

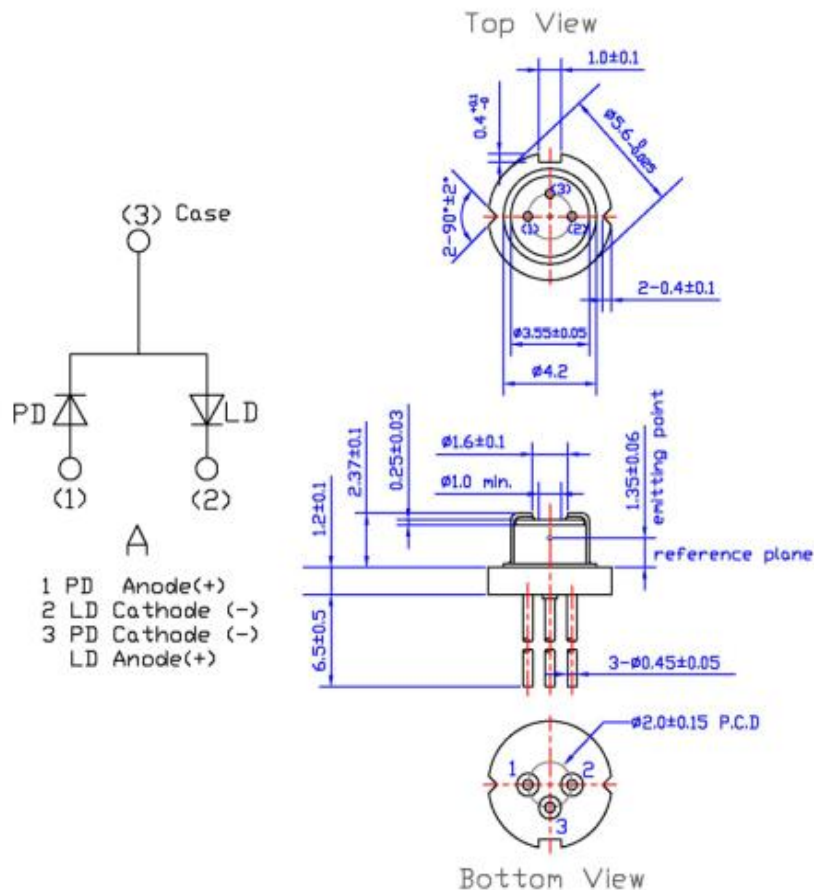
980nm Laser Diode

980nm Laser Diode LCU98A041A-preliminary

■ 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($T_c=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Optical Output	P_o	100	mW
Reverse Voltage	Laser	V_r	2 V
	PIN PD	$V_r(\text{PIN})$	30 V
Operating Temperature	T_{op}	-10 ~ +40	$^\circ\text{C}$
Storage Temperature	T_{stg}	-15 ~ +85	$^\circ\text{C}$

Ver.3 2009/09

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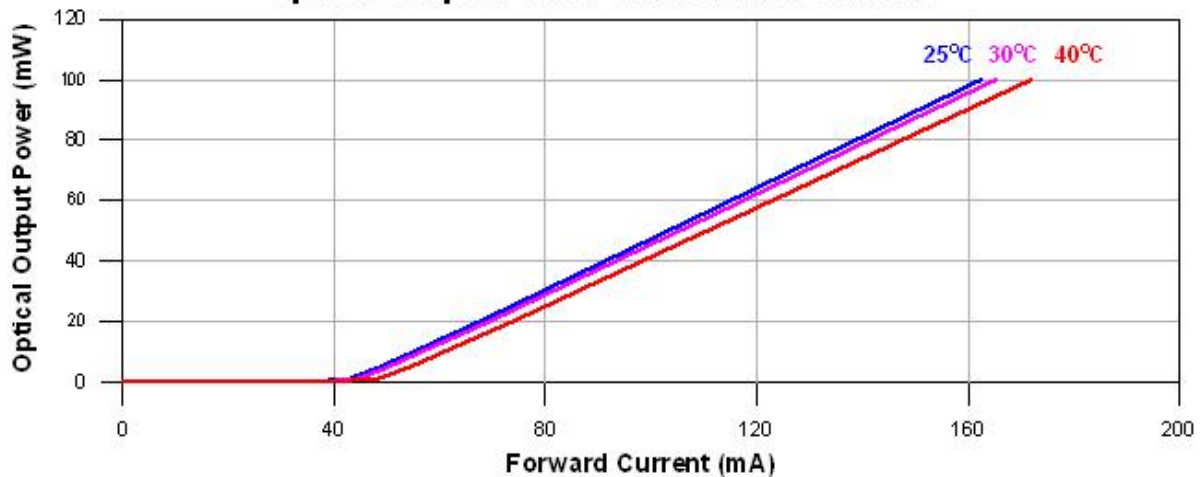
Electrical and Optical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I _{th}	-	-	40	50	mA	
Operating Current	I _{op}	P _o =100mW	-	165	190	mA	
Operating Voltage	V _{op}	-	1	1.5	2.1	Volt	
Slope Efficiency	η	75mW-25mW	0.5	0.8	-	mW/mA	
		I _{75mW} -I _{25mW}					
Monitor Current	I _m	P _o =100mW	0.4	0.9	1.4	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P _o =100mW	-	6	-	deg.
	Perpendicular	$\theta \perp$	P _o =100mW	27	32	37	deg.
Lasing Wavelength	λ	P _o =100mW	970	980	990	nm	

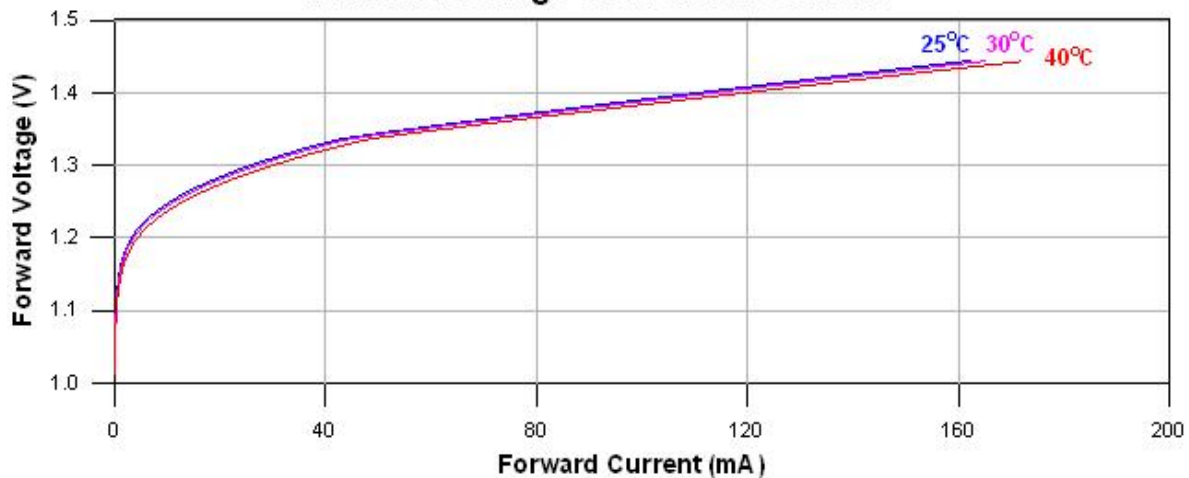
© $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

Optical Output Power v.s. Forward Current

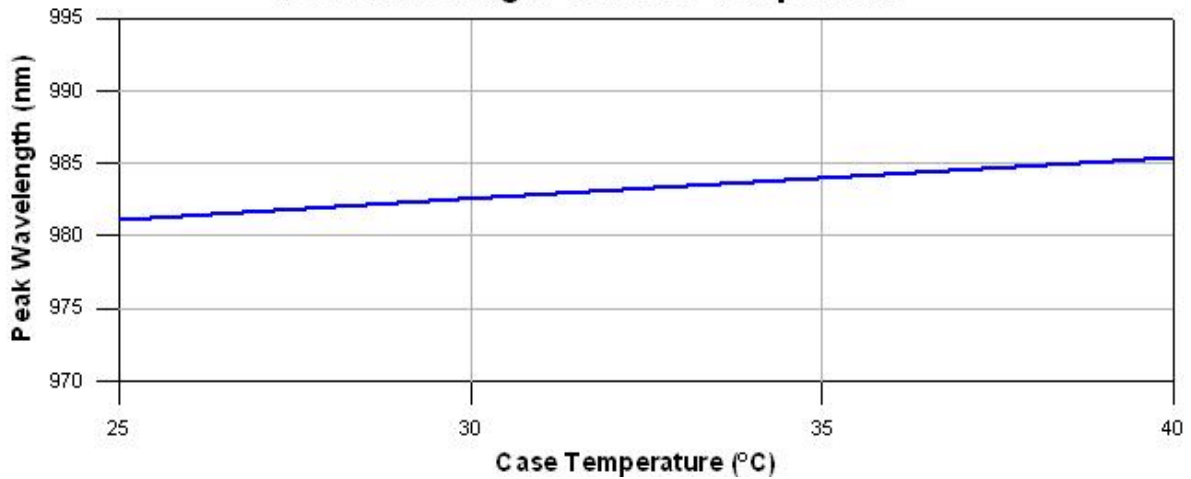


Forward Voltage v.s. Forward Current

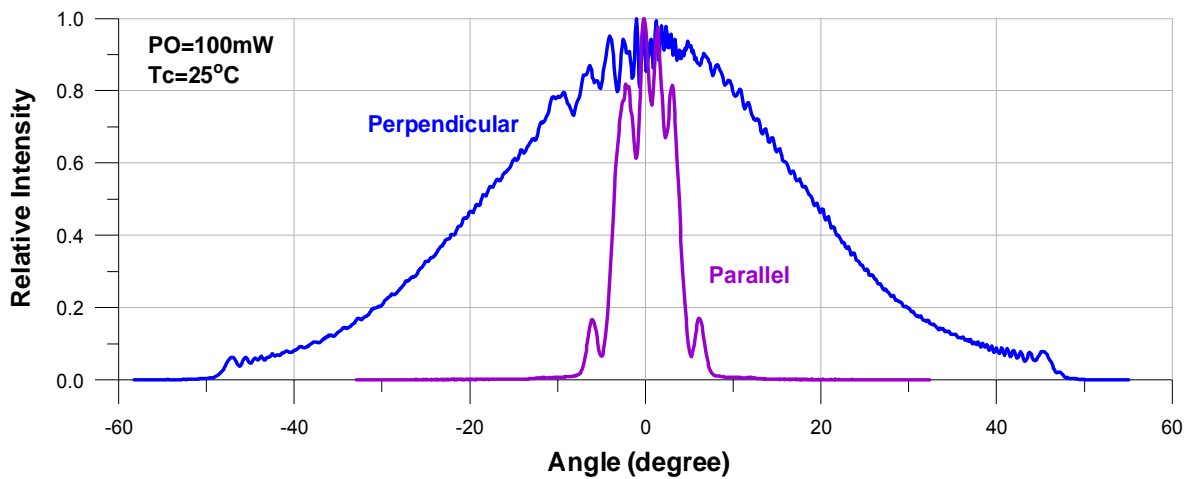


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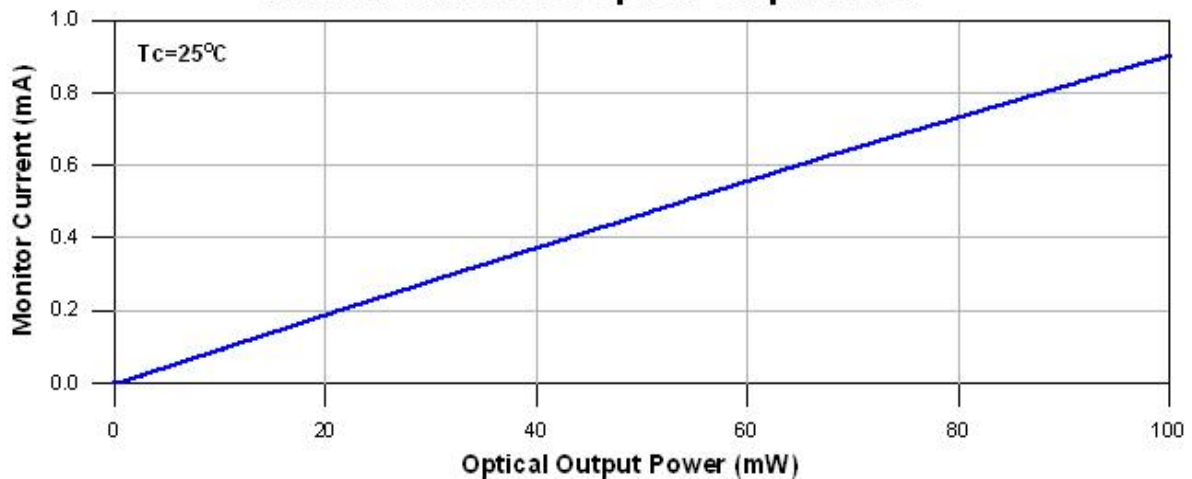
Peak Wavelength v.s. Case Temperature



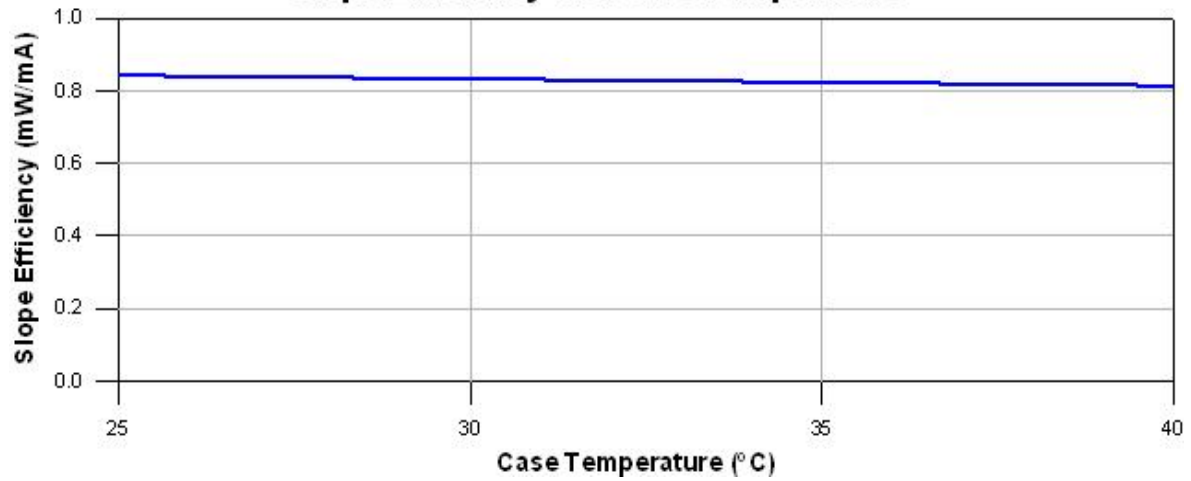
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

