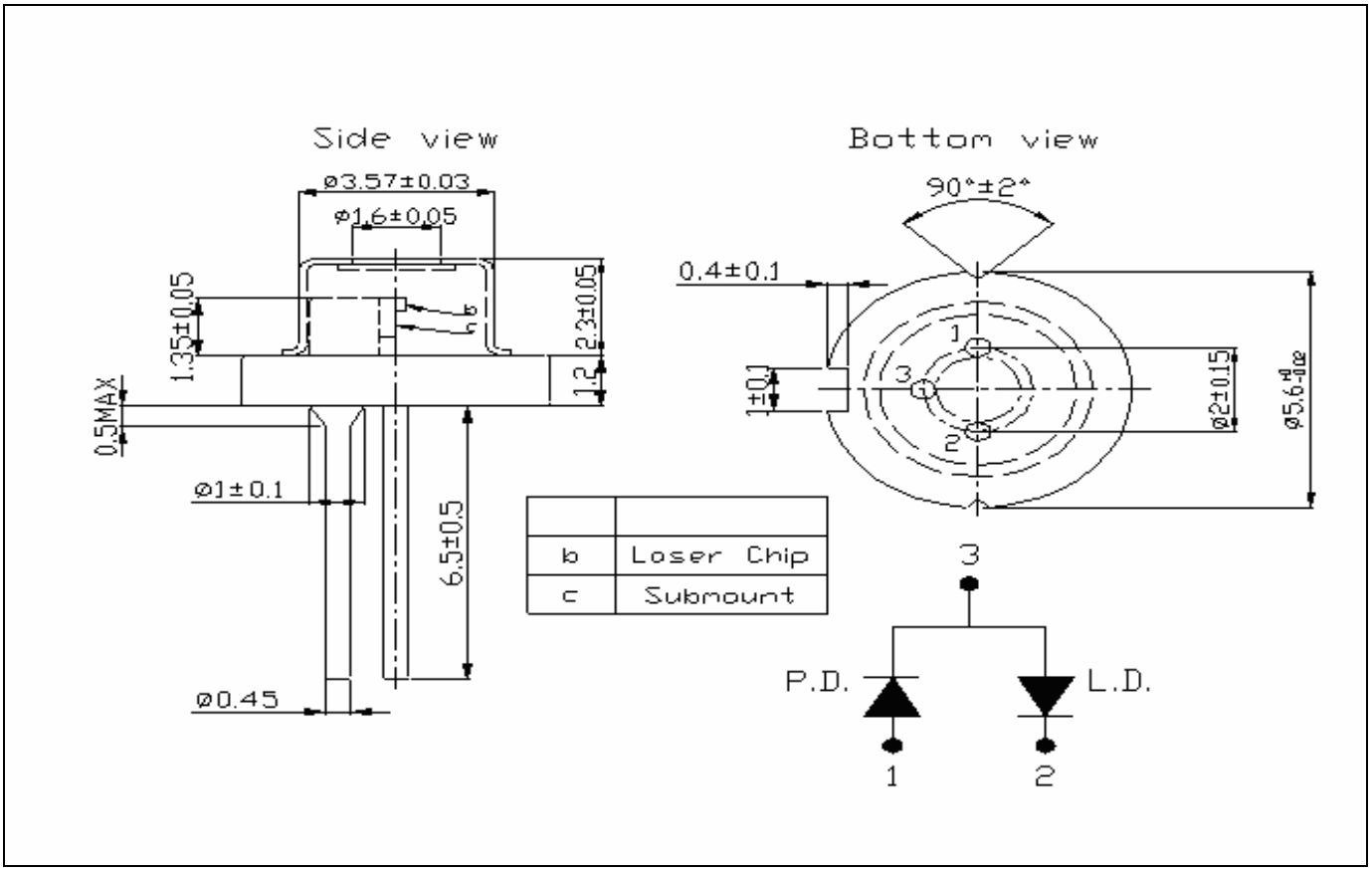
635nm Red Laser Diode
RLD63500101

■Specifications

(1) Device: Laser Diode

(2) Structure: TO-18(ϕ 5.6mm)

■External dimensions(Unit : mm)



■Absolute Maximum Ratings(Tc=25℃)

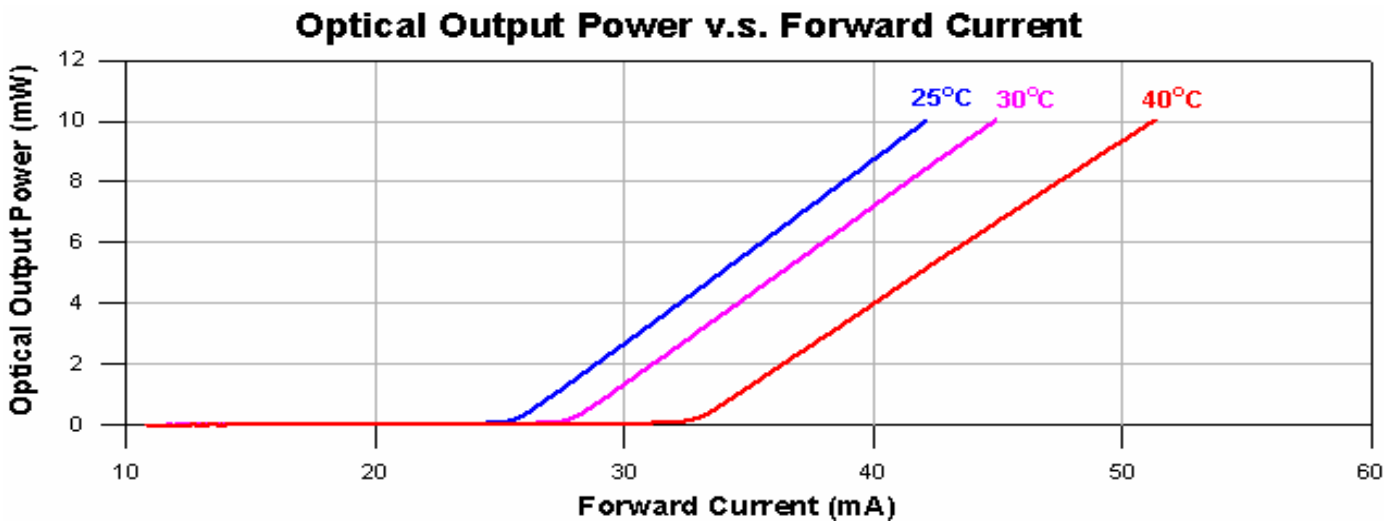
Parameter		Symbols	Value	Units
Optical Output		Po	**12**	mW
Reverse Voltage	Laser	Vr	**2**	V
	PIN PD	Vr(PIN)	**30**	V
Operating Temperature		Top	-10～+40	℃
Storage Temperature		Tstg	-40～+85	℃

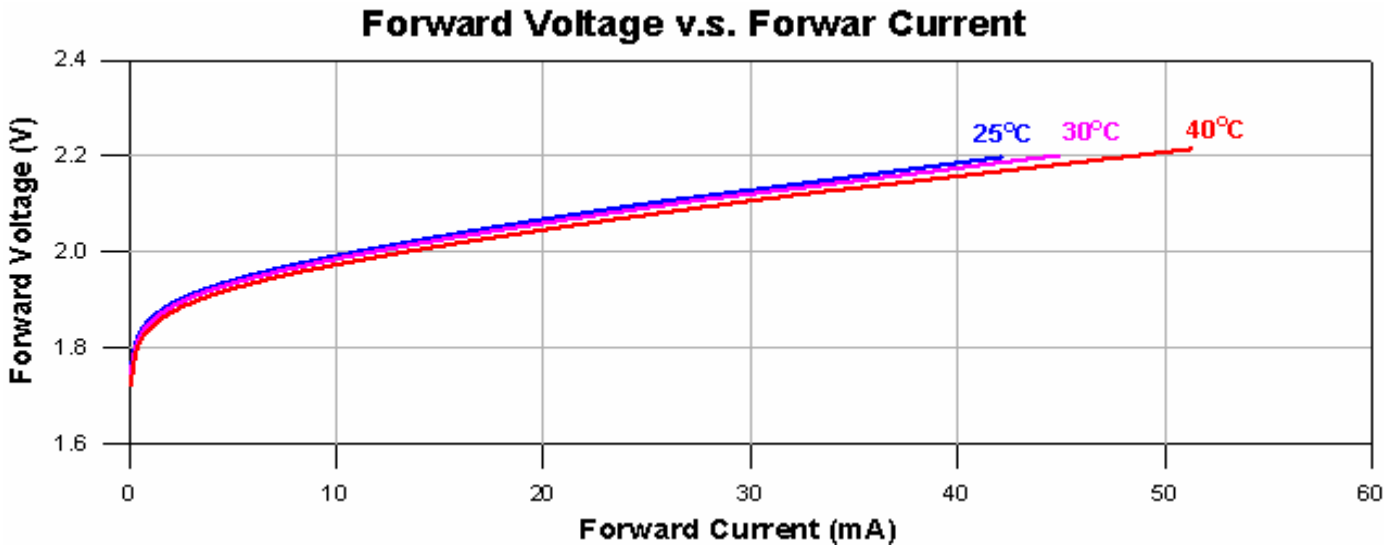
■Electrical and Optical Characteristics(Tc=25℃)

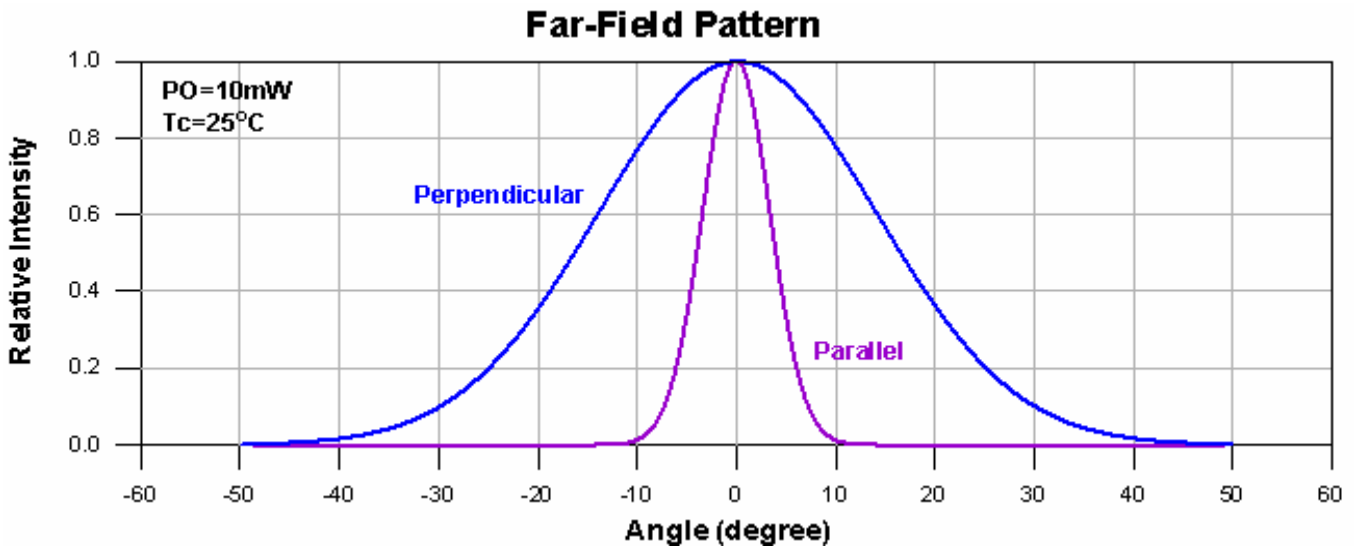
Parameter		Symbols	Conditions	Min.	Typ.	Max.	Units
		Ith		-	30	40	mA
Operating Current		Iop	Po=10mW	-	45	60	mA
Operating Voltage		Vop	-	-	2.2	2.6	Volts
Slope Efficiency		η	7mW-3mW / I_{7mW}-I_{3mW}	0.3	0.6	-	mW/mA
Monitor Current		Im	Po=10mW	0.05	0.15	0.4	mA
Beam Divergence (FWHM)	Parallel	θ //	Po=10mW	6	8	12	deg.
	Perpendicular	θ ⊥	Po=10mW	28	33	37	deg.
Lasing Wavelength		λ	Po=10mW	630	638	642	nm

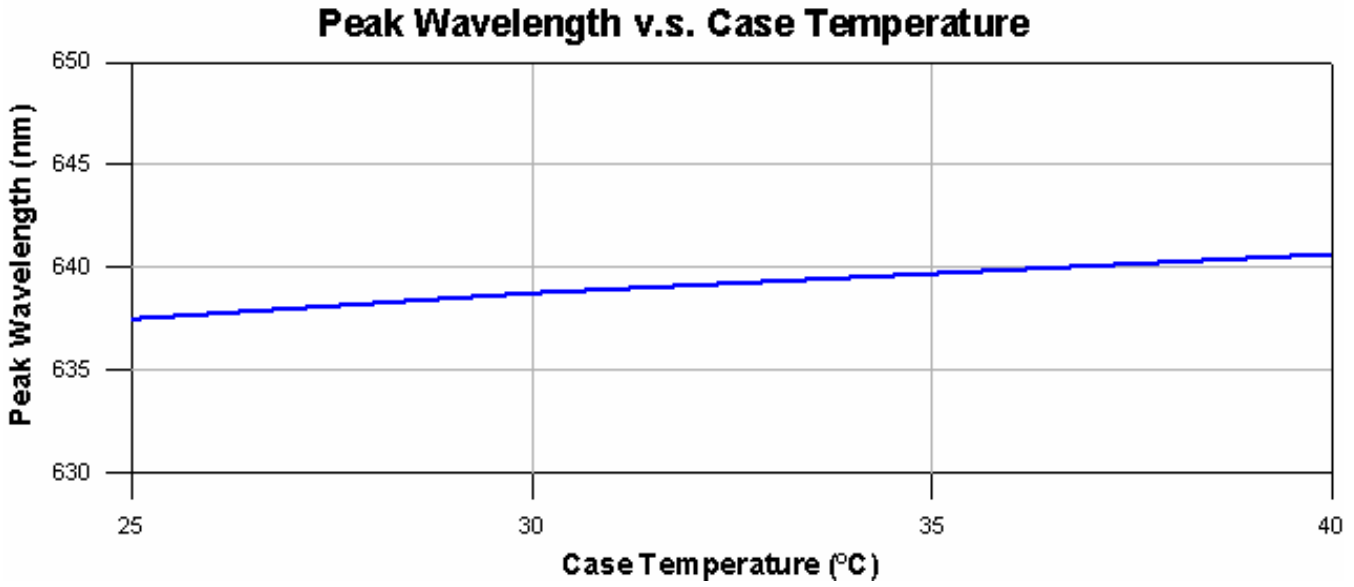
◎ θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

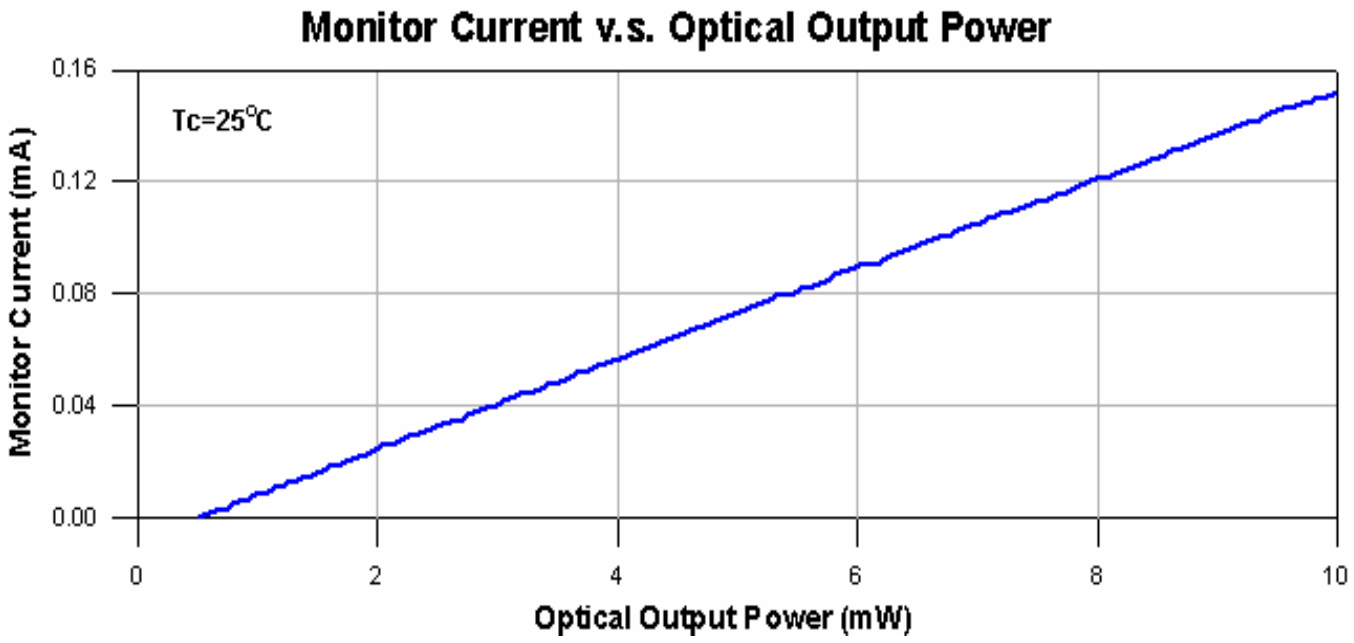
■Typical characteristic curves

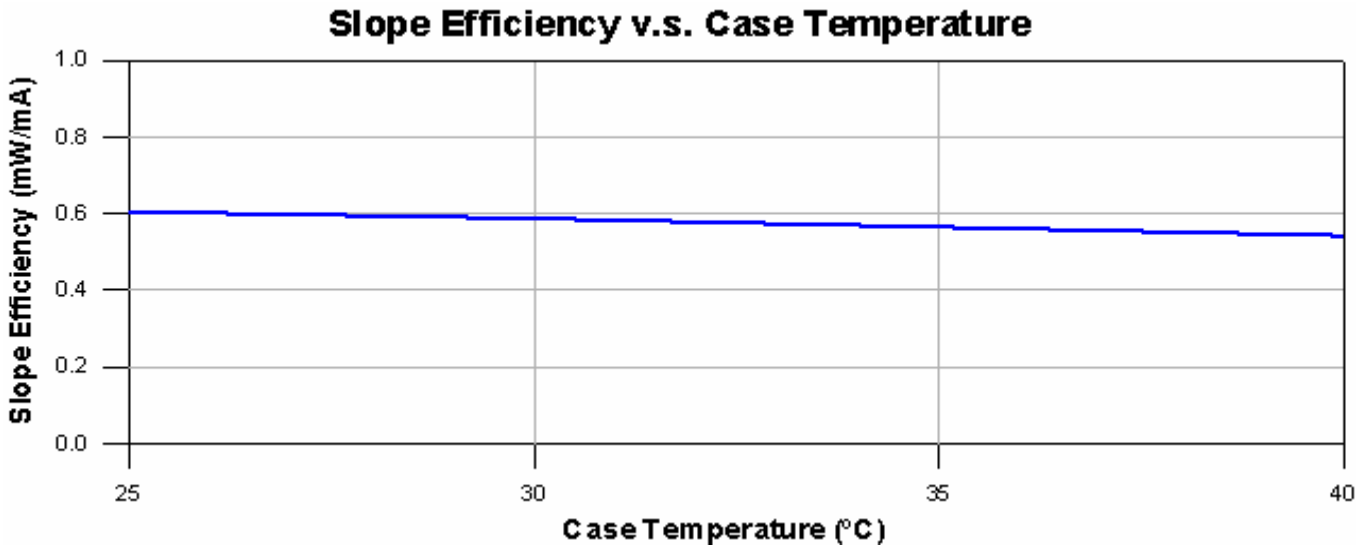


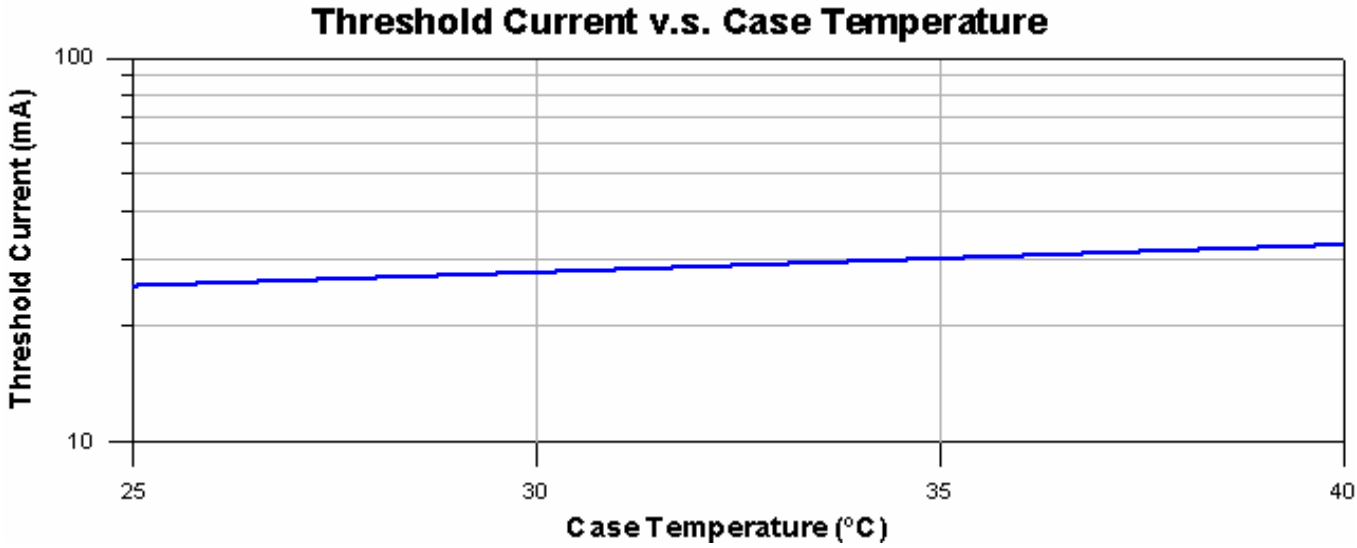



Far-Field Pattern
PO=10mW
Tc=25°C
Perpendicular
Parallel
Relative Intensity
1.0
0.8
0.6
0.4
0.2
0.0
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
Angle (degree)


Peak Wavelength v.s. Case Temperature
Peak Wavelength (nm)
650
645
640
635
630
25
30
35
40
Case Temperature (°C)


Monitor Current v.s. Optical Output Power
Tc=25°C
Monitor Current (mA)
0.16
0.12
0.08
0.04
0.00
0
2
4
6
8
10
Optical Output Power (mW)


Slope Efficiency v.s. Case Temperature
Slope Efficiency (mW/mA)
1.0
0.8
0.6
0.4
0.2
0.0
25
30
35
40
Case Temperature (°C)


Threshold Current v.s. Case Temperature
Threshold Current (mA)
100
10
25
30
35
40
Case Temperature (°C)