

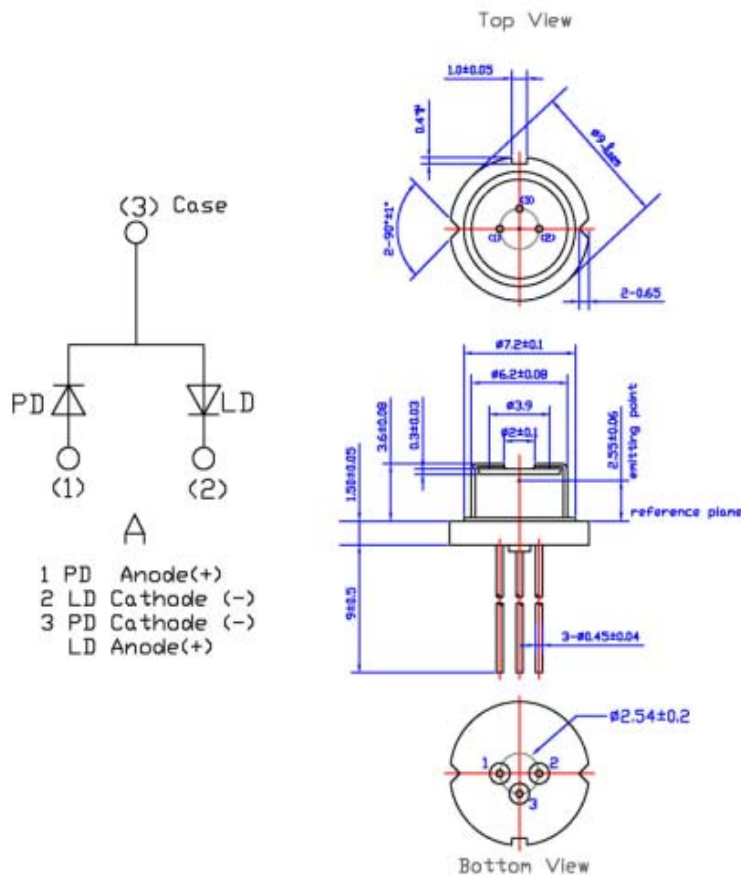
808nm Laser Diode

808nm IR Laser Diode LCU80E041A-preliminary

Specifications

- (1) Device: Laser Diode
- (2) Structure: TO-5 ($\phi 9.0\text{mm}$), With Pb free glass cap, PD
- (3) Power Output: 500mW

External dimensions(Unit : mm)



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

Parameter	Symbols	Ratings	Units
Optical Output	Po	500	mW
Reverse Voltage	Vr	2	V
Operating Temperature	Top	-10~+40	$^{\circ}\text{C}$
Storage Temperature	Tstg	-10~+85	$^{\circ}\text{C}$

808nm Laser Diode

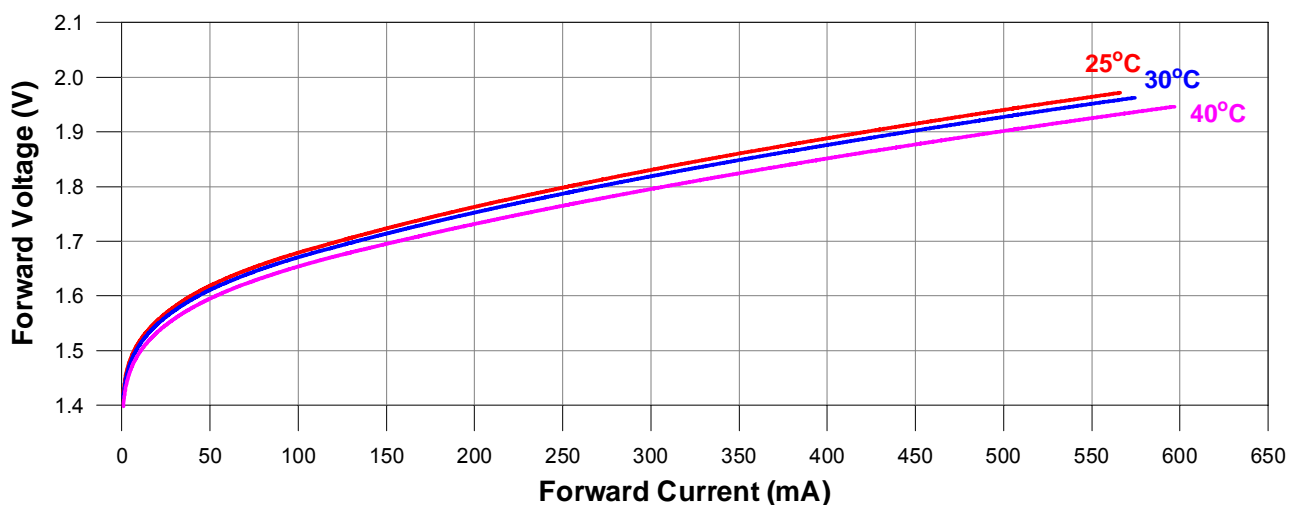
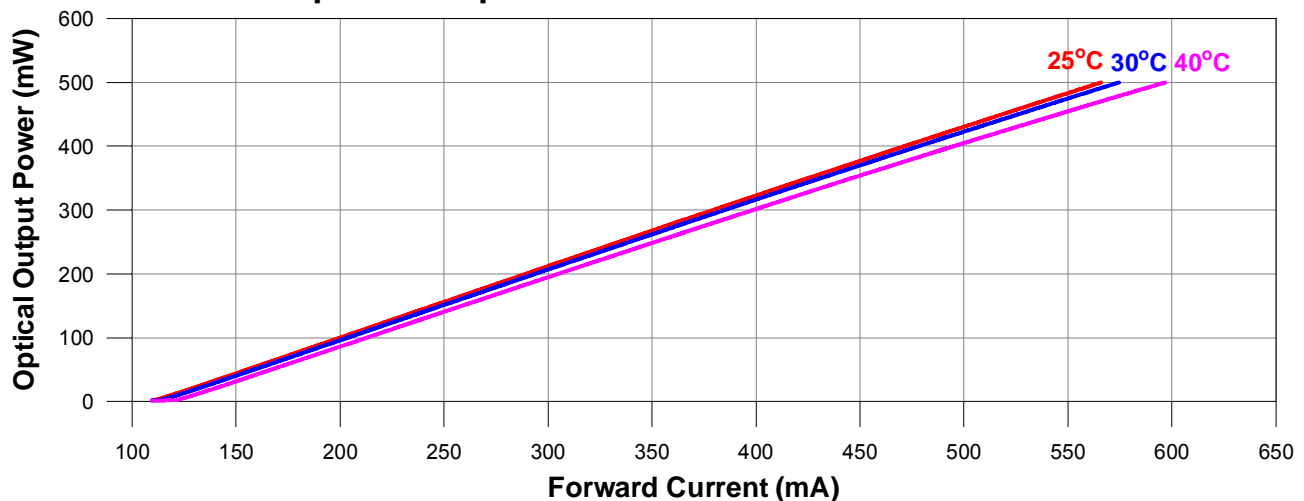
Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Units	
Threshold Current	I _{th}	P _o =500mW	-	110	130	mA	
Operating Current	I _{op}	P _o =500mW	-	570	600	mA	
Operating Voltage	V _{op}	P _o =500mW	-	2.0	2.1	Volts	
Slope Efficiency	η	375mW-125mW	0.8	1.1	-	mW/mA	
		I _{375mW} -I _{125mW}					
Monitor Current	I _m	P _o =500mW	-	0.6	2.5	deg.	
Beam Divergence (FWHM)	Parallel	$\theta //$	P _o =500mW	-	11	-	deg.
	Perpendicular	$\theta \perp$	P _o =500mW	-	38	-	deg.
Lasing Wavelength*	λ	P _o =500mW	803	808	811	nm	

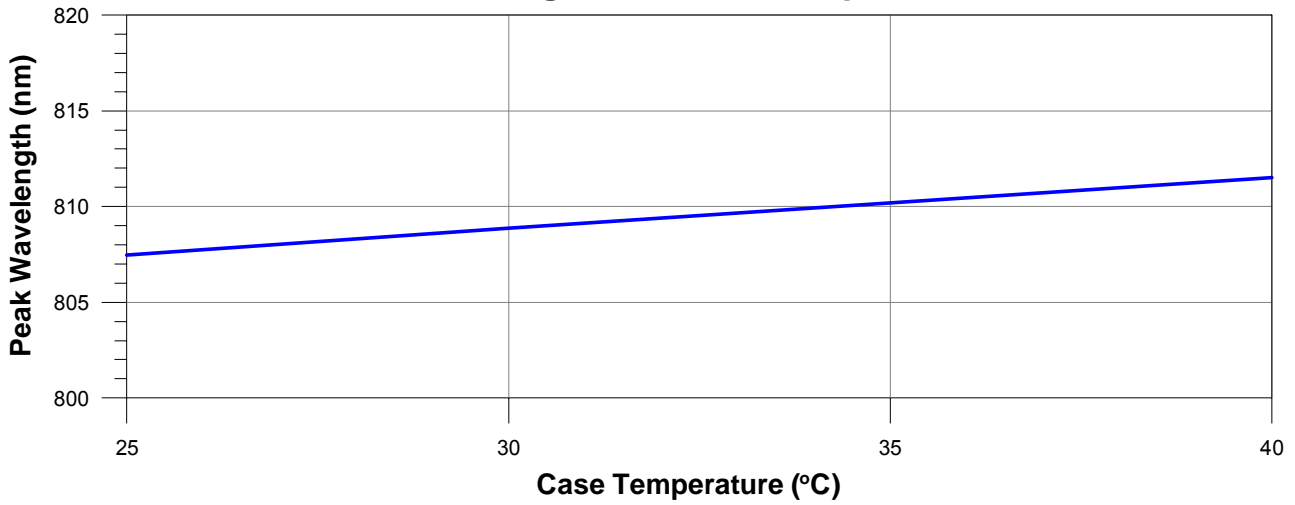
© $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

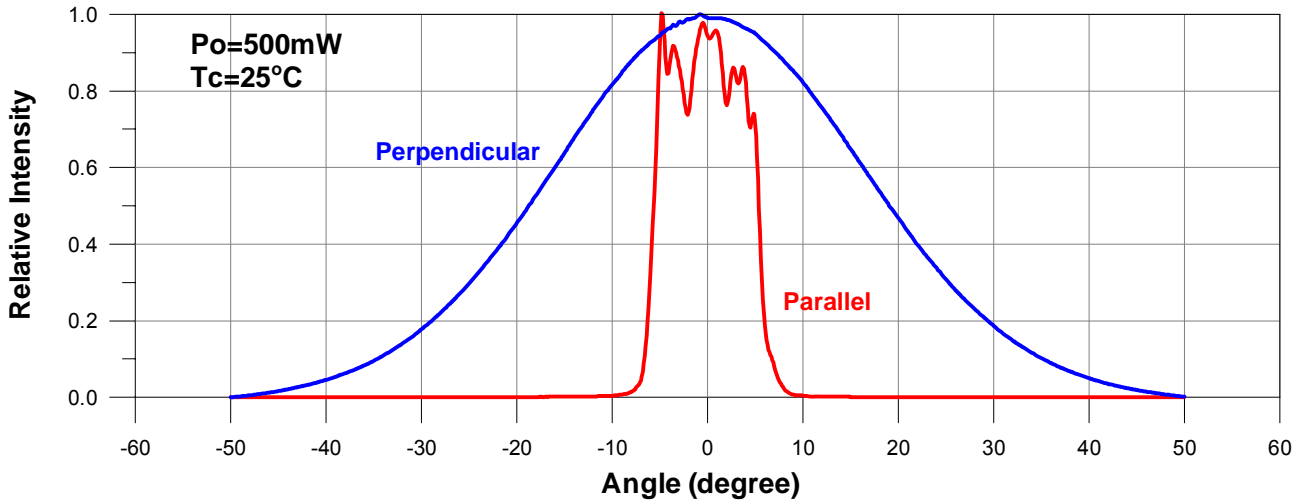
Optical Output Power v.s. Forward Current



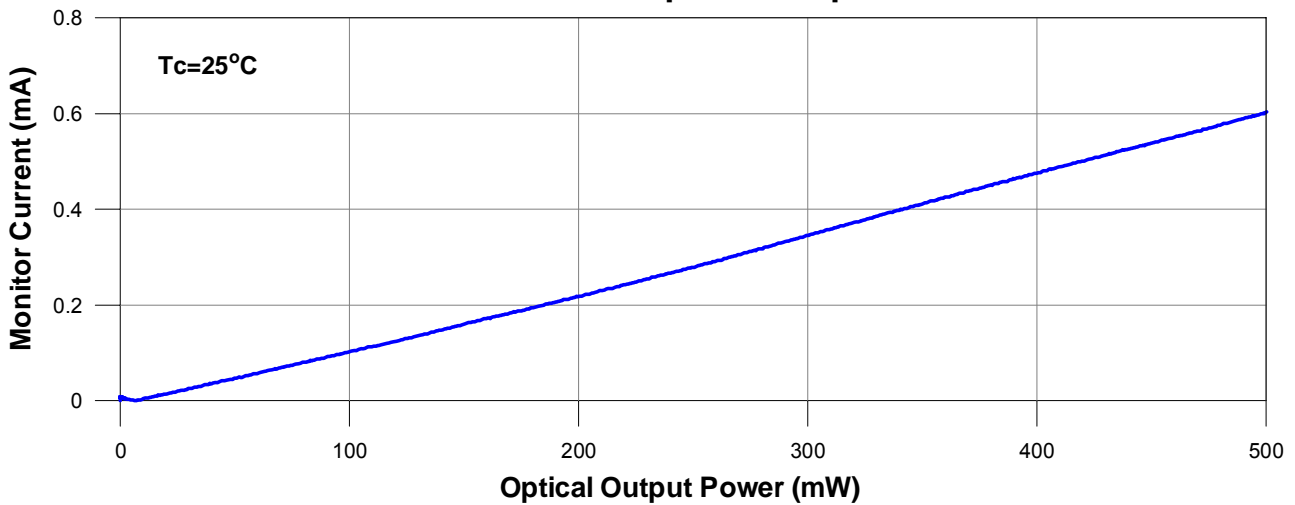
Peak Wavelength v.s. Case Temperature



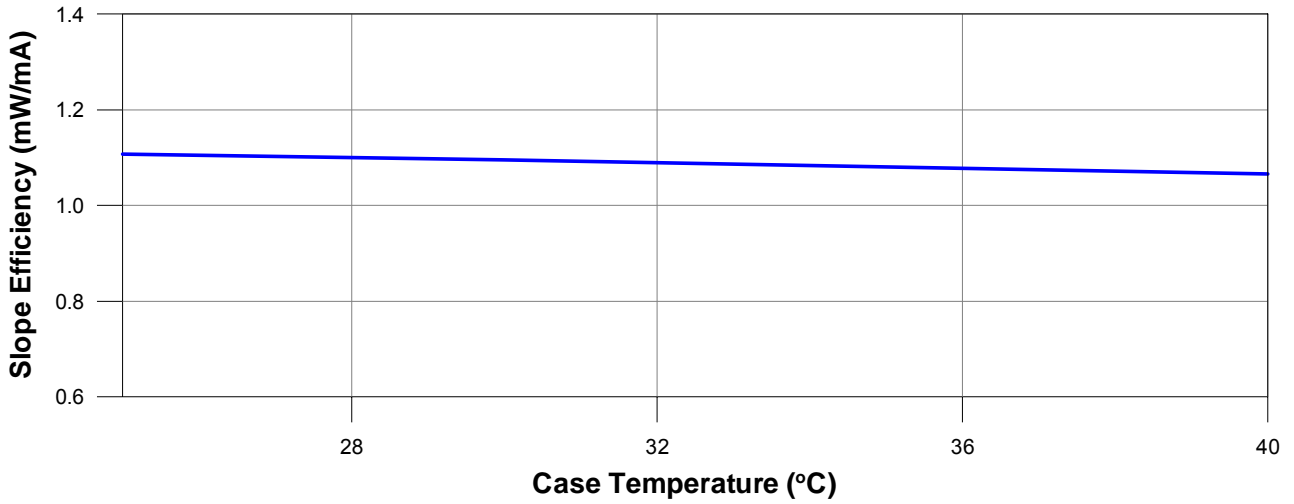
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

