

Infrared Laser Diode

ADL-83Y51IY-F1

xx-xx-xxxx-xxx Rev.00

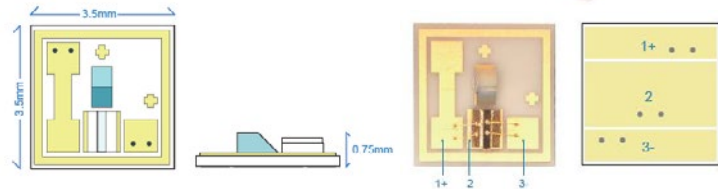
830nm 250mW

Features

- High wavelength stability at different temperature
- High power conversion efficiency
- Open package

Applications

- Moving sensor/Gesture
- Photoelectric sensors
- 3D sensing
- ToF applications
- VR



Absolute Maximum Ratings

Parameter	Symbol	Condition	Rating	Unit
Light Output Power	P_O	CW	270	mW
Reverse Voltage(LD)	V_{RL}	-	2	V
Case Temperature	TC	-	-10~60	°C
Storage Temperature	TS	-	-40~85	°C



Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Peak Wavelength	λ	820	830	840	nm	Po=250mW
Threshold Current	I_{th}		68	85	mA	
Operating Current	I_{op}		308	318	mA	Po=250mW
Operating Voltage	V_{op}		1.9		V	Po=250mW
Differential Efficiency	η		1.04		mW/mA	Po=200-250mW
Wavelength Shift	$\Delta\lambda/\Delta T$		0.23		nm/°C	Po=250mW
Parallel Divergence Angle	$\theta_{//}$	5	7	12	deg.	Po=250mW
Perpendicular Divergence Angle	θ_{\perp}	11	15	20	deg.	

- * Sufficient heat dissipation is required for CW operation.
- * The characteristics was tested under cw condition.
- * Divergence angle measurement was based on FWHM

Precautions

- * Do not operate the device above maximum ratings even short period of time. 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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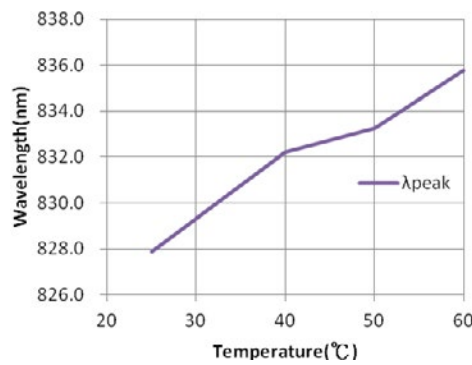
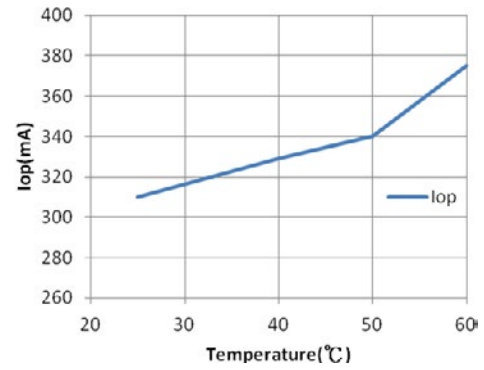
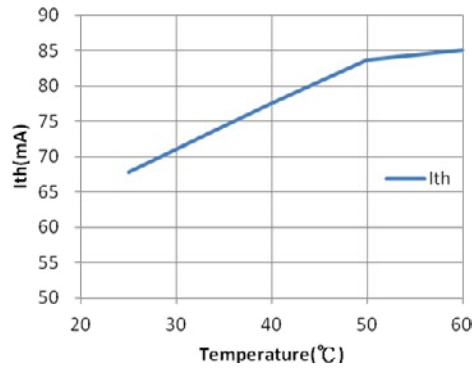
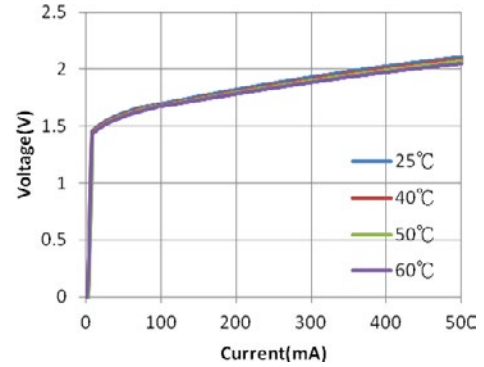
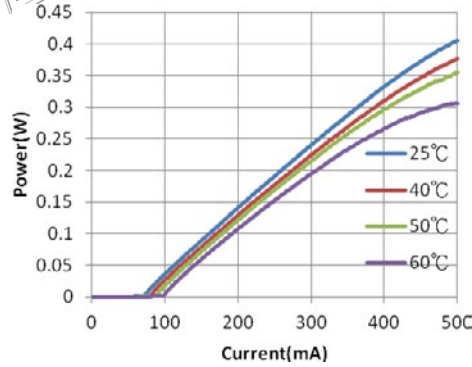
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830nm 250mW

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TENTATIVE



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