

AlGaInP Visible Laser Diode**DL-6353TL**

2004/5/14 Ver.4

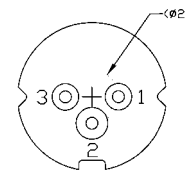
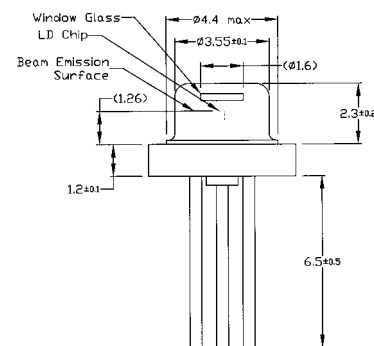
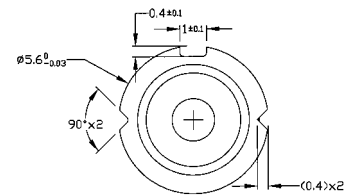
635nm 5mW 40°C Reliable Operation

• Features

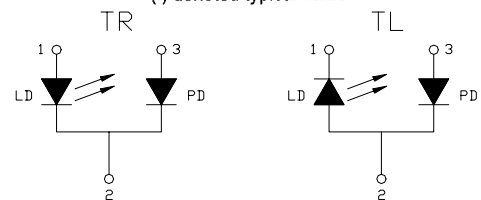
1. Long reliability, MTTF >5000hrs
2. High visibility
3. Small perpendicular divergence angle

• Applications

1. Industrial laser markers
2. Survey and engineering instruments
3. Class I, eye-safe laser pointer
4. High visibility LD display



() denoted typical value



• Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	7	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~+40	°C
Storage temperature	T_S	-	-40~+75	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength		630	637.5	640	nm	$P_o=5\text{mW}$
Threshold current	I_{th}	-	20	30	mA	
Operating current	I_{op}	-	30	40	mA	$P_o=5\text{mW}$
Operating voltage	V_{op}	-	2.15	2.5	V	$P_o=5\text{mW}$
Differential efficiency		0.4	0.7	0.85	mW/mA	$P_o=3\text{--}5\text{mW}$
Monitor current	I_m	0.05	0.1	0.3	mA	$P_o=5\text{mW}$, $V_{RD}=5\text{V}$
Parallel divergence angle	//	6	7.5	11	deg	
Perpendicular divergence angle		25	28.5	35	deg	
Parallel FFP deviation angle	//	-	-	±2.9	deg	$P_o=5\text{mW}$
Perpendicular FFP deviation angle		-	-	±2.9	deg	
Emission point accuracy	x y z	-	-	±80	um	

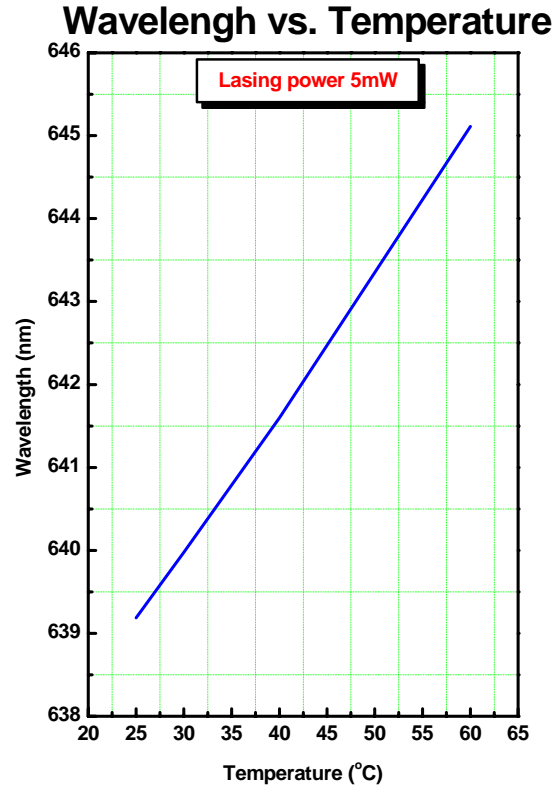
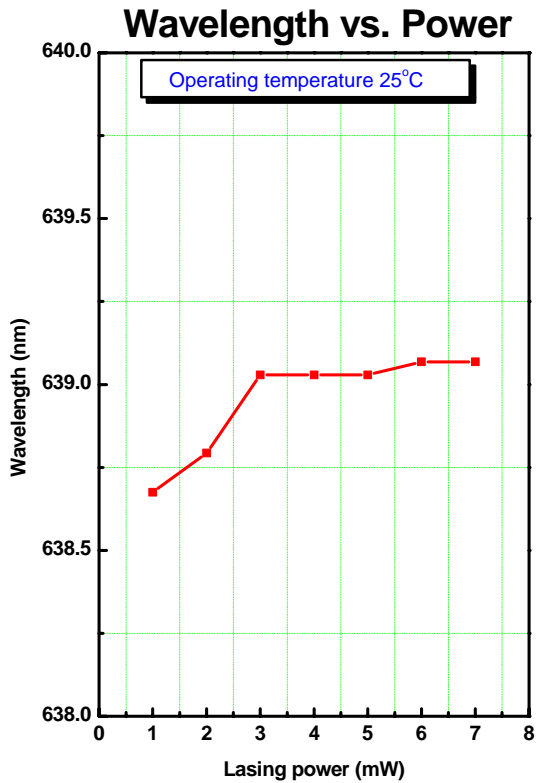
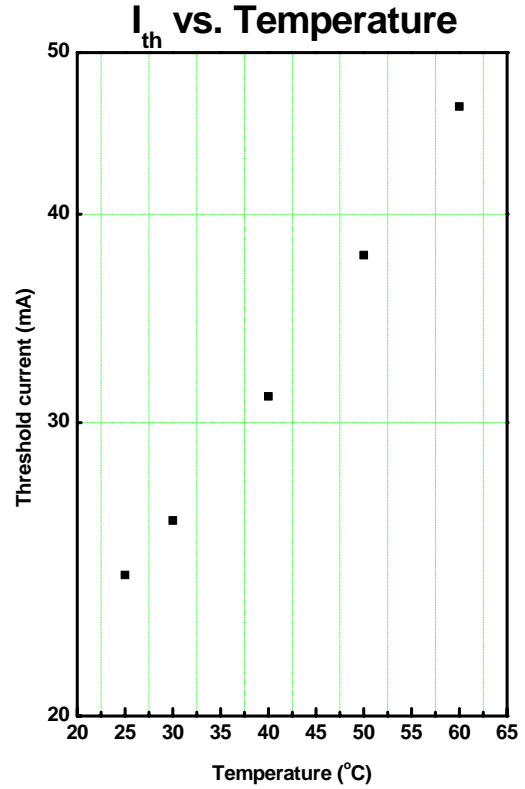
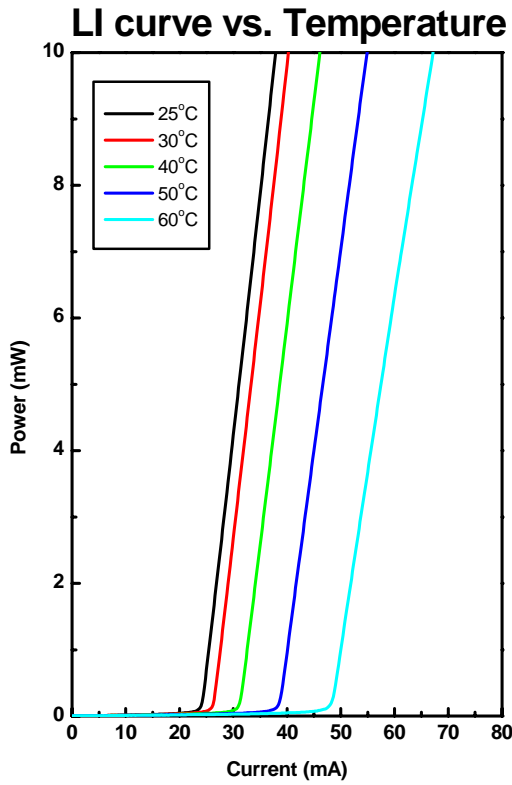
• Precautions

1. Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
2. 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.
3. 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.

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