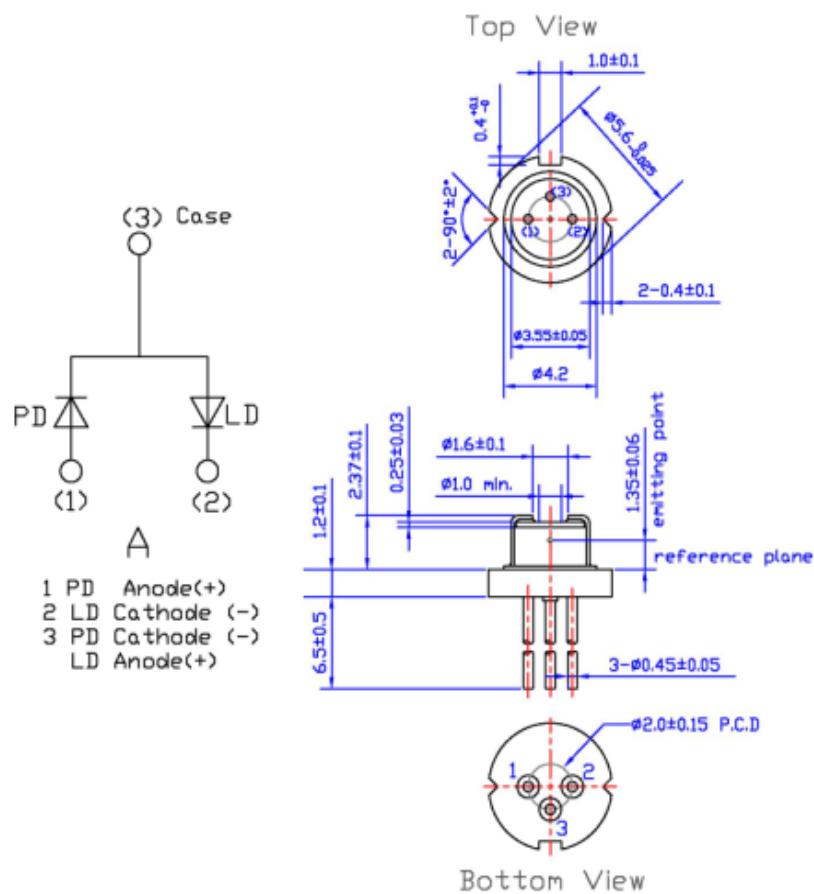


## 650 nm Red Laser Diode LCU652051A-preliminary

### ■ Specifications

- (1) Device: Laser Diode  
 (2) Structure: TO-18(  $\phi$  5.6mm), With Pb free glass cap, PD

### ■ External dimensions(Unit : mm)



### ■ Absolute Maximum Ratings( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit	
Optical Output	$P_o$	20	mW	
Reverse Voltage	Laser	$V_r$	2	V
	PIN PD	$V_r(\text{PIN})$	30	V
Operating Temperature	$T_{op}$	-10 ~ +50	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	-15 ~ +85	$^\circ\text{C}$	

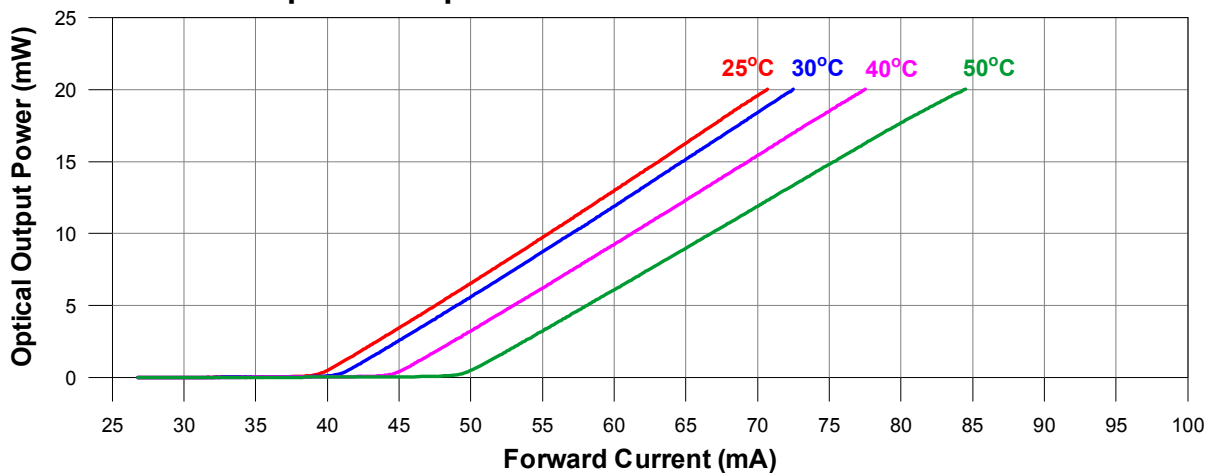
■ Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I <sub>th</sub>	P <sub>o</sub> =20mW	-	42	50	mA	
Operating Current	I <sub>op</sub>	P <sub>o</sub> =20mW	-	75	80	mA	
Operating Voltage	V <sub>op</sub>	-	-	2.2	2.4	Volt	
Slope Efficiency	$\eta$	20mW-5mW	0.5	0.65	-	mW/mA	
		I <sub>20mW</sub> -I <sub>5mW</sub>					
Beam Divergence (FWHM)	Parallel	$\theta //$	P <sub>o</sub> =20mW	7	8	9.5	deg.
	Perpendicular	$\theta \perp$	P <sub>o</sub> =20mW	-	30	35	deg.
Lasing Wavelength	$\lambda$	P <sub>o</sub> =20mW	650	660	665	nm	

©  $\theta //$  and  $\theta \perp$  are defined as the angle within which the intensity is 50% of the peak value.

■ Typical characteristic curves

Optical Output Power v.s. Forward Current



Forward Voltage v.s. Forward Current

