



AlGaInP Visible Laser Diode

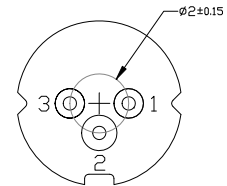
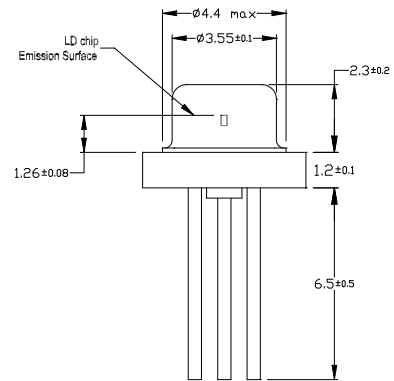
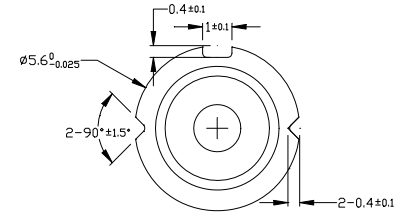
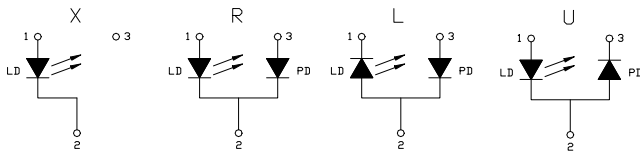
ADL-65401TX/R/L/U

650nm 40mW 60°C Reliable High Power Operation

• Applications

Light source for high power industrial & medical applications

• Pin connections



• Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P _o	CW	55	mW
Reverse voltage (LD)	V _{RL}	CW	2	V
Reverse voltage (PD)	V _{RD}	-	30	V
Forward current (PD)	I _{FD}	-	10	mA
Case temperature	T _c	CW	-10~+60	°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	645	655	665	nm	P _o =40mW CW Kink free
Threshold current	I _{th}	30	40	50	mA	
Operating current	I _{op}	-	80	100	mA	
Operating voltage	V _{op}	2.0	2.45	3.0	V	P _o =35-40mW
Differential efficiency	η	0.7	1.0	1.4	mW/mA	
Monitor current (For R,L,U type)	I _m	0.05	0.1	0.5	mA	P _o =40mW, V _{RD} =5V
Parallel divergence angle	θ	6	10	15	deg	P _o =40mW
Perpendicular divergence angle	θ _⊥	15	20	25	deg	
Parallel FFP deviation angle	Δθ	-2	0	2	deg	
Perpendicular FFP deviation angle	Δθ _⊥	-3	0	3	deg	
Emission point accuracy	ΔxΔyΔz	-80	0	80	um	

• Precautions

- Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
- Semiconductor laser device is very sensitive to electrostatic discharge. High voltage spike current may change the characteristics of the device, or malfunction at any time during its service period. Therefore, proper measures for preventing electrostatic discharge are strongly recommended.
- Effective heat sink can help the device operates under a more relax condition; as a result, a more stable characteristics and better reliability can be achieved. So it is recommended that always apply proper heat sink before the device is operating.
- Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.



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