

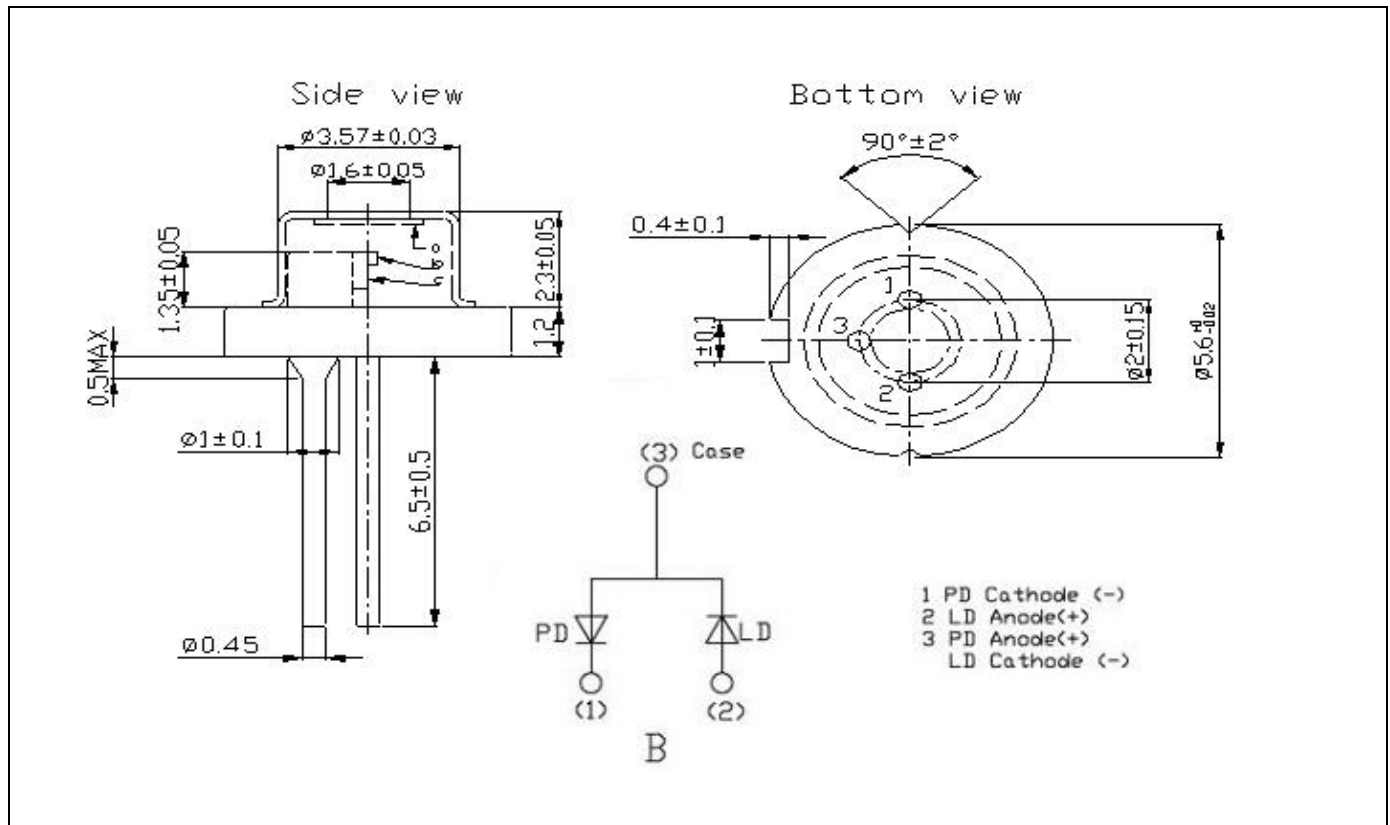
## 650nm Red Laser Diode RLD65000701

### ■ 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	Symbols	Ratings	Units
Optical Output	$P_o$	7	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operation Temperature	Top	-10~+70	$^{\circ}\text{C}$
Storage Temperature	Tstg	-40~+85	$^{\circ}\text{C}$

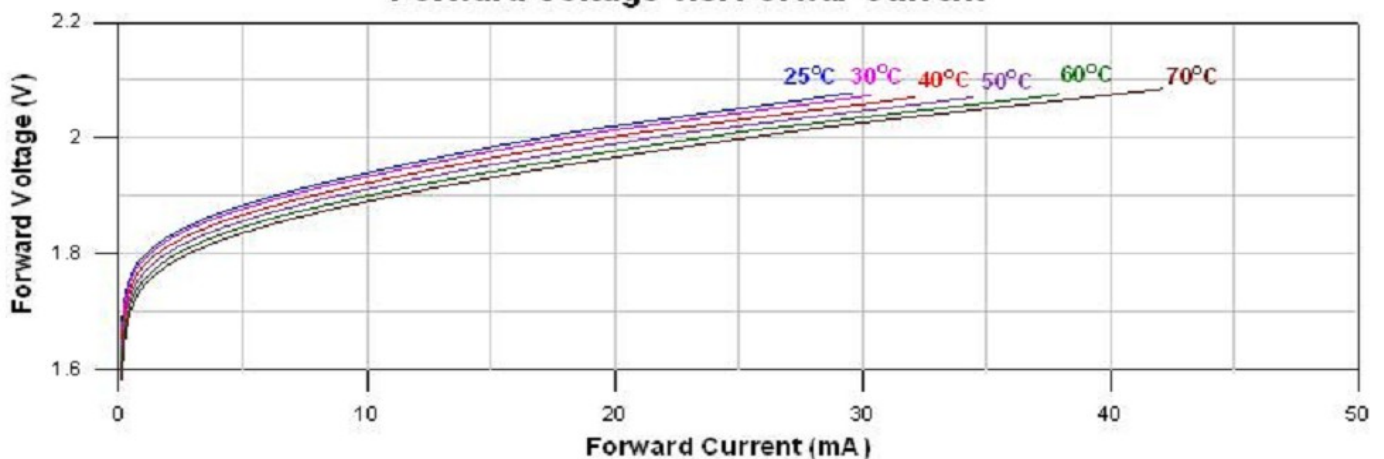
### Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I <sub>th</sub>	-	-	18	23	mA	
Operating Current	I <sub>op</sub>	P <sub>o</sub> =7mW	-	28	35	mA	
Operating Voltage	V <sub>op</sub>	-	-	2.2	2.5	Volt	
Slope Efficiency	$\eta$	5.25mW-1.75mW	0.6	0.8	1	mW/mA	
		I <sub>5.25mW</sub> -I <sub>1.75mW</sub>					
Monitor Current	I <sub>m</sub>	P <sub>o</sub> =7mW	0.1	0.2	0.5	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P <sub>o</sub> =7mW	8	10	13	deg.
	Perpendicular	$\theta \perp$	P <sub>o</sub> =7mW	25	28	32	deg.
Lasing Wavelength	$\lambda$	P <sub>o</sub> =7mW	645	655	665	nm	

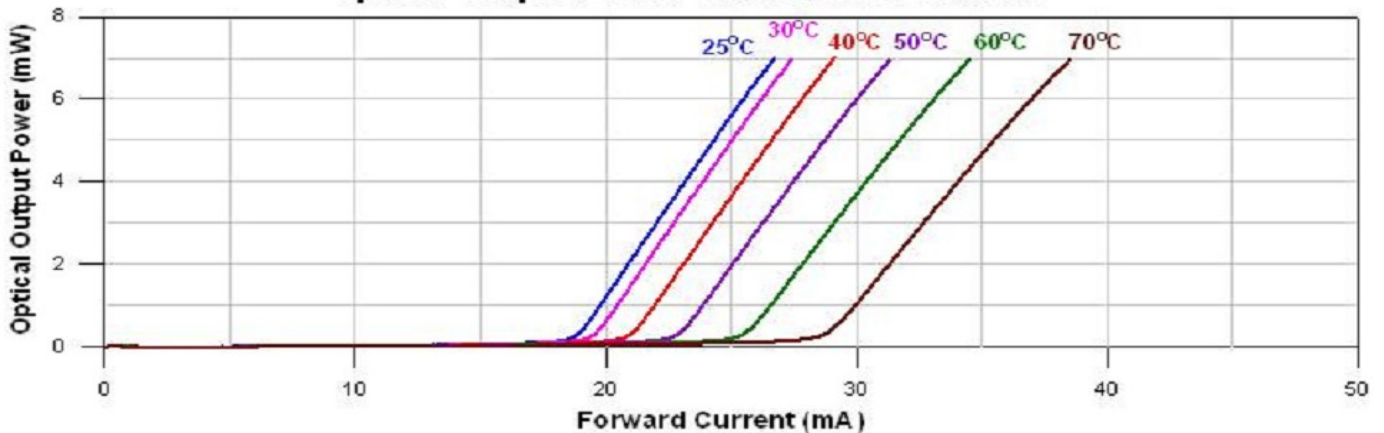
©  $\theta //$  and  $\theta \perp$  are defined as the angle within which the intensity is 50% of the peak value.

### Typical characteristic curves

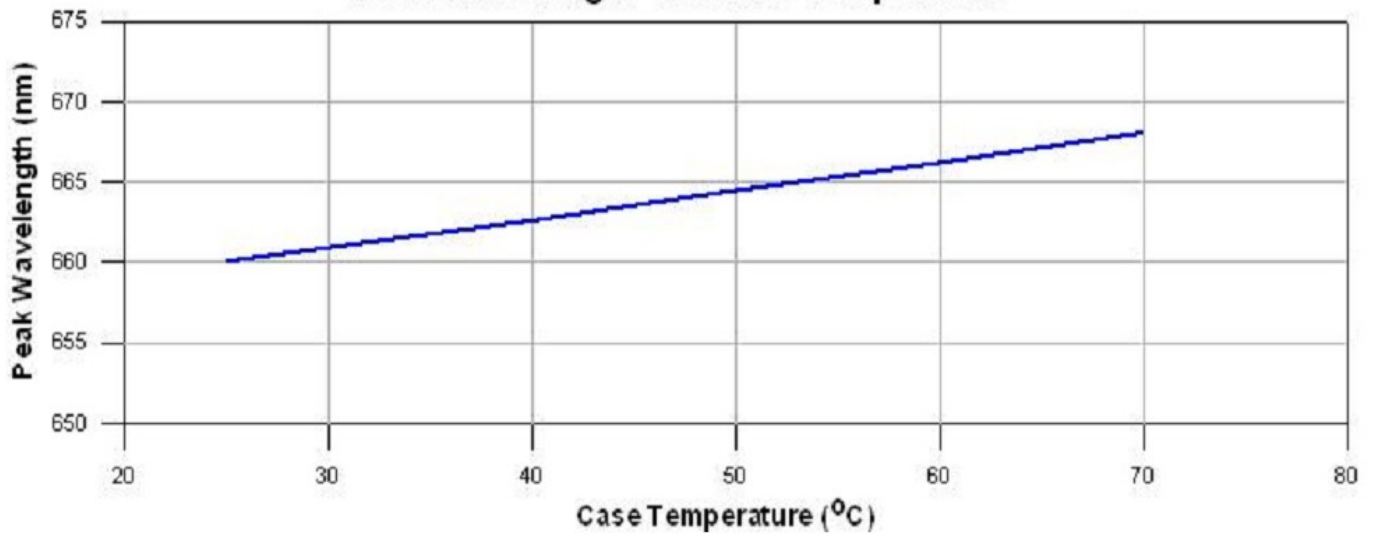
#### Forward Voltage v.s. Forward Current



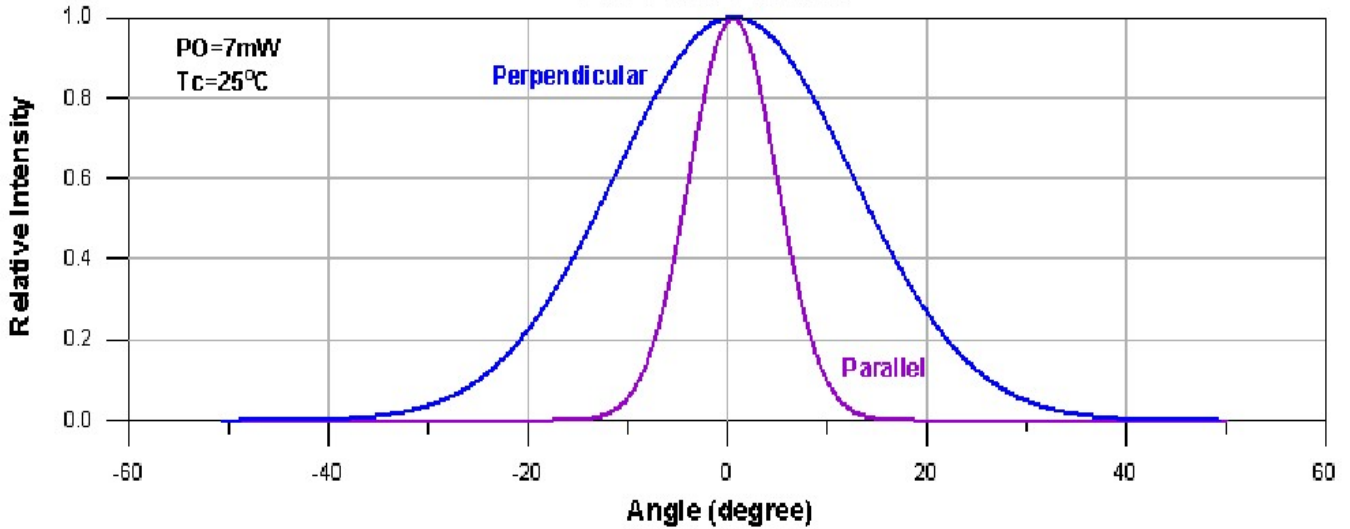
#### Optical Output Power v.s. Forward Current



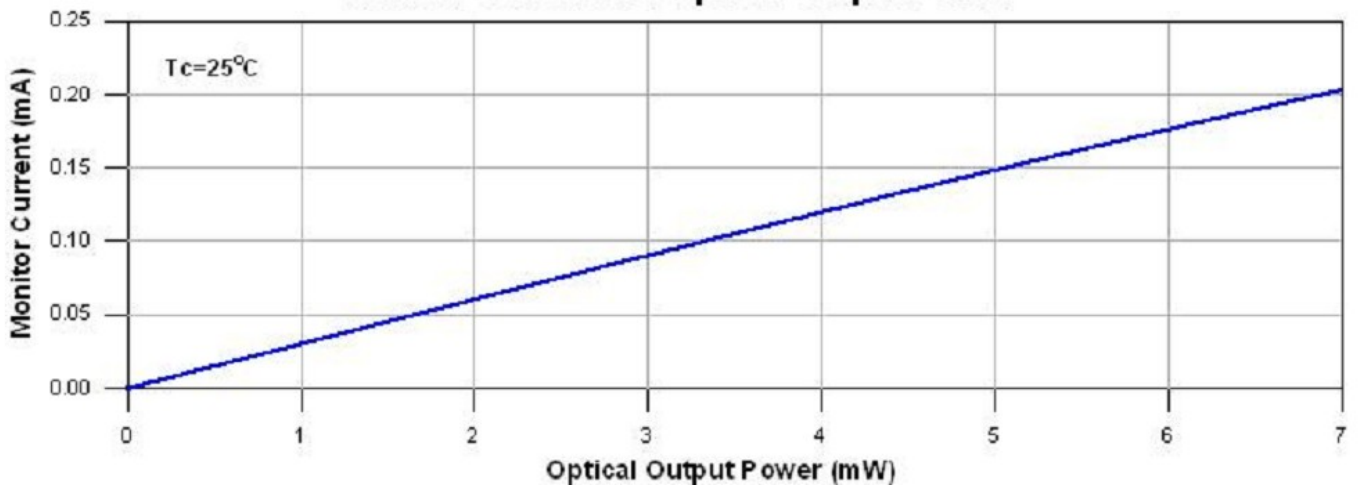
Peak Wavelength v.s. Case Temperature



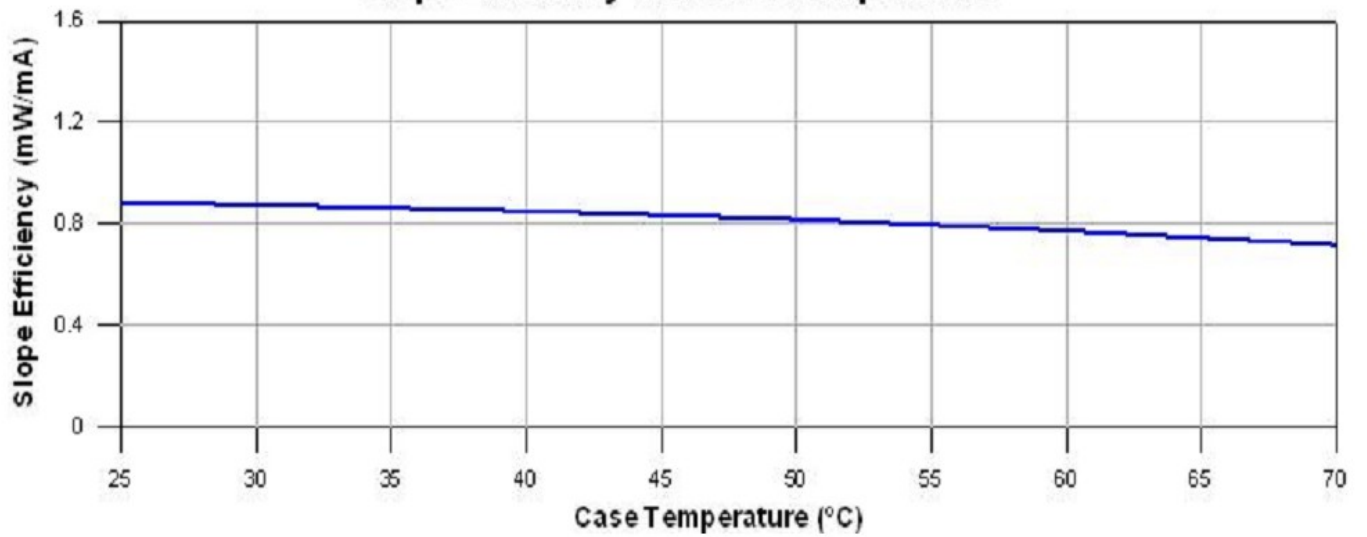
Far-Field Pattern



Monitor Current v.s. Optical Output Power



**Slope Efficiency v.s. Case Temperature**



**Threshold Current v.s. Case Temperature**

