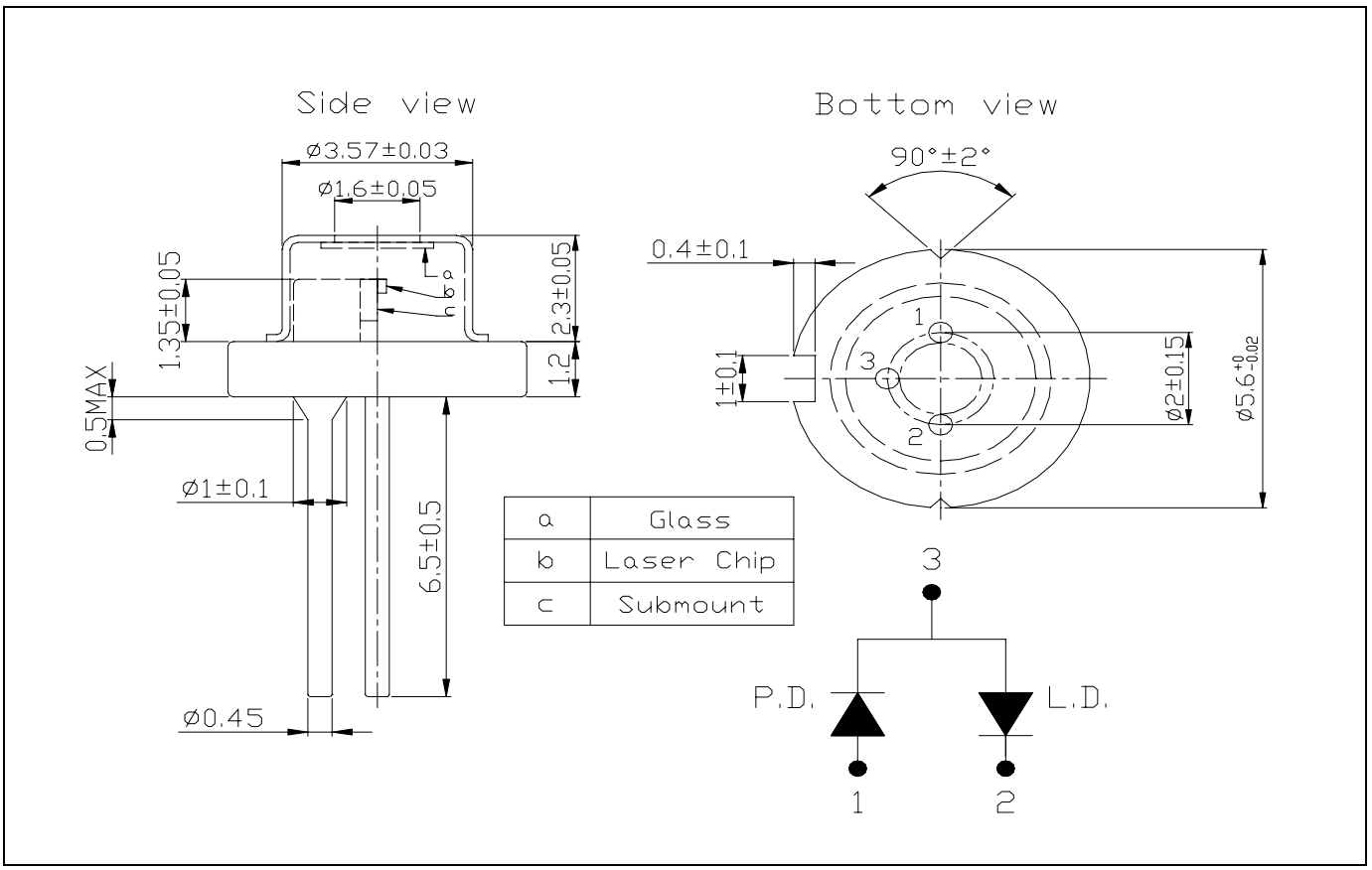
650nm Red Laser Diode
RLD65000101

■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℃)

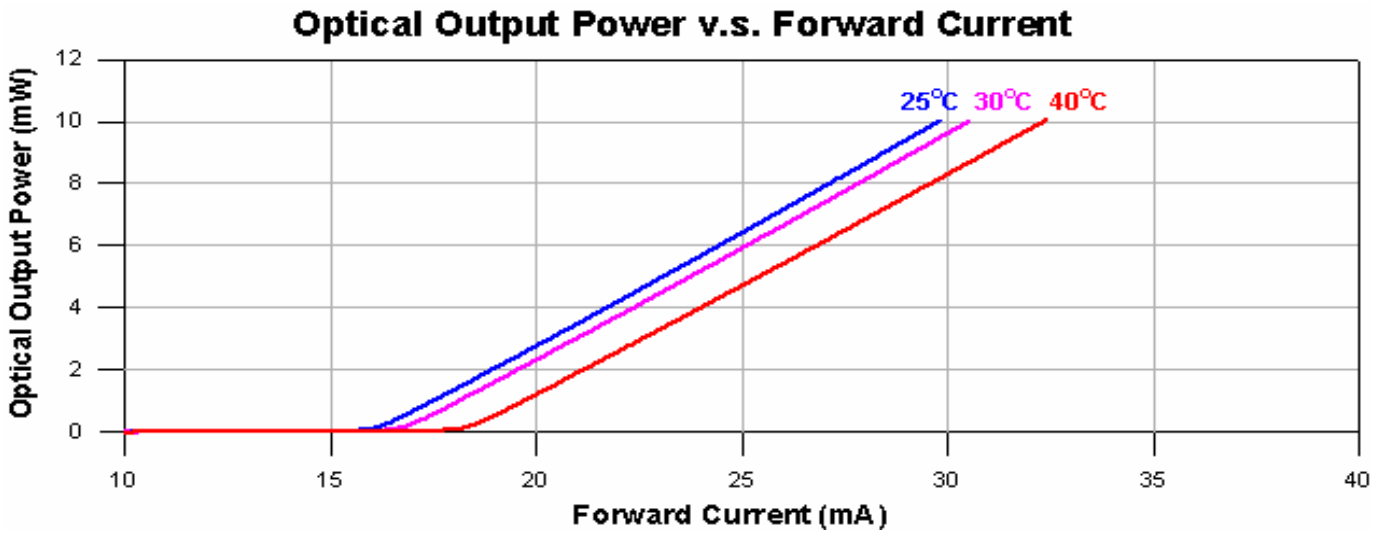
Parameter		Symbol	Value	Unit
Optical Output		Po	**12**	mW
Reverse Voltage	Laser	Vr	**2**	V
	PIN PD	Vr(PIN)	**30**	V
Operating Temperature		Top	-10～+40	℃
Storage Temperature		Tstg	-15～+85	℃

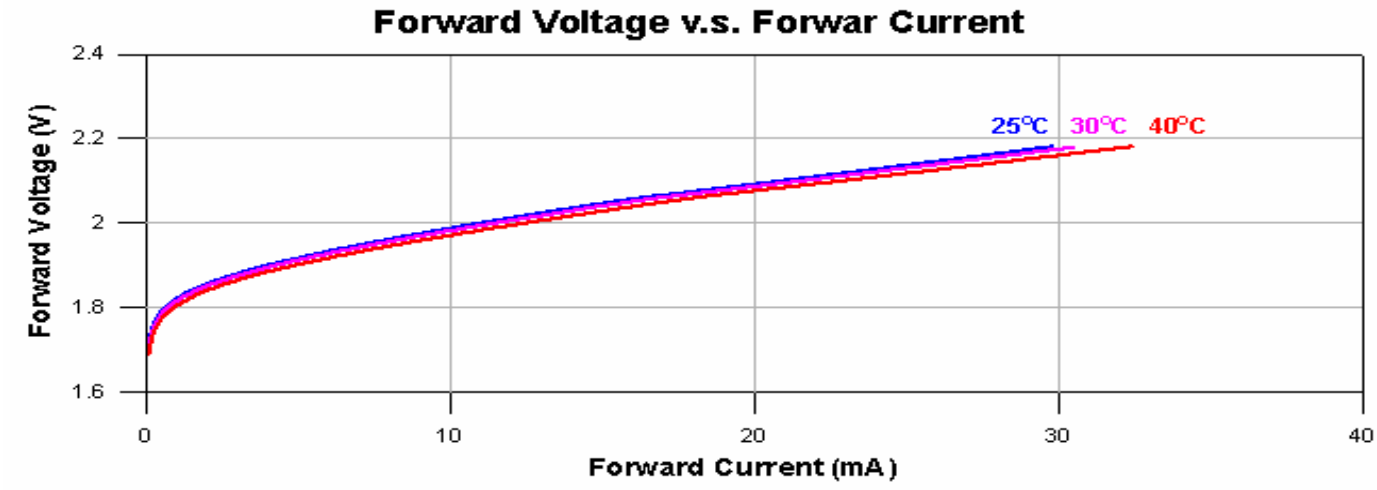
■Electrical and Optical Characteristics(Tc=25℃)

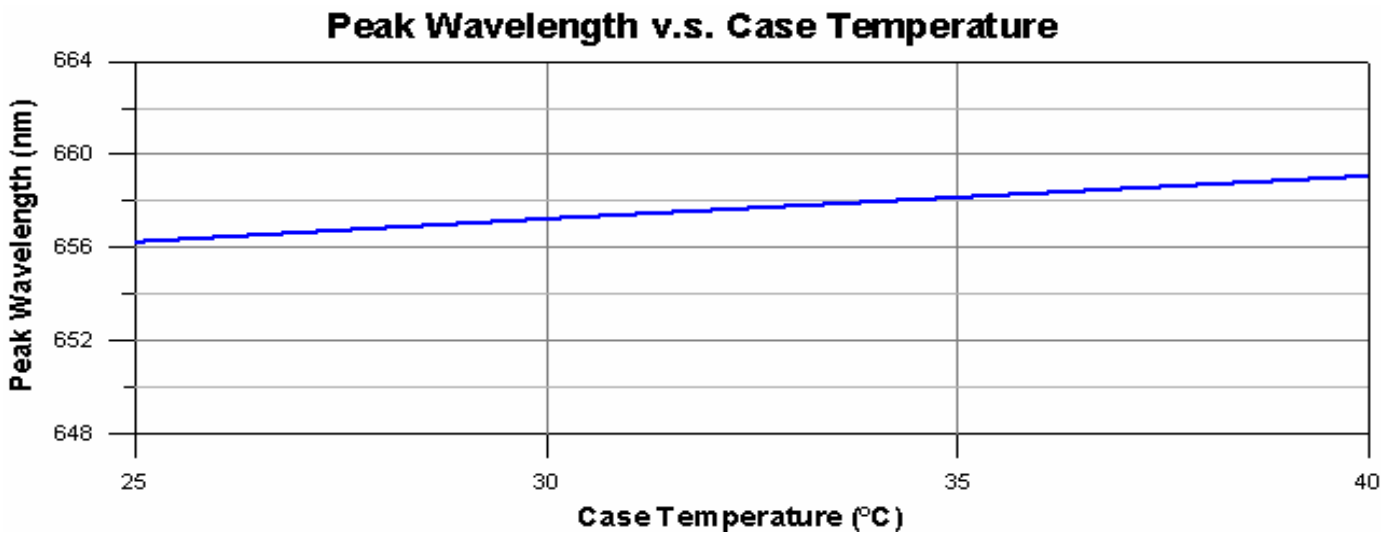
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith		-	16	26	mA
Operating Current		Iop	Po=10mW	-	30	40	mA
Operating Voltage		Vop	-	-	2.2	2.6	Volt
Slope Efficiency		η	7mW-3mW / I_{7mW}-I_{3mW}	0.3	0.7	-	mW/mA
Monitor Current		Im	Po=10mW	0.1	0.3	1	mA
Beam Divergence (FWHM)	Parallel	θ //	Po=10mW	5	8	12	deg.
	Perpendicular	θ ⊥	Po=10mW	28	33	38	deg.
Lasing Wavelength		λ	Po=10mW	640	655	665	nm

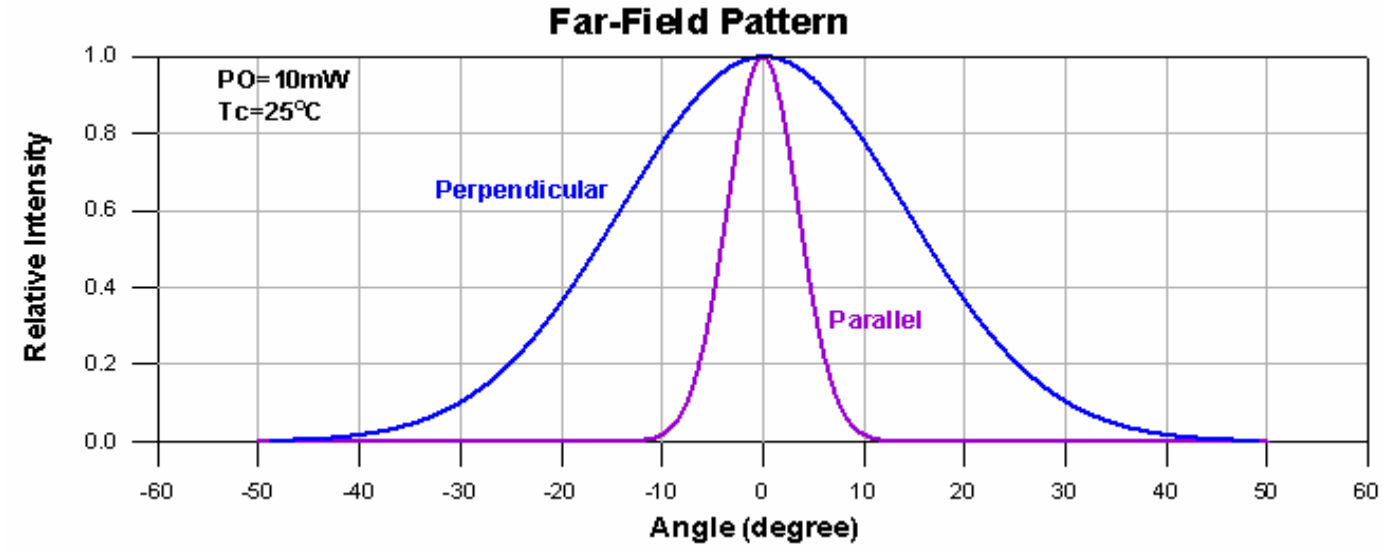
◎ θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

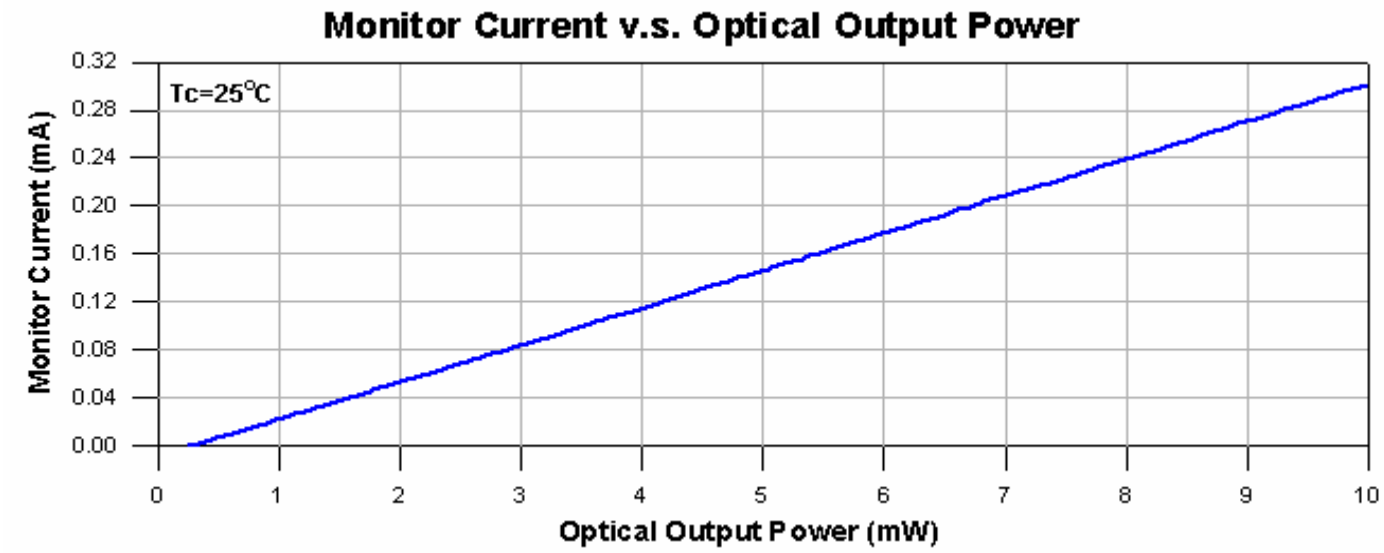
■Typical characteristic curves

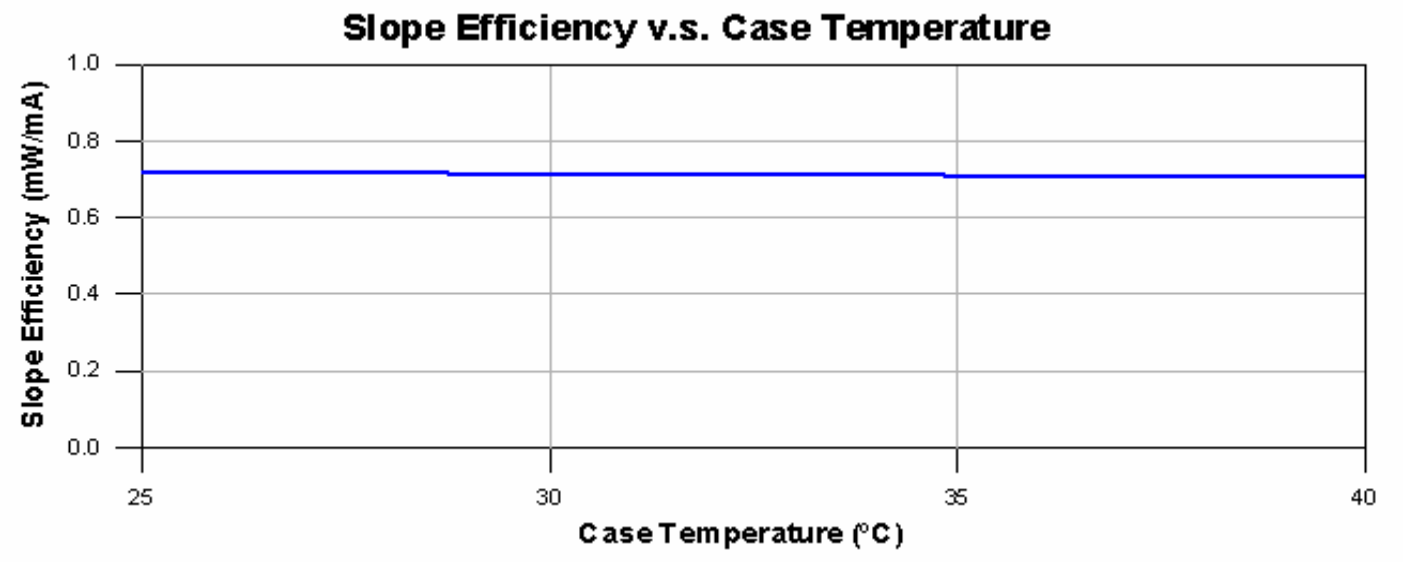


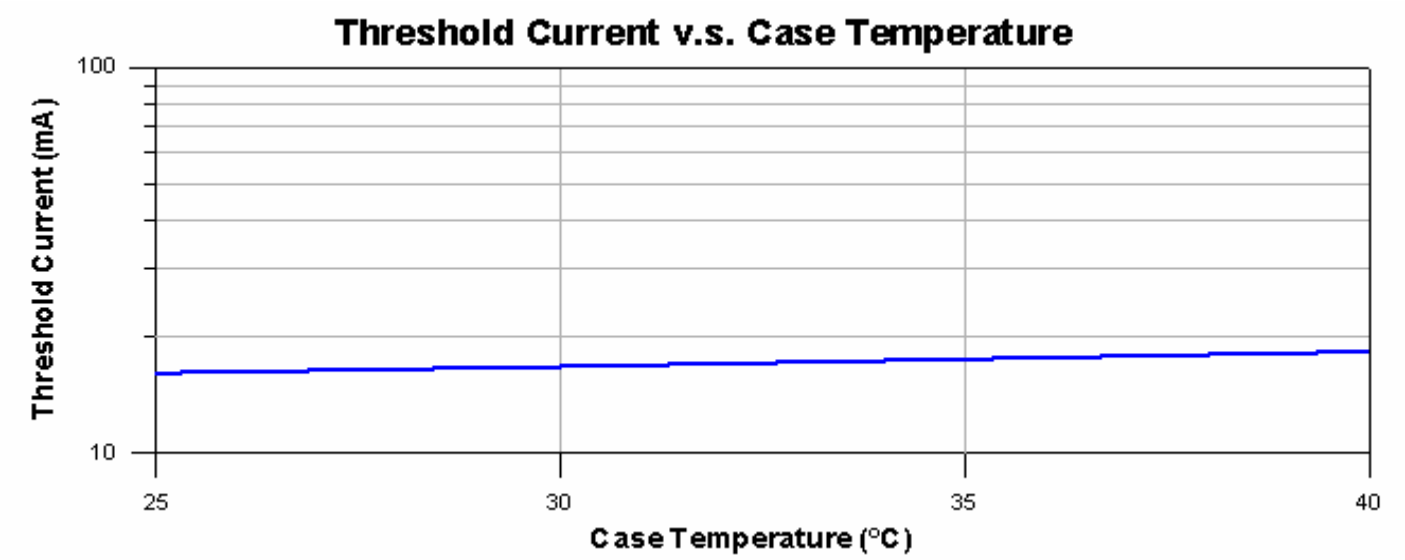



Peak Wavelength v.s. Case Temperature
Peak Wavelength (nm)
664
660
656
652
648
25
30
35
40
Case Temperature (°C)


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)


Monitor Current v.s. Optical Output Power
Tc=25°C
Monitor Current (mA)
0.32
0.28
0.24
0.20
0.16
0.12
0.08
0.04
0.00
0
1
2
3
4
5
6
7
8
9
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)