

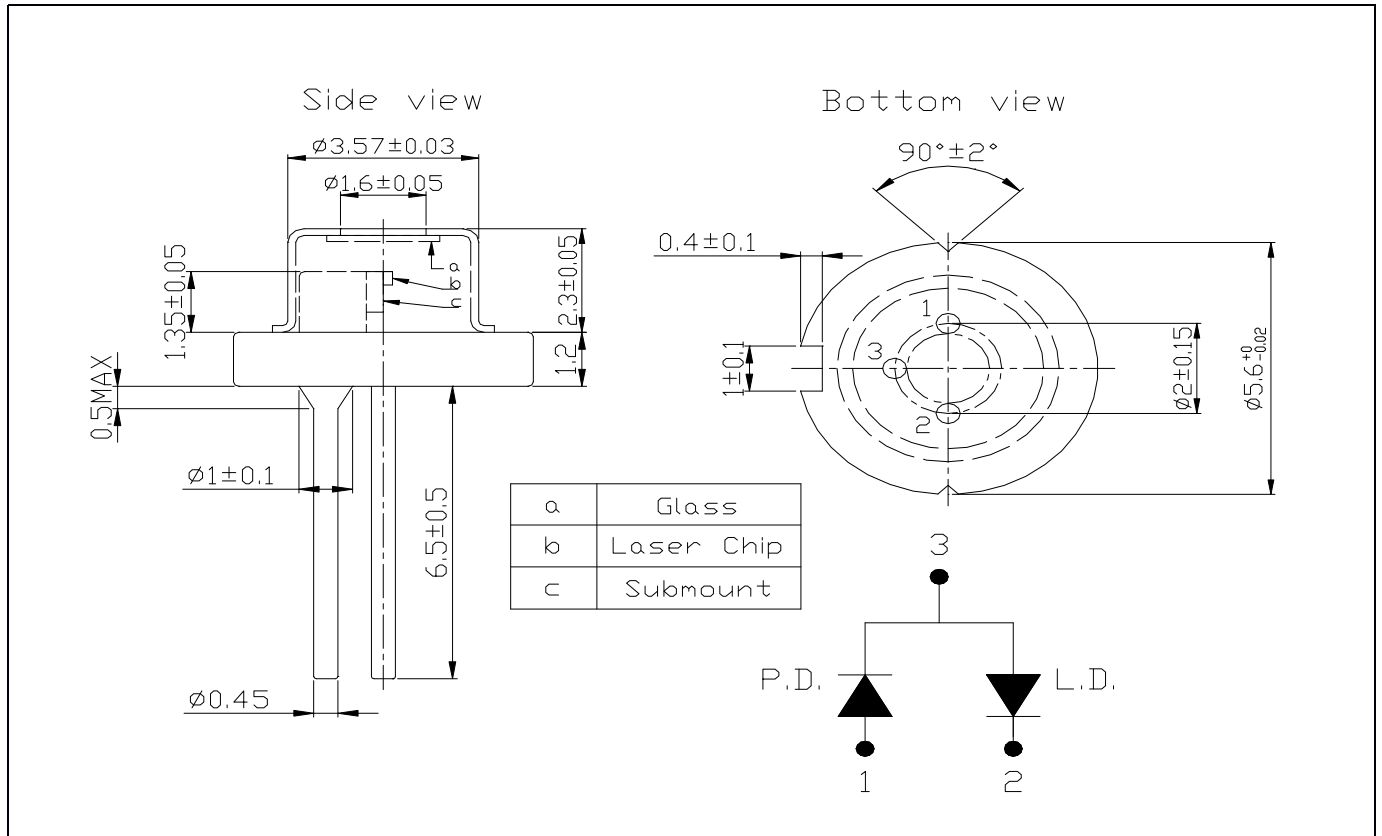
# 650nm Red Laser Diode RLD650005

## Specifications

(1) Device: Laser Diode

(2) Structure: TO-18(φ 5.6mm), With Pb free glass cap, PD

## External dimensions(Unit : mm)



## Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Value	Unit
Optical Output	Po	5	mW
Reverse Voltage	Laser	Vr	2
	PIN PD	Vr(PIN)	30
Operating Temperature	Top	-10 ~ +40	°C
Storage Temperature	Tstg	-15 ~ +85	°C

Dongguan Yuquan Electronics Co.,Ltd

No. 44, Hexing Road, Shixin Industrial Area, Zhangmutou Town, DongGuan,China

TEL: 0769-82022530      FAX: 0769-82022531

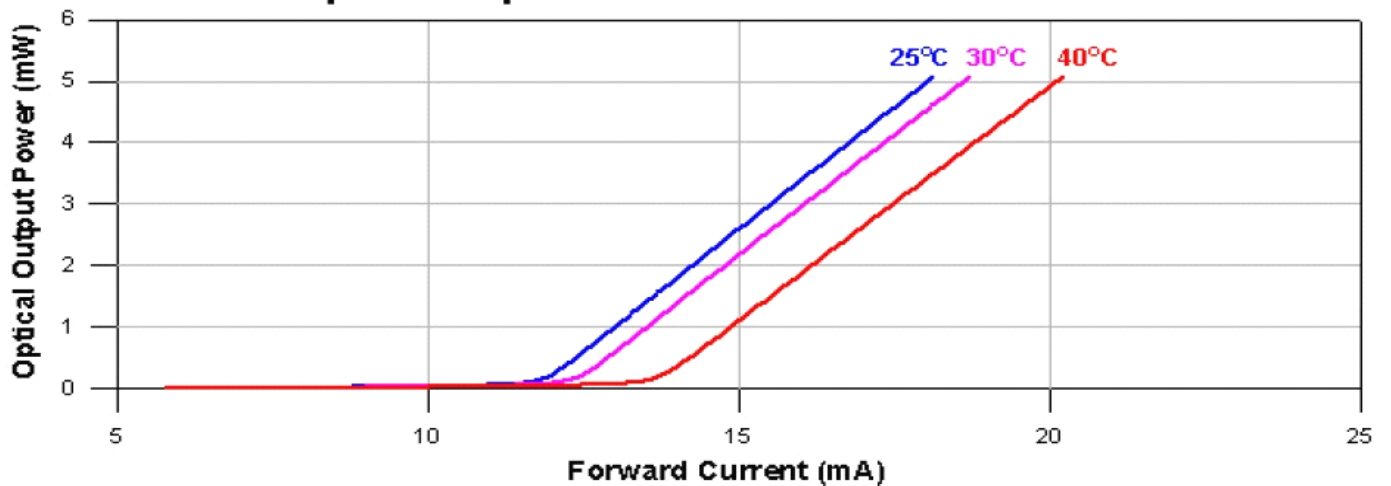
■ Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I <sub>th</sub>	P <sub>o</sub> =5mW	-	12	25	mA	
Operating Current	I <sub>op</sub>	P <sub>o</sub> =5mW	-	18	25	mA	
Operating Voltage	V <sub>op</sub>	-	-	2.1	2.5	Volt	
Slope Efficiency	$\eta$	4mW-1mW	0.4	0.8	-	mW/mA	
		I <sub>4mW</sub> -I <sub>1mW</sub>					
Monitor Current	I <sub>m</sub>	P <sub>o</sub> =5mW	0.05	0.3	0.5	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P <sub>o</sub> =5mW	5	9	12	deg.
	Perpendicular	$\theta \perp$	P <sub>o</sub> =5mW	30	36	42	deg.
Lasing Wavelength	$\lambda$	P <sub>o</sub> =5mW	640	655	660	nm	

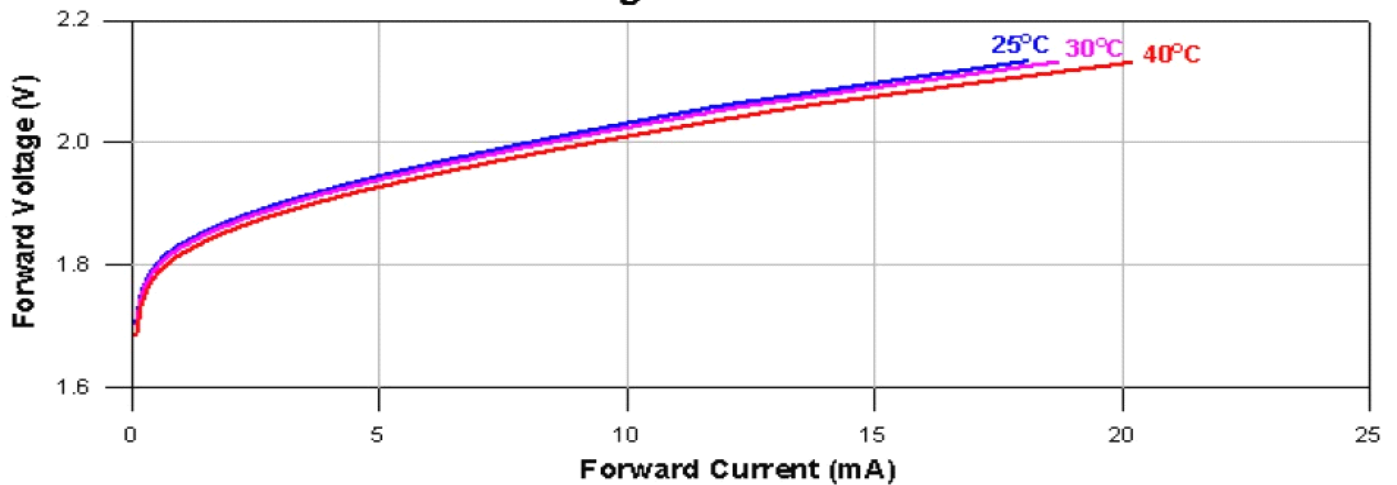
◎  $\theta //$  and  $\theta \perp$  are defined as the angle within which the intensity is 50% of the peak value.

■ Typical characteristic curves

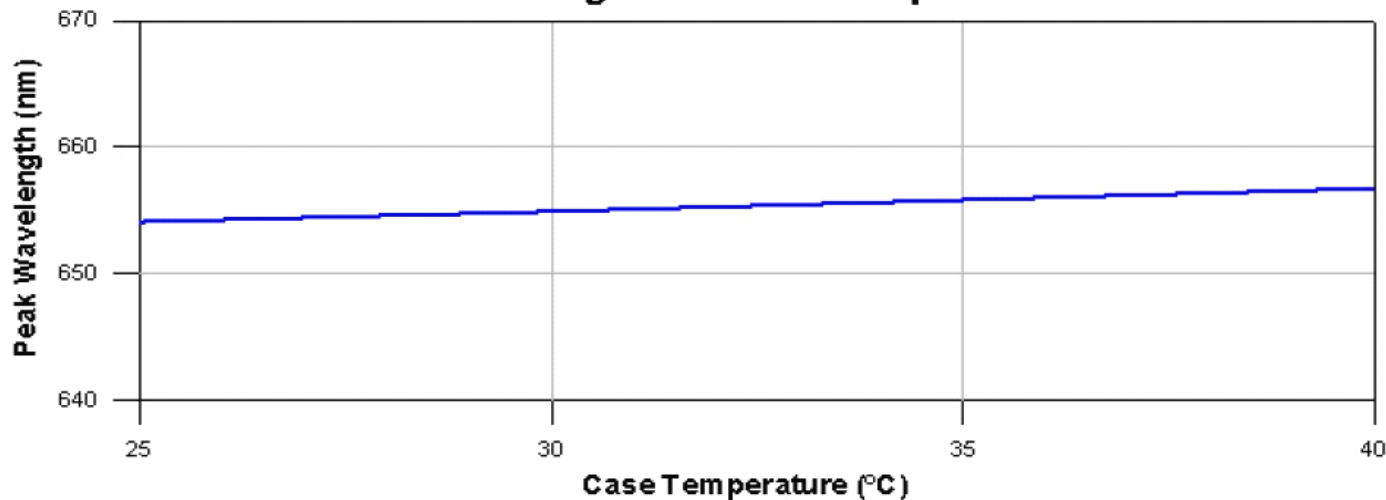
**Optical Output Power v.s. Forward Current**



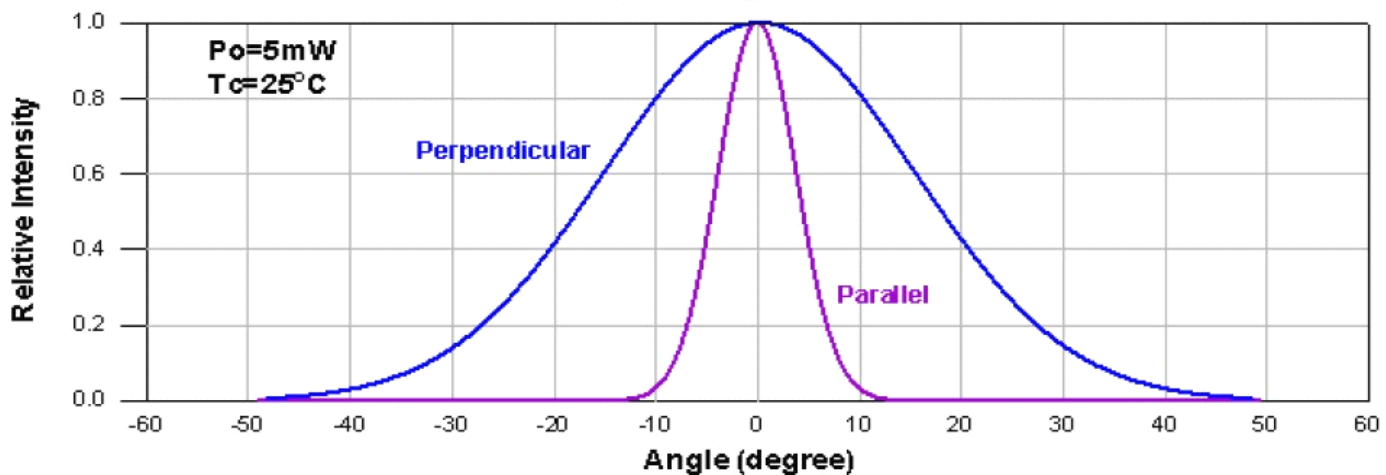
**Forward Voltage v.s. Forward Current**



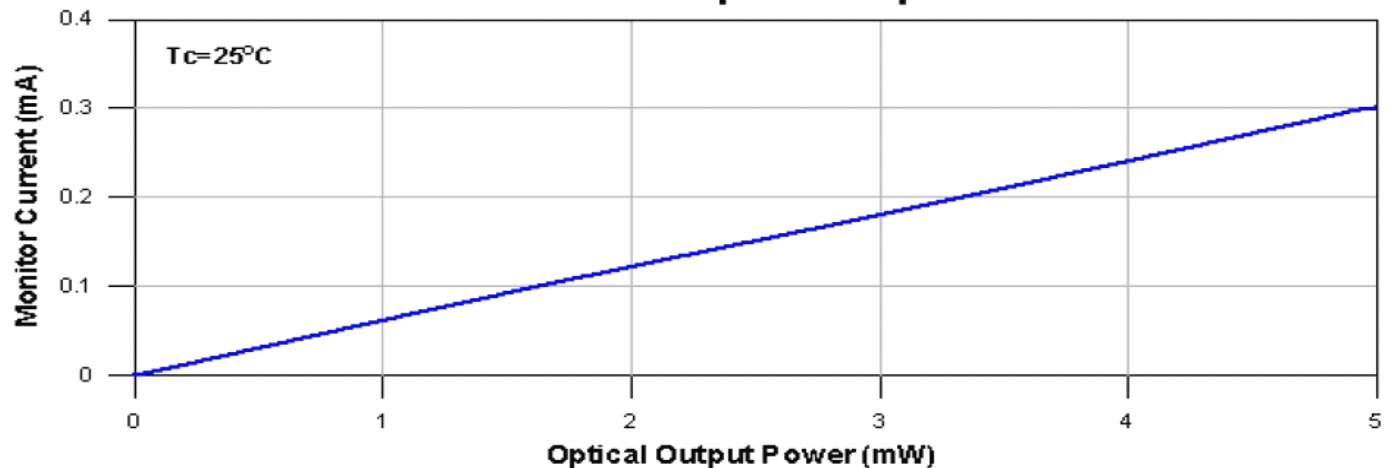
**Peak Wavelength v.s. Case Temperature**



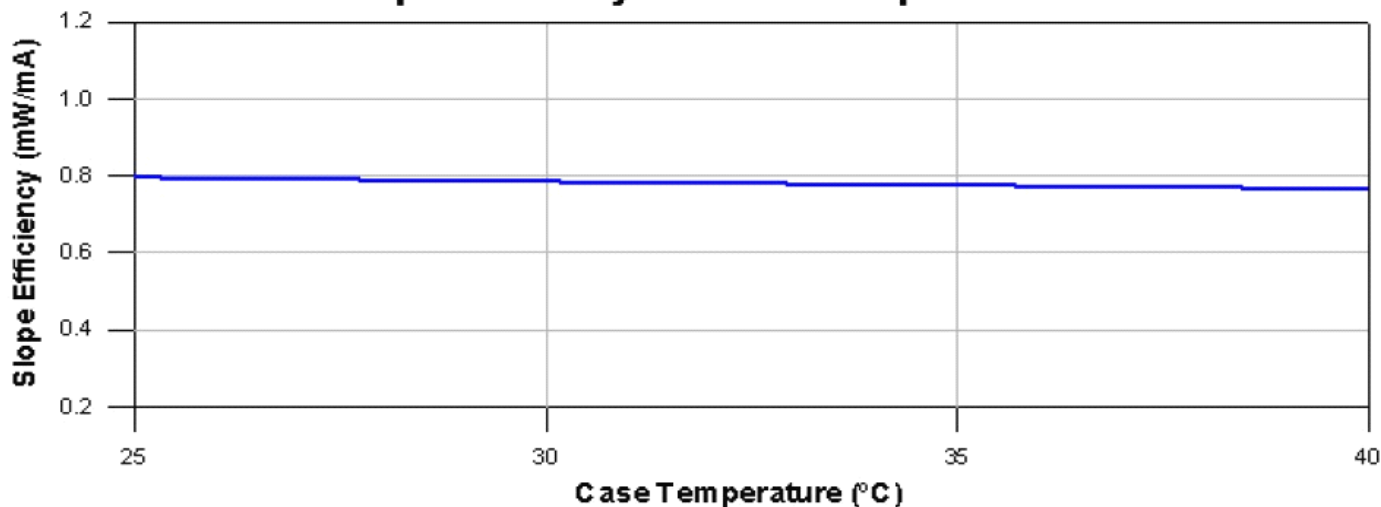
**Far-Field Pattern**



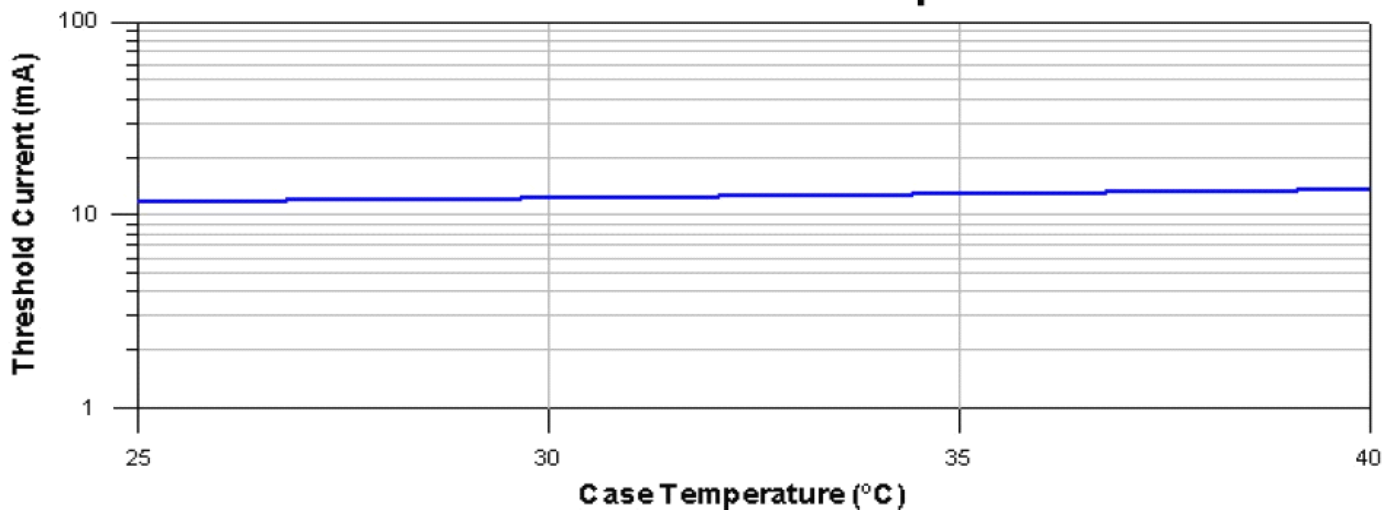
**Monitor Current v.s. Optical Output Power**



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



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



---

Dongguan Yuquan Electronics Co.,Ltd

No. 44, Hexing Road, Shixin Industrial Area, Zhangmutou Town, DongGuan,China

TEL: 0769-82022530      FAX: 0769-82022531