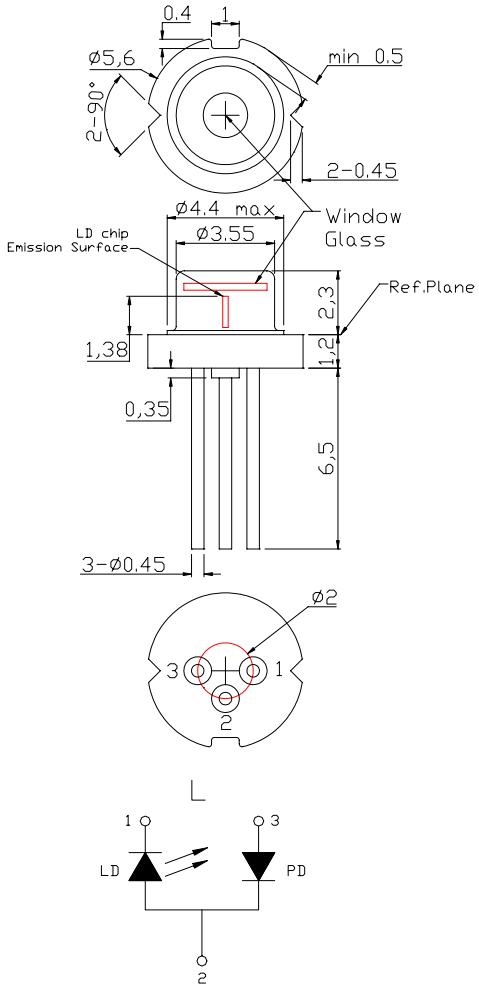
AlGaInP Visible Laser Diode

ADL-63302TL

6-2D-LD63-058_Rev.01

★635nm 30mW 50°C Reliable Operation



•Features

1. High Output Power：30mW CW
2. Small Package：Φ5.6mm
3. TM mode
4. Single Transverse/Longitudinal Mode

•Applications

1. Construction Tools
2. High Definition Laser Displays
3. Medical Applications

•Absolute maximum ratings

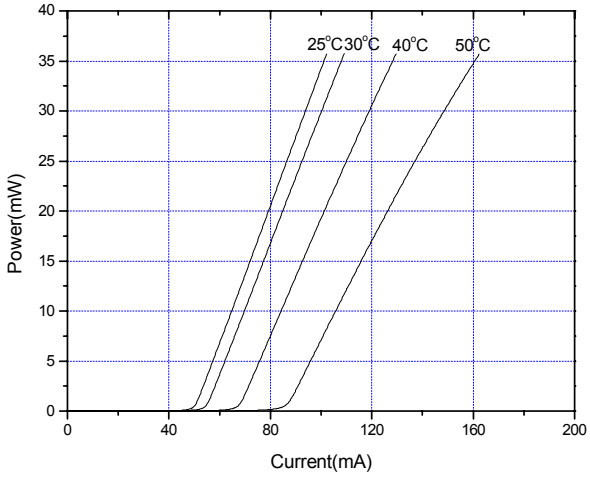
Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	35	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse voltage (PD)	V_{RD}	-	30	V
Forward current (PD)	I_{FD}	-	10	mA
Case temperature	T_C	-	-10~+50	°C
Storage temperature	T_S	-	-40~+85	°C

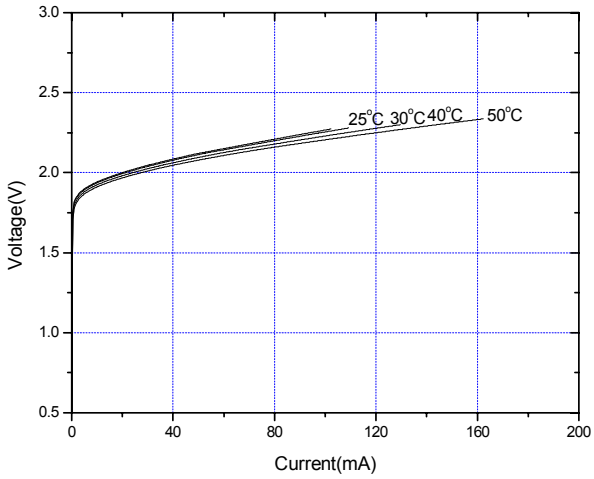
•Electrical and optical characteristics (T_c=25°C)

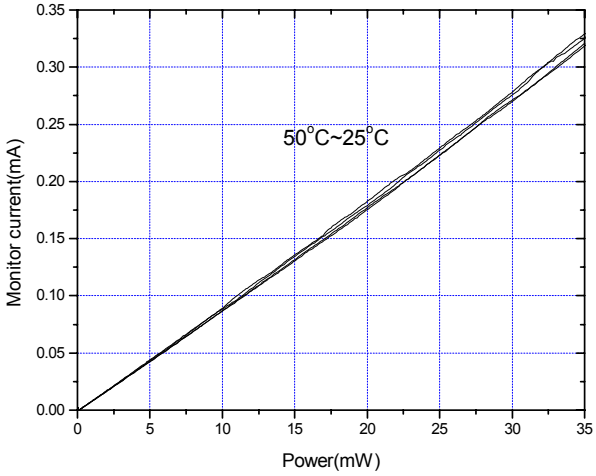
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	630	639	645	nm	P_o=30mW
Threshold current	I_{th}	-	50	60	mA	
Operating current	I_{op}	-	95	110	mA	P_o=30mW
Operating voltage	V_{op}	-	2.2	2.7	V	P_o=30mW
Differential efficiency	η	0.30	0.60	0.90	mW/mA	P_o=25 -30 mW
Monitor current	I_m	0.1	0.27	0.5	mA	P_o=30mW, V_{RD}=5V
Parallel divergence angle	$\theta_{//}$	5	8	12	deg	P_o=30mW
Perpendicular divergence angle	$\theta_{\perp}$	25	30	35	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	ΔxΔyΔz	-80	0	+80	um	

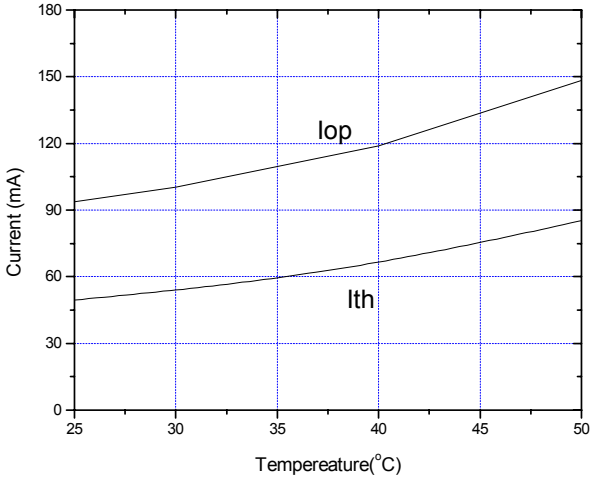
• Precautions

* 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.


25°C 30°C 40°C 50°C
Power(mW)
Current(mA)


25°C 30°C 40°C 50°C
Voltage(V)
Current(mA)


50°C~25°C
Monitor current(mA)
Power(mW)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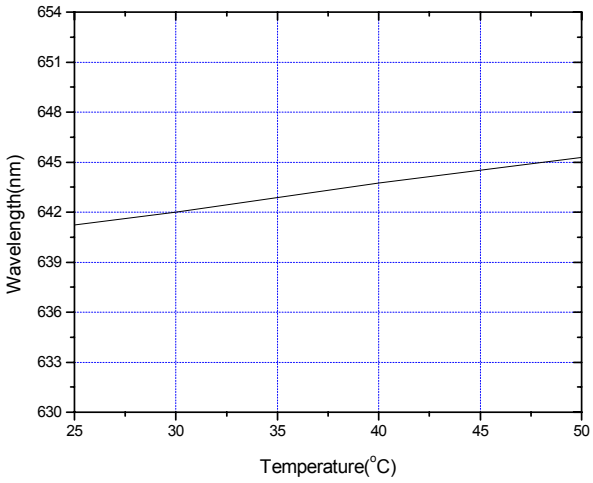
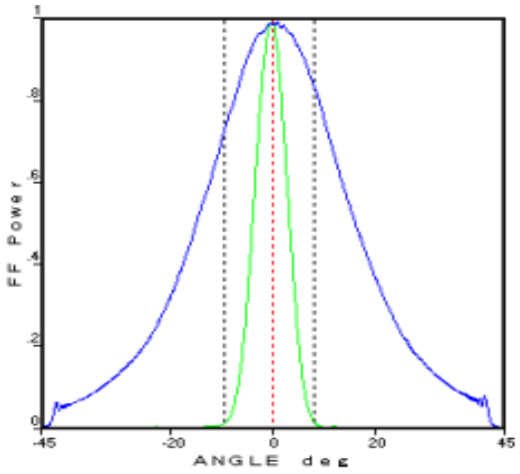
Ith
Current (mA)
Tempereature(°C)


Wavelength(nm)
Temperature(°C)


FF Power
ANGLE deg