

## 830nm Laser Diode

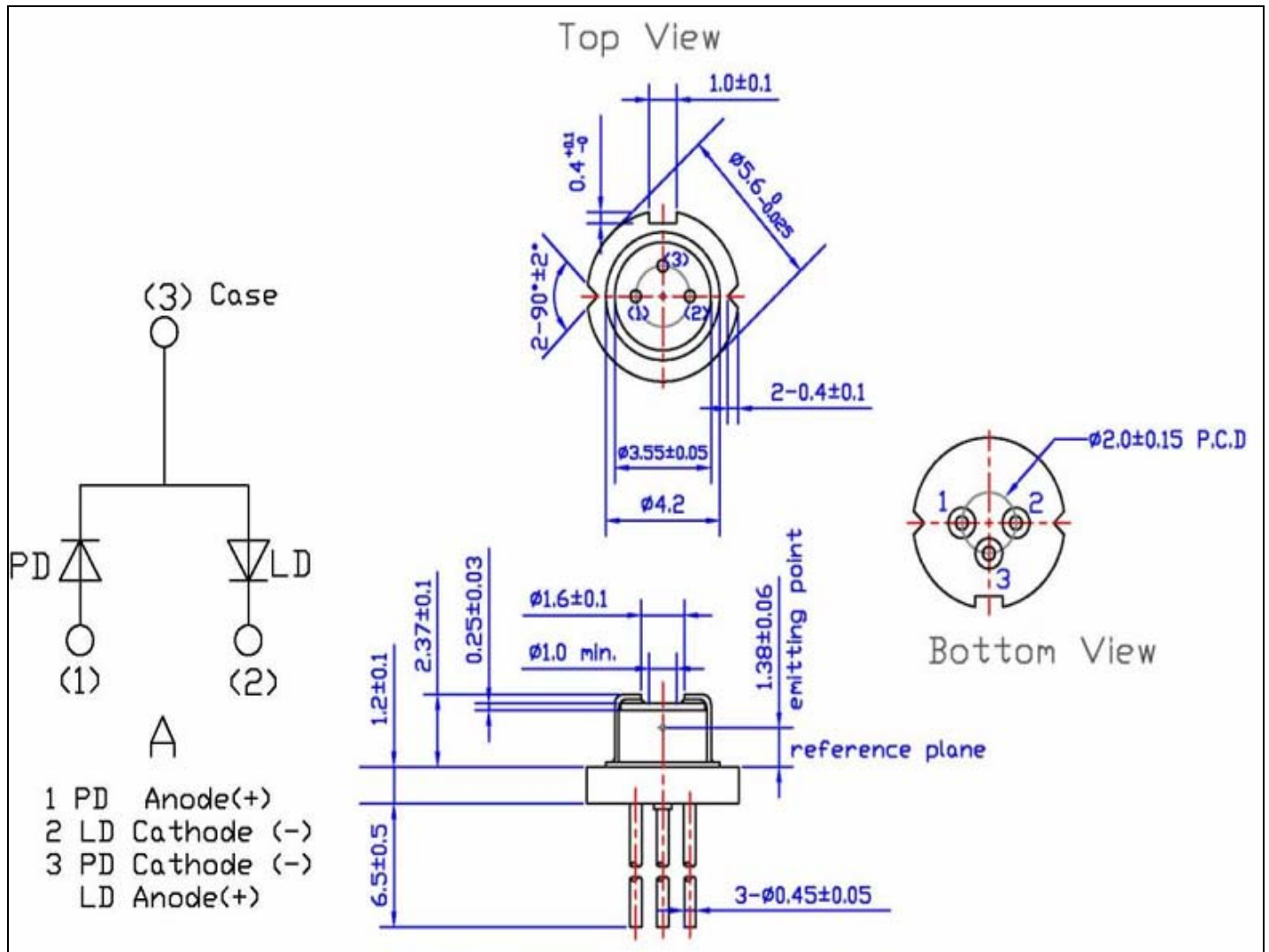
### RLD83000100

#### ■ 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(Tc=25°C)

Parameter		Symbols	Ratings	Units
Optical Output		Po	100	mW
Reverse Voltage	Laser	Vr	2	V
	PIN PD	Vr(PIN)	30	V
Operating Temperature		Top	-10~+50	°C
Storage Temperature		Tstg	-40~+85	°C

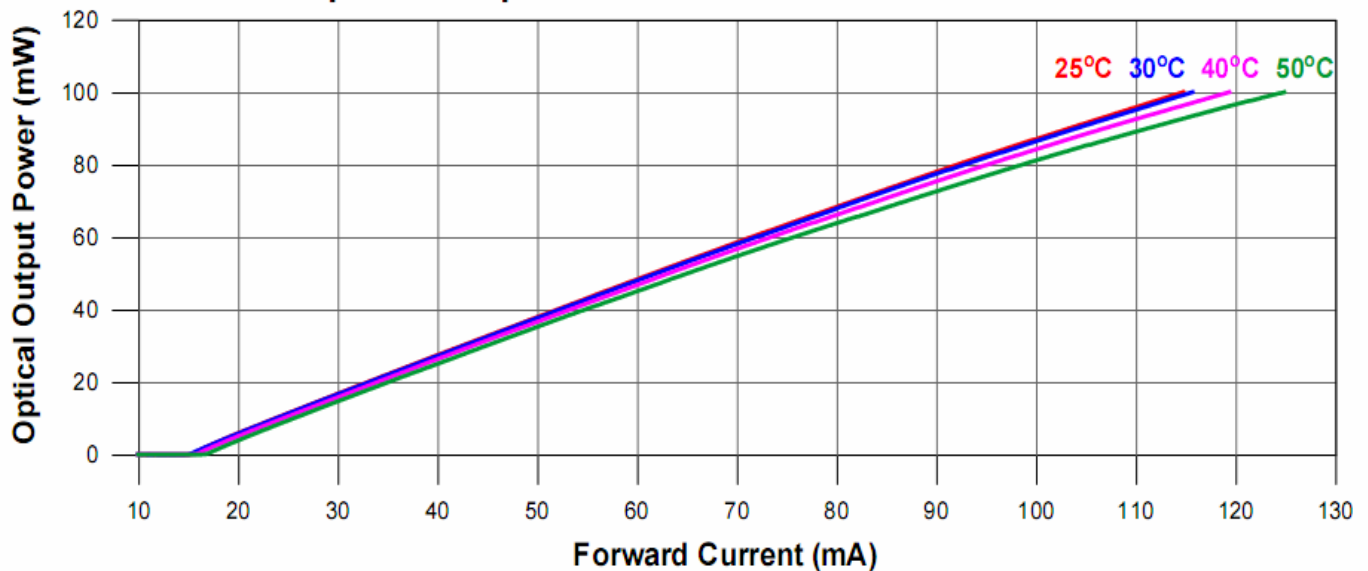
### Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Units	
Threshold Current	I <sub>th</sub>	-	-	14	20	mA	
Operating Current	I <sub>op</sub>	P <sub>o</sub> =100mW	-	115	135	mA	
Operating Voltage	V <sub>op</sub>	-	-	2.1	2.6	Volts	
Slope Efficiency	$\eta$	75mW-25mW	-	1.0	-	mW/mA	
		I <sub>75mW</sub> -I <sub>25mW</sub>					
Monitor Current	I <sub>m</sub>	P <sub>o</sub> =100mW	0.05	0.2	1	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P <sub>o</sub> =100mW	-	10	15	deg.
	Perpendicular	$\theta \perp$	P <sub>o</sub> =100mW	-	17	22	deg.
Lasing Wavelength*	$\lambda$	P <sub>o</sub> =100mW	820	830	840	nm	

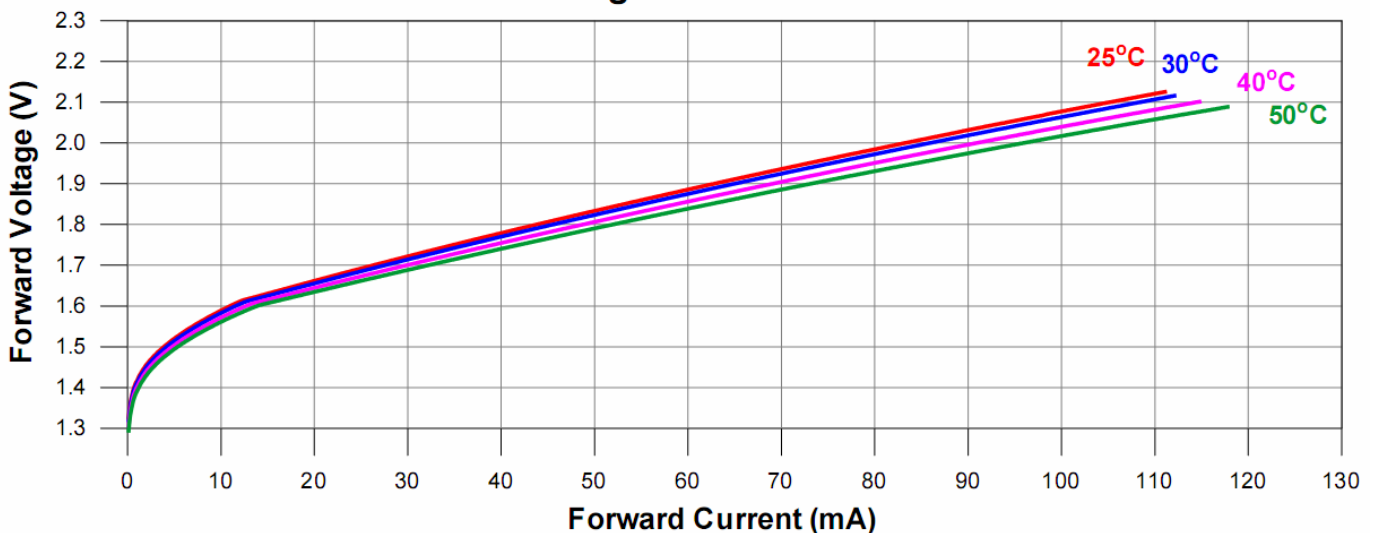
◎ $\theta //$  and  $\theta \perp$  are defined as the angle within which the intensity is 50% of the peak value.

### Typical characteristic curves

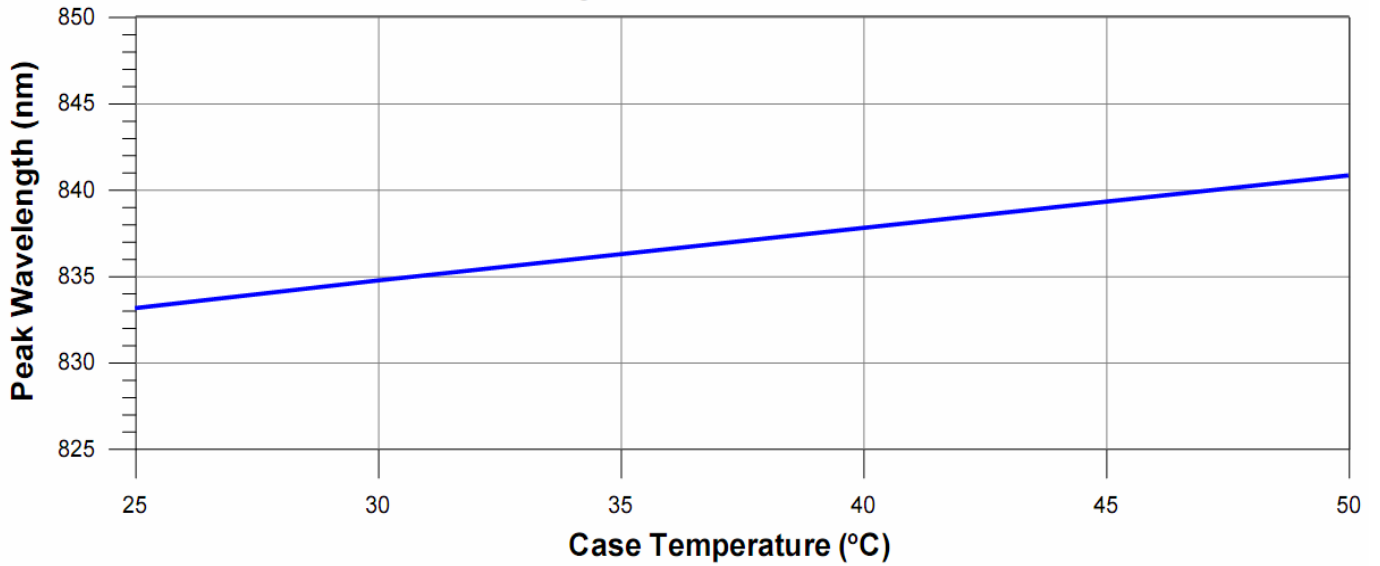
#### Optical Output Power v.s. Forward Current



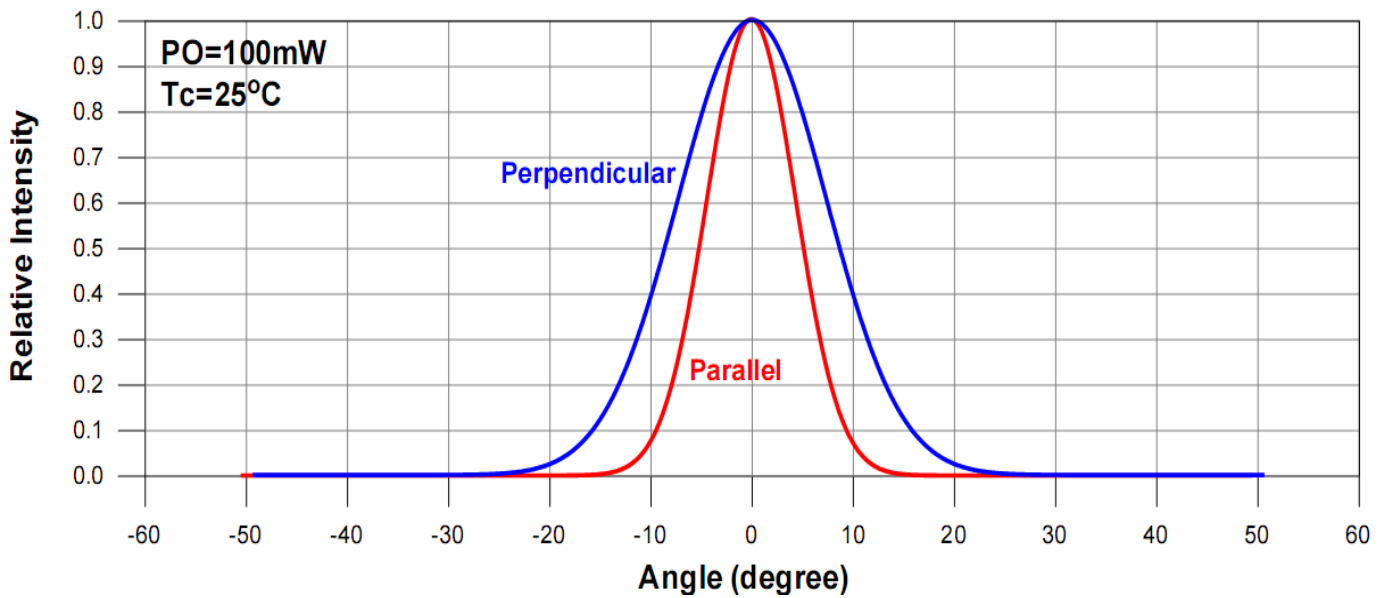
#### Forward Voltage v.s. Forward Current



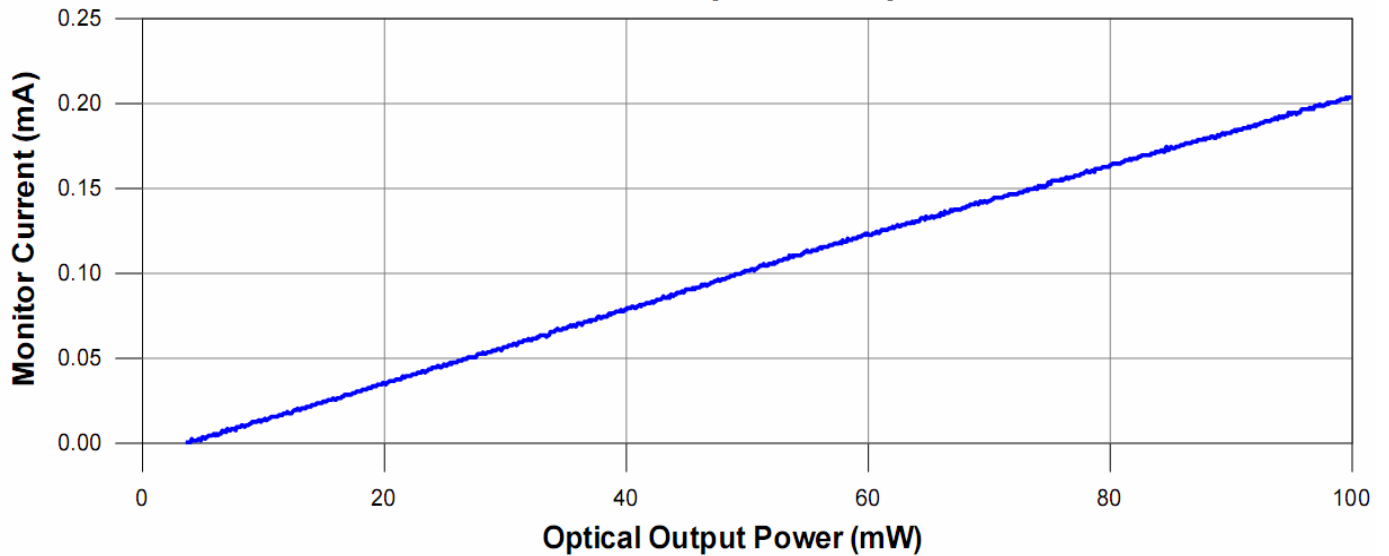
### Peak Wavelength v.s. Case Temperature



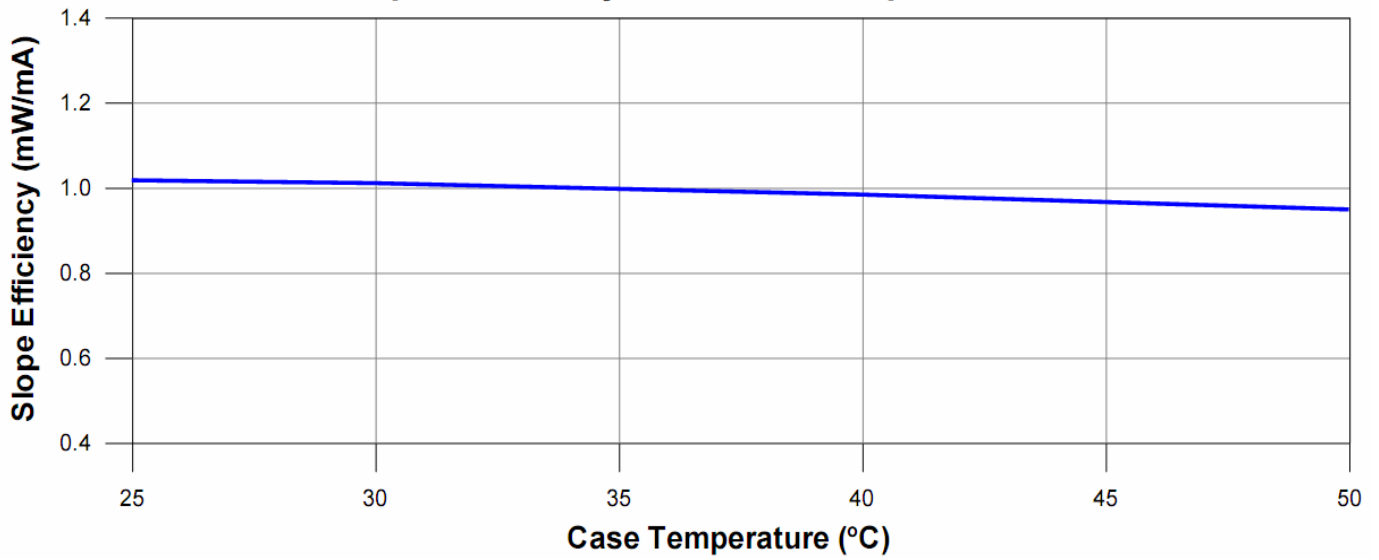
### Far-Field Pattern



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



### Slope Efficiency v.s. Case Temperature



### Threshold Current v.s. Case Temperature

