

**660nm 50mW 30°C****Reliable High Power Operation****•Features**

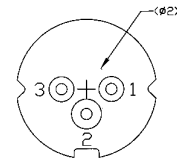
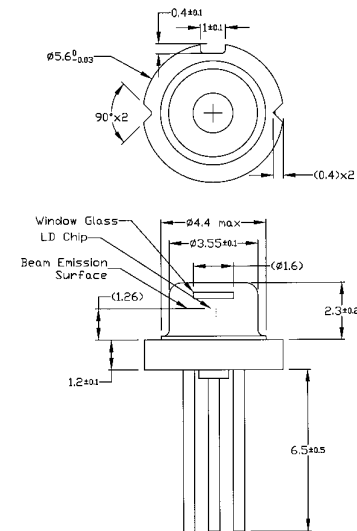
1. Low operating current
2. High efficiency
3. High precision package
4. High power operation

**•Applications**

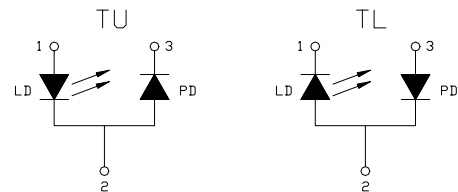
1. Industrial laser markers / measuring instruments
2. High visibility applications

**•Absolute maximum ratings**

Parameter	Symbol	Condition	Rating	Unit
Light output power	$P_O$	CW	52	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~+30	°C
Storage temperature	$T_S$	-	-40~+75	°C



( ) denoted typical value

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength		655	660	668	nm	$P_O=50\text{mW}$
Threshold current	$I_{th}$	-	45	55	mA	
Operating current	$I_{op}$	-	110	120	mA	$P_O=50\text{mW}$
Operating voltage	$V_{op}$	-	2.5	2.7	V	$P_O=50\text{mW}$
Differential efficiency		0.3	0.7	-	mW/mA	$P_O=45\sim 50\text{mW}$
Monitor current	$I_m$	-	0.5	-	mA	$P_O=50\text{mW}$ , $V_{RD}=5\text{V}$
Parallel divergence angle	//	-	8.5	-	deg	
Perpendicular divergence angle		-	22	-	deg	
Parallel FFP deviation angle	//	-	-	$\pm 2$	deg	$P_O=50\text{mW}$
Perpendicular FFP deviation angle		-	-	$\pm 2$	deg	
Emission point accuracy	x y z	-	-	$\pm 80$	$\mu\text{m}$	

**•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.
4. Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.

