

635nm Red Laser Diode

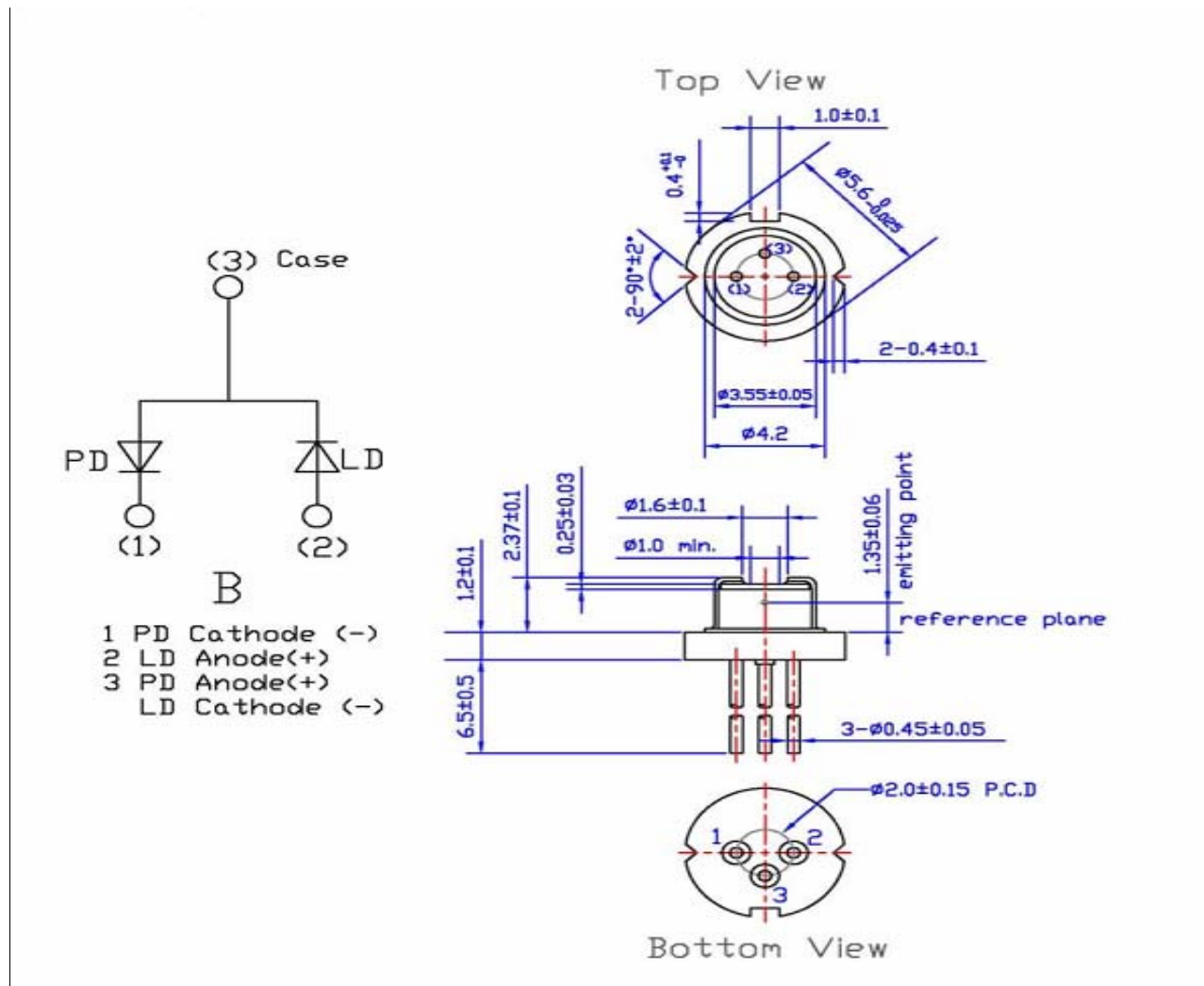
RLD63500503

■ Specifications

(1) Device: Laser Diode

(2) Structure: TO-18(ϕ 5.6mm)

■ External dimensions(Unit : mm)



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

Parameter		Symbol	Value	Unit
Optical Output		Po	7	mW
Reverse Voltage	Laser	Vr	2	V
	PIN PD	Vr(PIN)	30	V
Operating Temperature		Top	-10~+40	$^\circ\text{C}$
Storage Temperature		Tstg	-15~+85	$^\circ\text{C}$

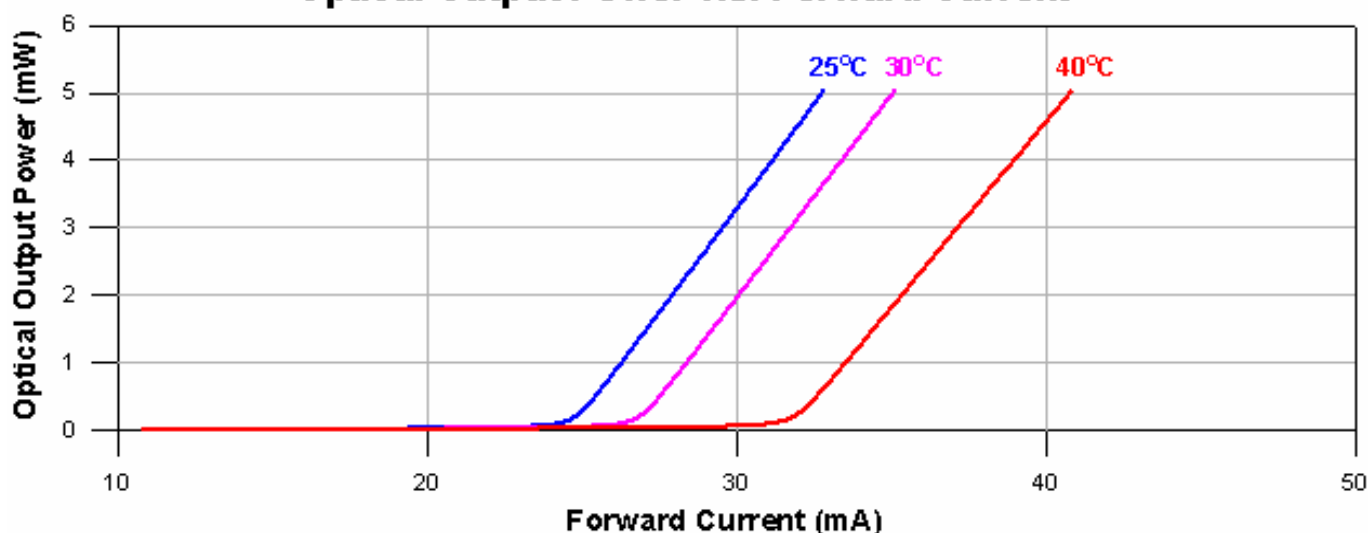
■ Electrical and Optical Characteristics(Tc=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I _{th}	-	-	25	30	mA
Operating Current		I _{op}	Po=5mW	-	35	40	mA
Operating Voltage		V _{op}	-	-	2.2	2.5	Volt
Slope Efficiency		η	3.75mW-1.25mW	0.5	0.6	-	mW/mA
			I _{3.75mW} -I _{1.25mW}				
Monitor Current		I _m	Po=5mW, V _r =0V	0.05	0.1	0.2	mA
Beam Divergence (FWHM)	Parallel	$\theta //$	Po=5mW	6	7.5	11	deg.
	Perpendicular	$\theta \perp$	Po=5mW	30	33	38	deg.
Lasing Wavelength		λ	Po=5mW	630	638	640	nm

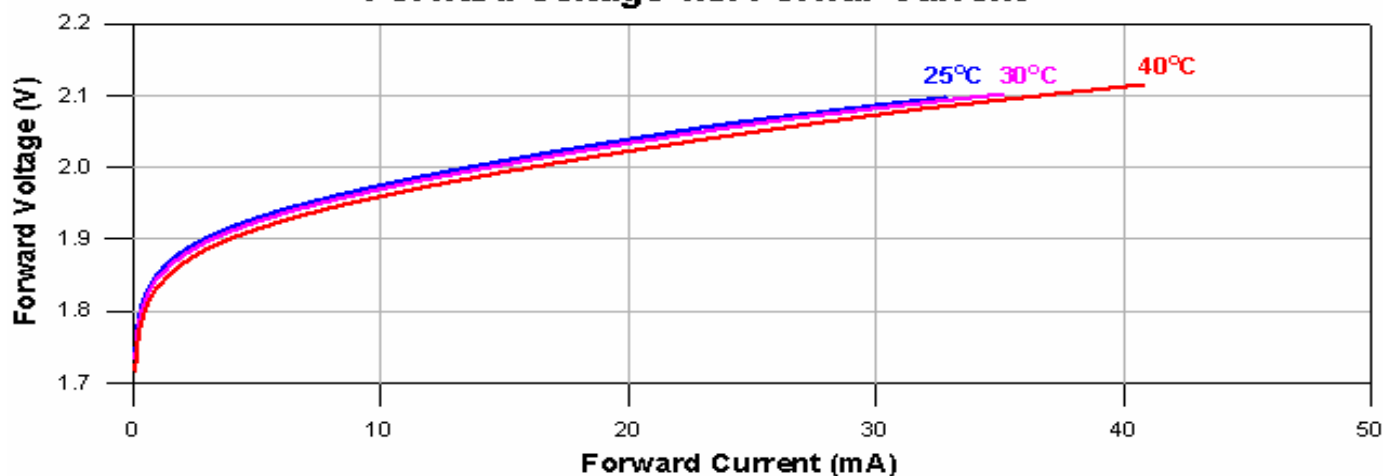
◎ $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

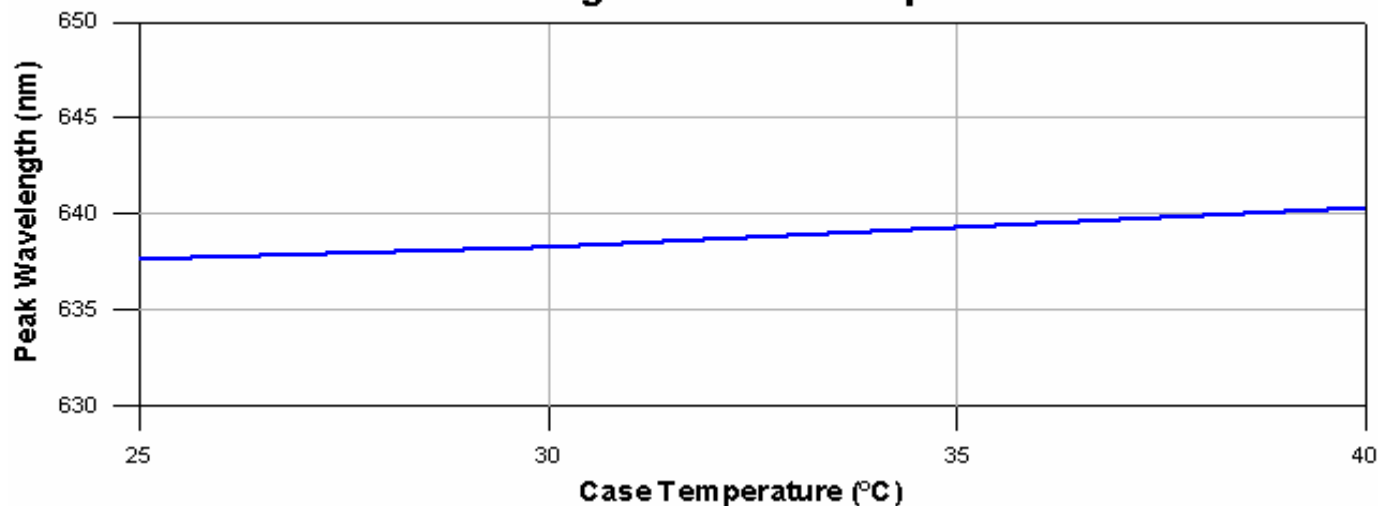
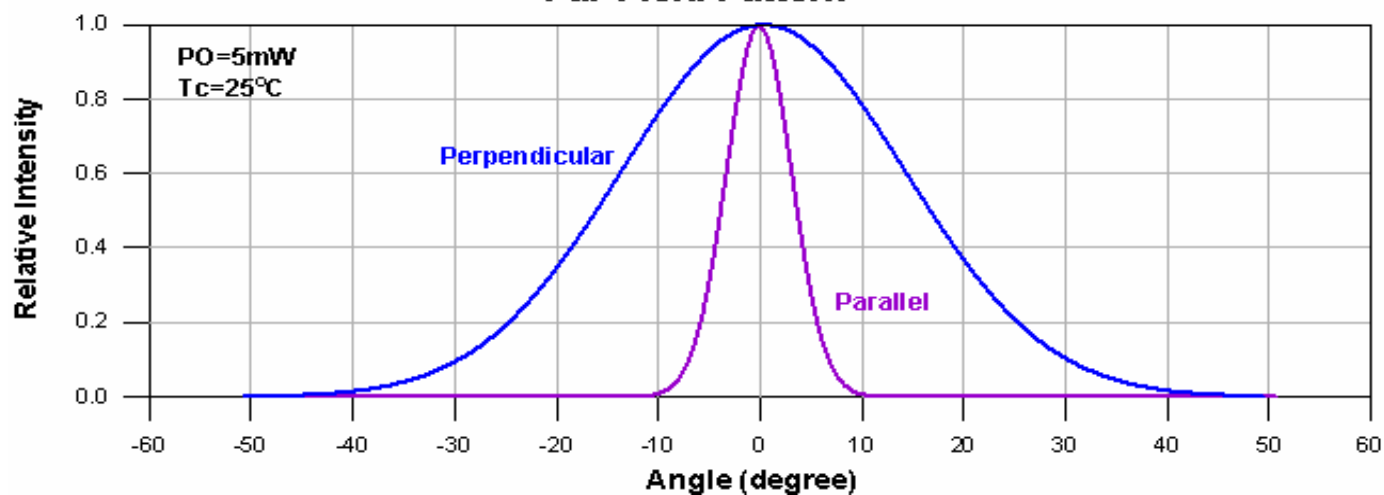
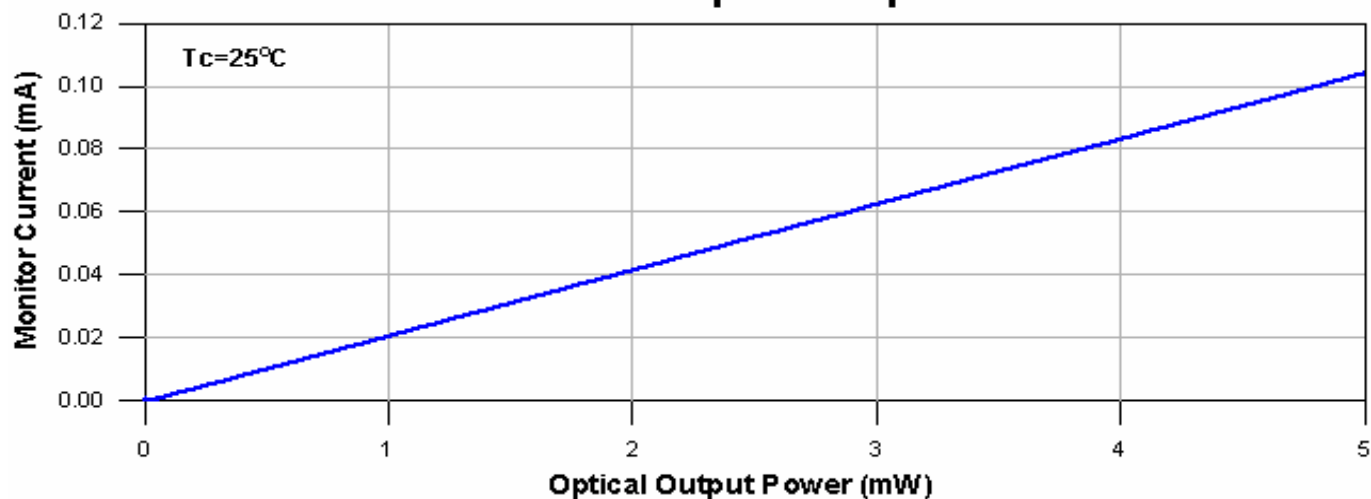
■ Typical characteristic curves

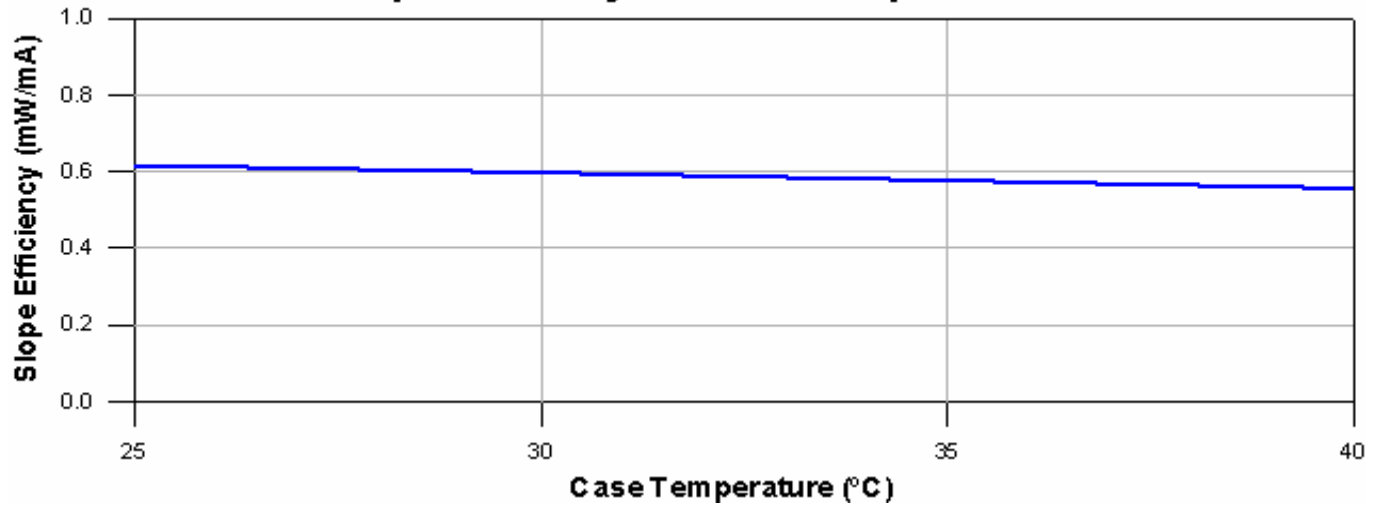
Optical Output Power v.s. Forward Current



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**