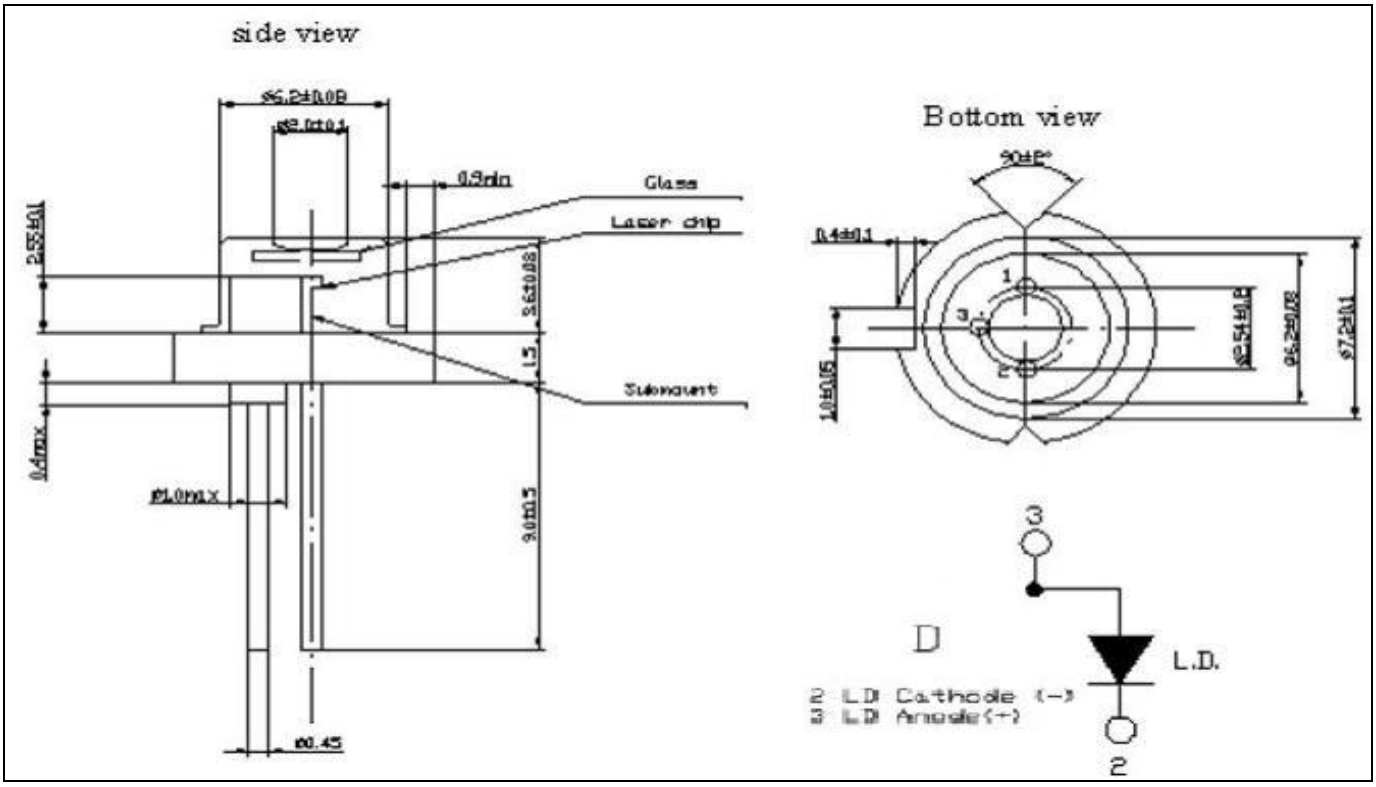
980nm Red Laser Diode
RLD980500

■Specifications

(1) Device: Laser Diode

(2) Structure: TO-5(ϕ 9mm),With Pb free glass cap, no PD

■External dimensions(Unit : mm)



■Absolute Maximum Ratings(Tc=25℃)

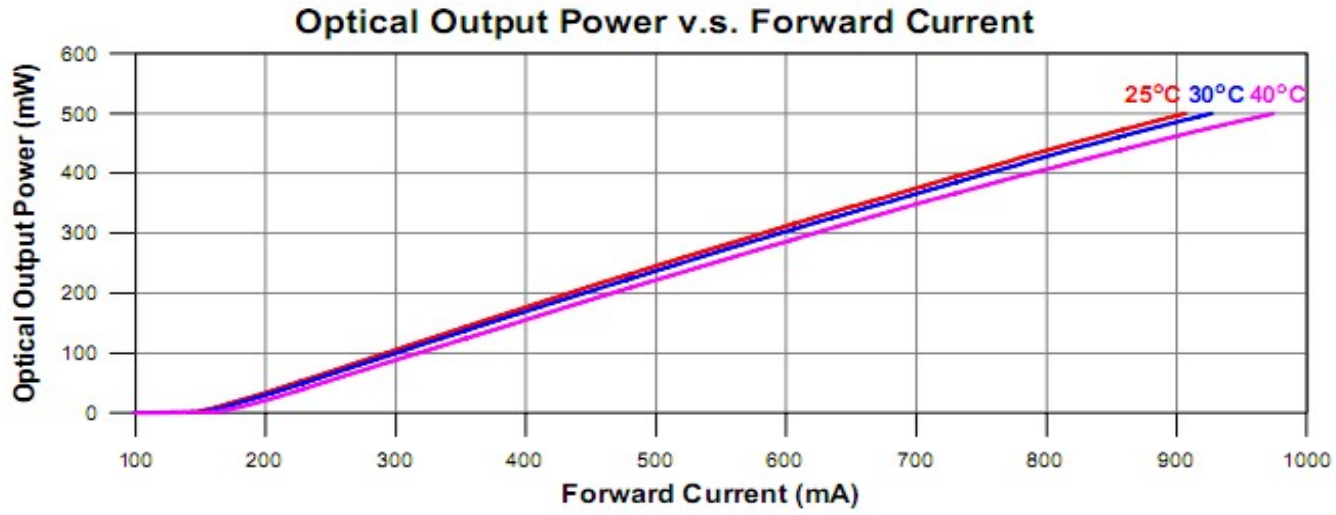
Parameter		Symbol	Rating	Unit
Optical Output		Po	**500**	mW
Reverse	Laser	Vr	**2**	V
Operating Temperature		Top	-10～+40	℃
Storage Temperature		Tstg	-15～+85	℃

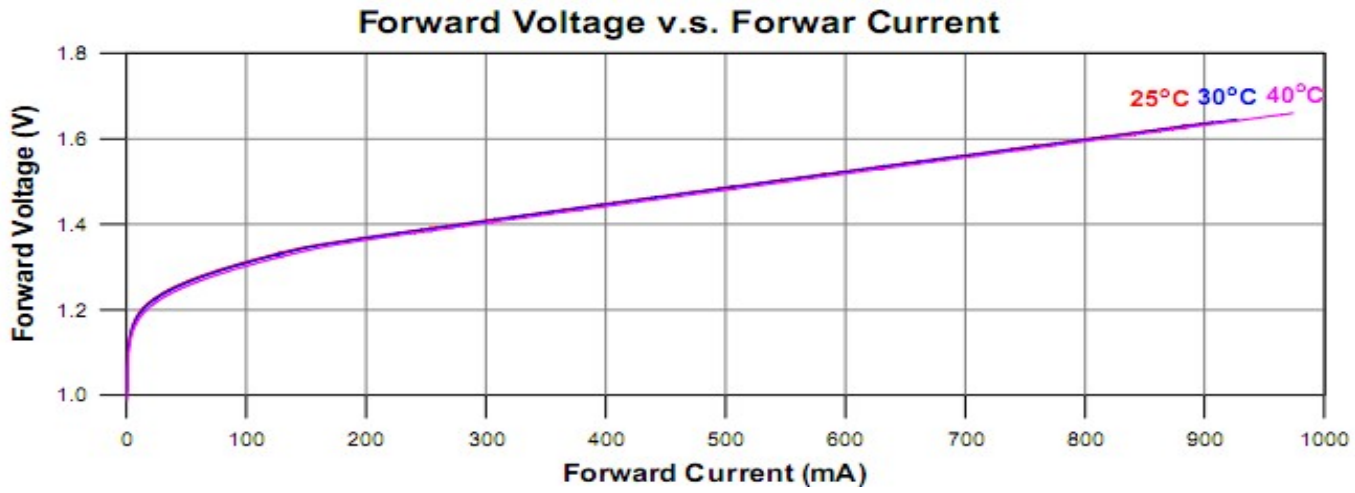
■Electrical and Optical Characteristics(Tc=25℃)

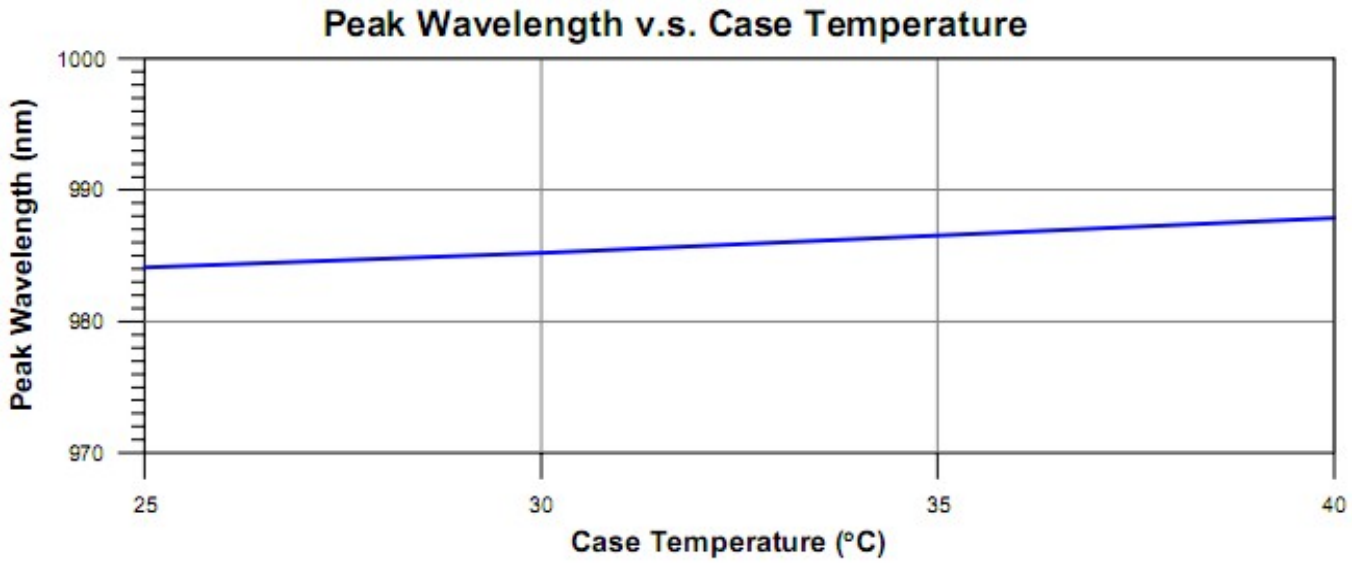
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	-	-	150	200	mA
Operating Current		Iop	Po=500mW	-	910	1200	mA
Operating Voltage		Vop	-	1.2	1.6	2.3	Volt
Slope Efficiency		η	375mW-125mW / I_{375mW}-I_{125mW}	0.5	0.65	-	mW/mA
Beam Divergence (FWHM)	Parallel	θ //	Po=500mW	-	7	-	deg.
	Perpendicular	$\theta \perp$	Po=500mW	28	31	42	deg.
Lasing Wavelength		λ	Po=500mW	970	980	990	nm

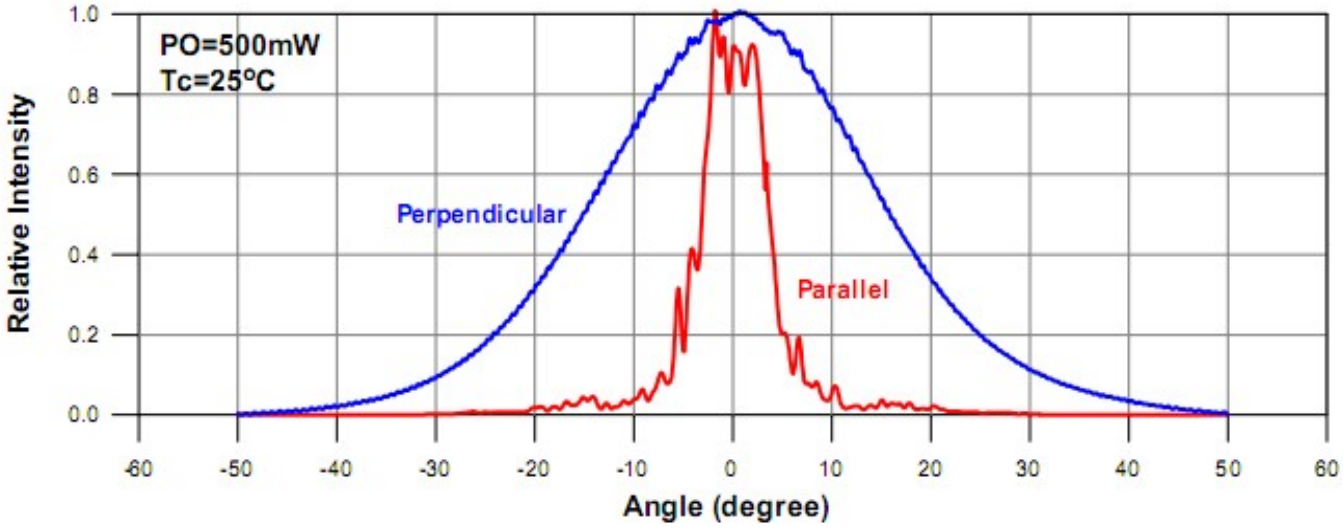
◎$\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

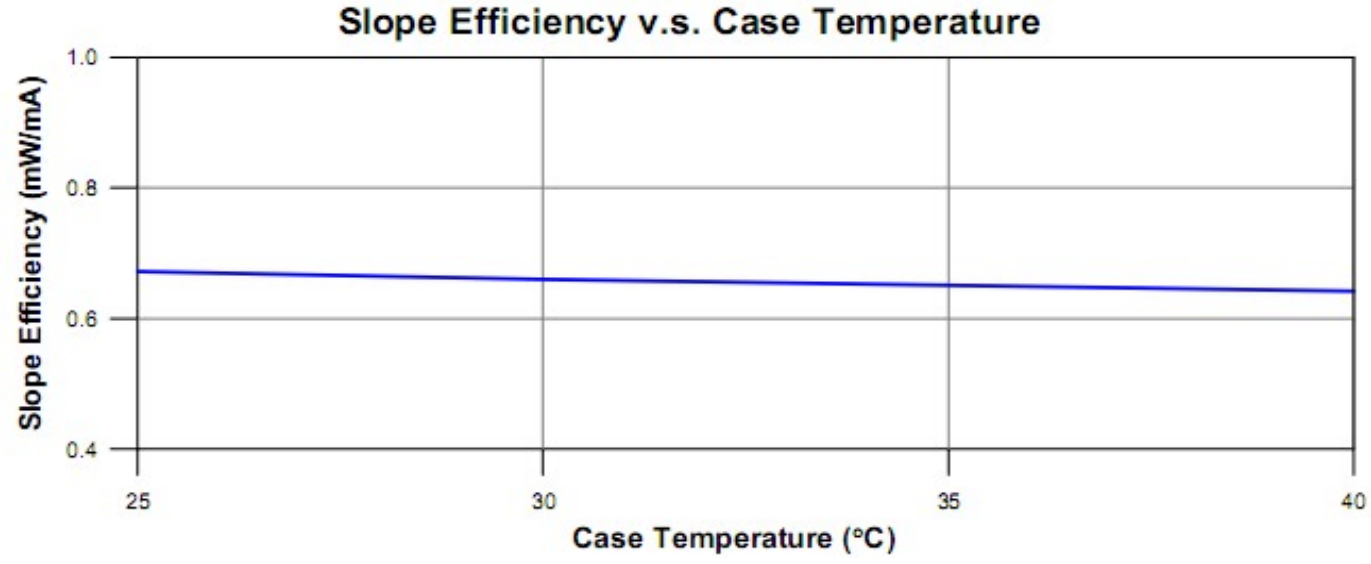
■Typical characteristic curves

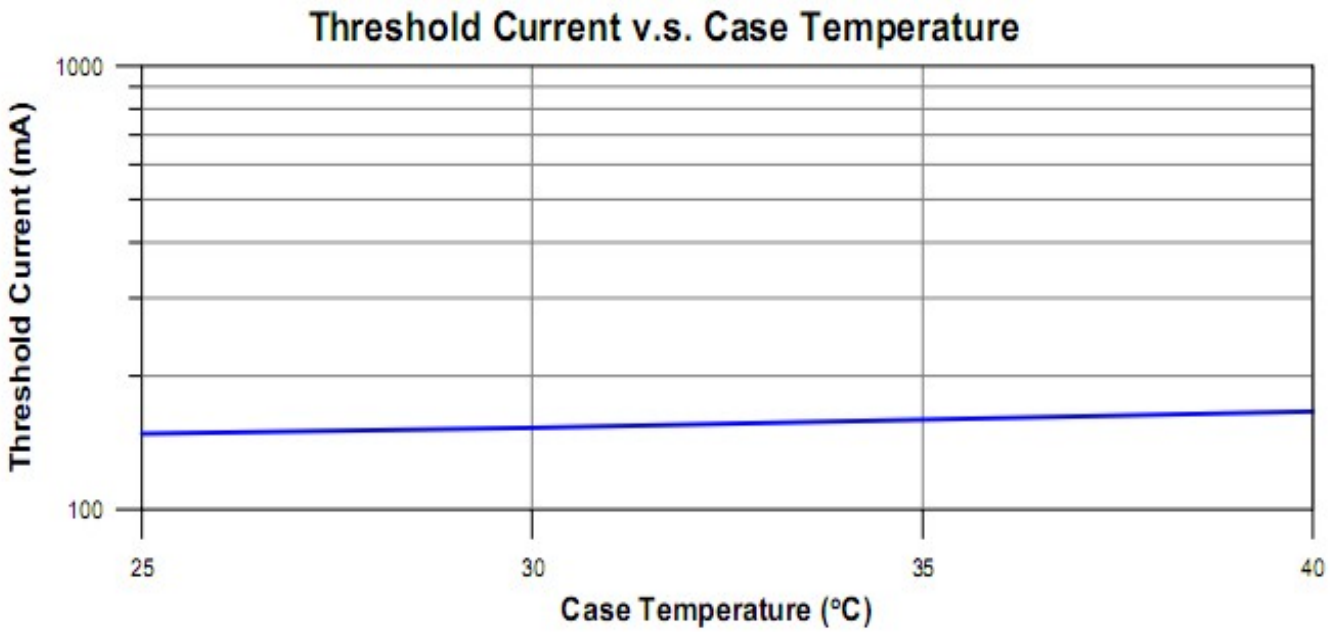





Peak Wavelength v.s. Case Temperature
Peak Wavelength (nm)
1000
990
980
970
25
30
35
40
Case Temperature (°C)


PO=500mW
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)


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


Threshold Current v.s. Case Temperature
1000
100
Threshold Current (mA)
25
30
35
40
Case Temperature (°C)