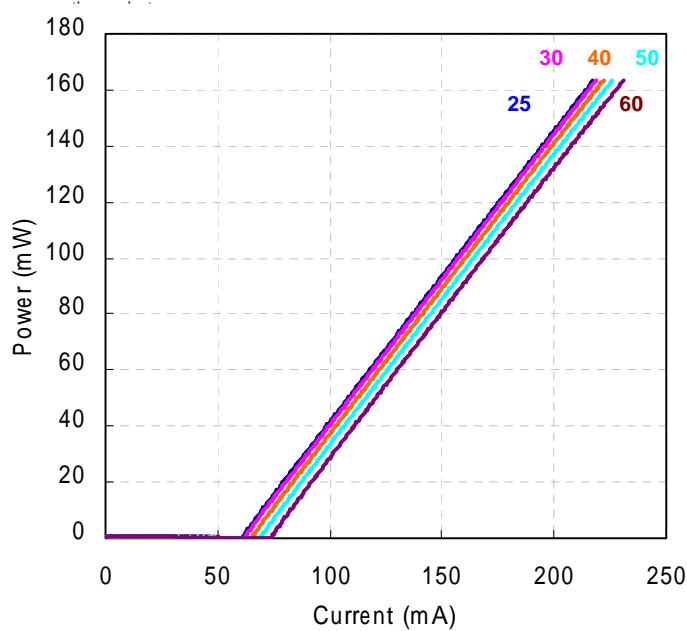
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