

AlGaAs / Infrared Laser Diode

ADL-83Y01TL

830nm 200mW High Power Operation

Features

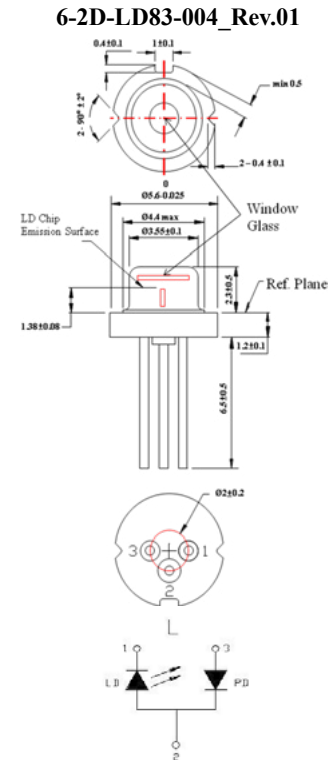
Small far field angle

Applications

Light source for sensor
Industry

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P _O	CW	210	mW
Reverse voltage (LD)	V _{RL}	-	2	V
Reverse voltage(PD)	V _{RD}	-	30	V
Forward current(PD)	I _{FD}	-	10	mA
Case temperature	TC	-	-10~+60	°C
Storage temperature	TS	-	-40~+85	°C



Electrical and optical characteristics (T_c=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	820	830	840	nm	P _O =200mW
Threshold current	I _{th}	-	65	95	mA	
Operating current	I _{op1}	-	265	350	mA	P _O =200mW
Operating voltage	V _{op}	-	1.9	2.4	V	P _O =200mW
Differential efficiency	η	0.8	1.0	-	mW/mA	P _O =150-200mW
Monitor current	I _m	0.5	0.9	2.15	mA	P _O =200mW, VRD=5V
Parallel divergence angle	θ //	5	7	12	deg	P _O =200mW
Perpendicular divergence angle	θ ⊥	10	14	20	deg	
Parallel FFP deviation angle	Δ θ //	-3	0	3	deg	
Perpendicular FFP deviation angle	Δ θ ⊥	-3	0	3	deg	
Emission point accuracy	Δ xΔyΔz	-80	0	80	um	

* Sufficient heat dissipation is required for CW operation.

● 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.

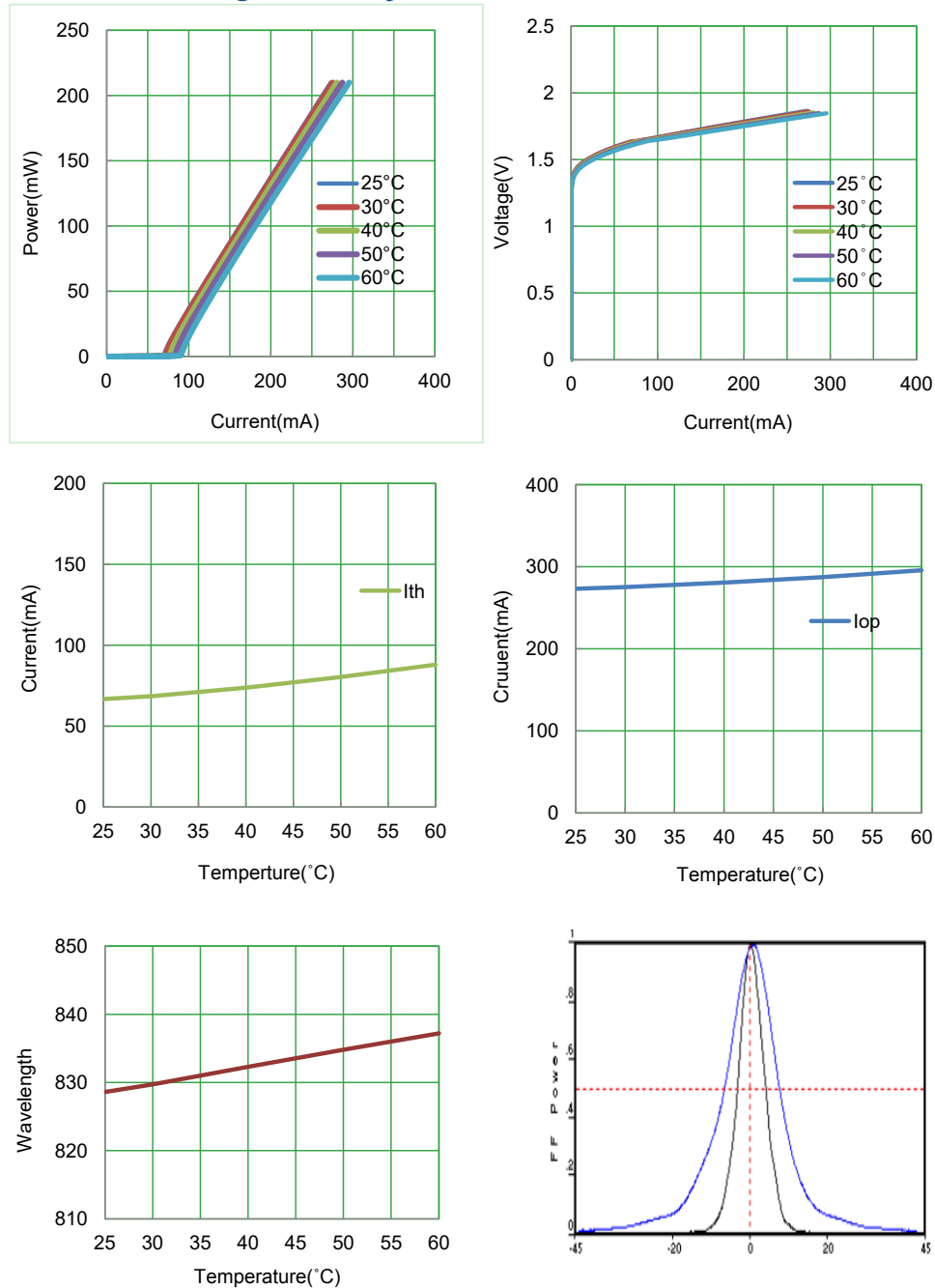
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6-2D-LD83-004_Rev.01

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