

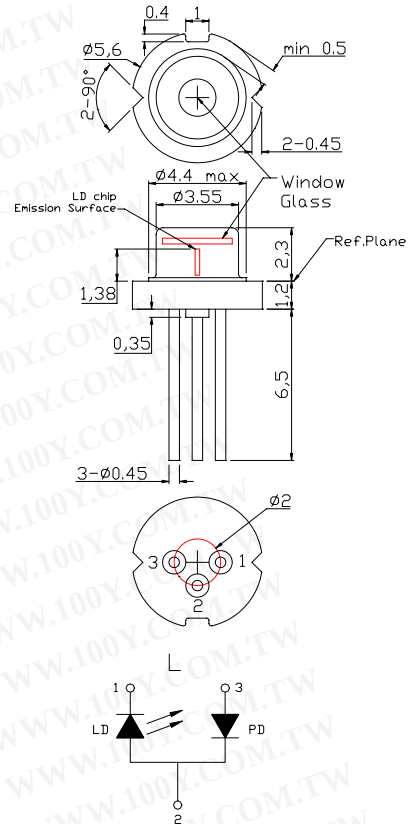
★635nm 30mW 50°C Reliable Operation

• Features

1. High Output Power : 30mW CW
2. Small Package : $\Phi 5.6\text{mm}$
3. TM mode
4. Single Transverse/Longitudinal Mode

• Applications

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



- **Absolute maximum ratings**

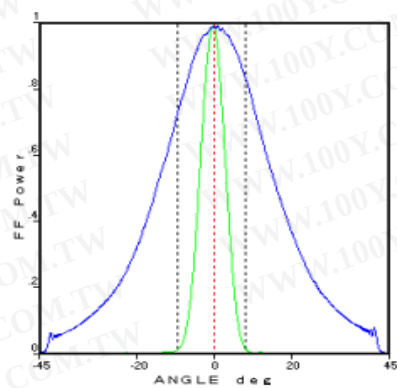
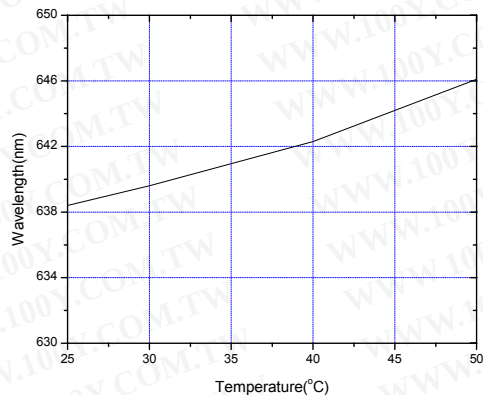
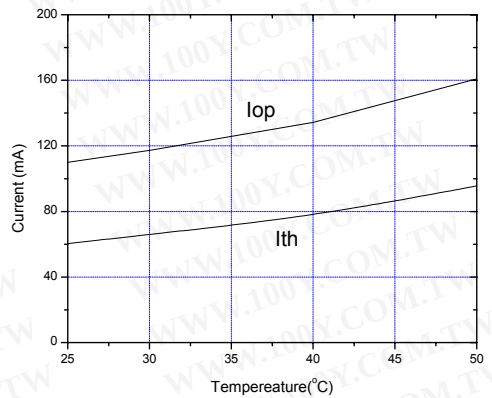
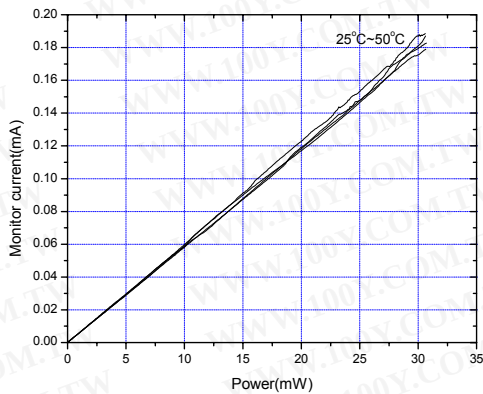
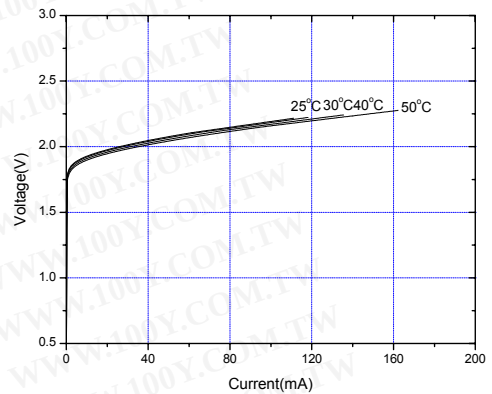
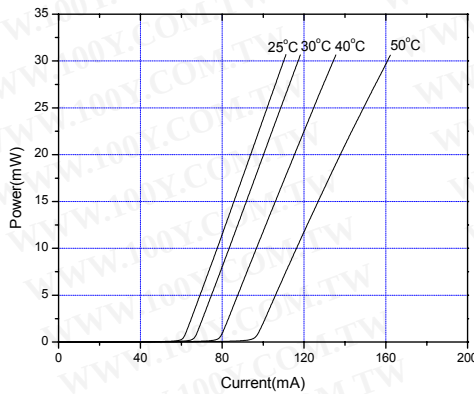
Parameter	Symbol	Condition	Rating	Unit
Light output power	P _O	CW	32	mW
Reverse voltage (LD)	V _{RL}	-	2	V
Reverse voltage (PD)	V _{RD}	-	30	V
Forward current (PD)	I _{FD}	-	10	mA
Case temperature	T _C	-	-10~+50	°C
Storage temperature	T _S	-	-40~+85	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	630	638	645	nm	$P_o=30\text{mW}$
Threshold current	I_{th}	-	60	80	mA	
Operating current	I_{op}	-	115	140	mA	$P_o=30\text{mW}$
Operating voltage	V_{op}	-	2.2	2.7	V	$P_o=30\text{mW}$
Differential efficiency	η	0.30	0.60	0.90	mW/mA	$P_o=25\text{--}30\text{ mW}$
Monitor current	I_m	0.05	0.1	0.5	mA	$P_o=30\text{mW}$, $V_{RD}=5\text{V}$
Parallel divergence angle	$\theta_{\parallel}$	5	8	12	deg	$P_o=30\text{mW}$
Perpendicular divergence angle	$\theta_{\perp}$	27	32	37	deg	
Parallel FFP deviation angle	$\Delta\theta_{\parallel}$	-3	0	+3	deg	
Perpendicular FFP deviation angle	$\Delta\theta_{\perp}$	-3	0	+3	deg	
Emission point accuracy	$\Delta x\Delta y\Delta z$	-80	0	+80	μm	

- **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.



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