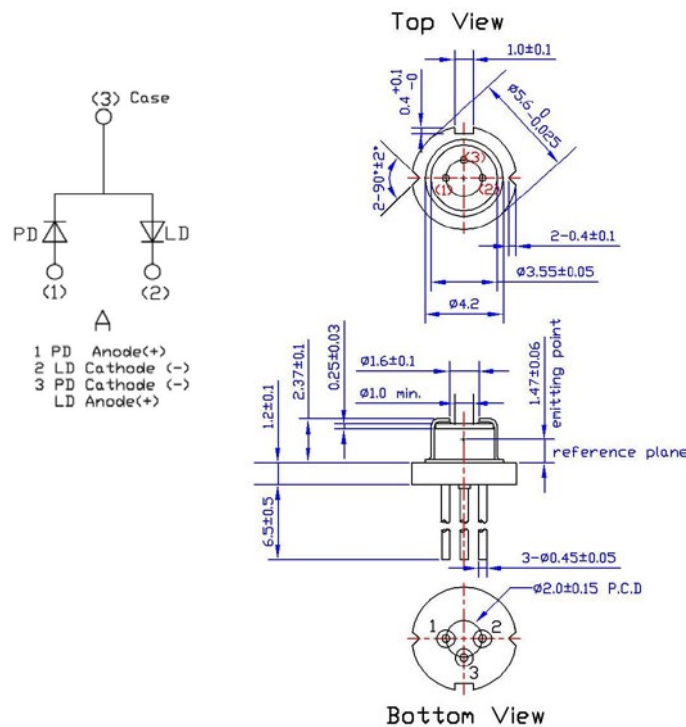


## 808nm IR Laser Diode LCU80E051A-A-preliminary

### ■ Specifications

- (1) Device: Laser Diode
- (2) Structure: TO-18 (  $\phi$  5.6mm ) ,With Pb free glass cap, PD
- (3) Power Output: 500mW

### ■ External dimensions (Unit: mm)



### ■ Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbols	Ratings	Units
Optical Output	Po	500	mW
Reverse Voltage	Vr	2	V
Operating Temperature ( Case )	Top	-10~+50	°C
Storage Temperature	Tstg	-40~+85	°C

Ver.2 2014/12

### 808nm Laser Diode

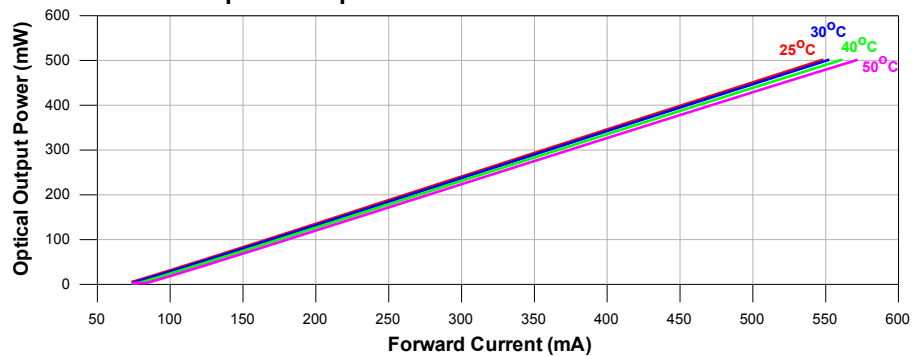
#### Electrical and Optical Characteristics (Tc=25°C)

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Units
Threshold Current	I <sub>th</sub>	P <sub>o</sub> =500mW	-	70	100	mA
Operating Current	I <sub>op</sub>	P <sub>o</sub> =500mW	-	540	590	mA
Operating Voltage	V <sub>op</sub>	P <sub>o</sub> =500mW	-	1.9	1.95	Volts
Slope Efficiency	η	375mW-125mW	0.8	1.1	-	mW/mA
		I <sub>375mW</sub> -I <sub>125mW</sub>				
Monitor Current	I <sub>m</sub>	P <sub>o</sub> =500mW	-	0.6	2.5	mA
Beam Divergence (FWHM)	Parallel	θ // P <sub>o</sub> =500mW	-	10	-	deg.
	Perpendicular	θ ⊥ P <sub>o</sub> =500mW	-	31	-	deg.
Lasing Wavelength*	λ	P <sub>o</sub> =500mW	803	808	811	nm

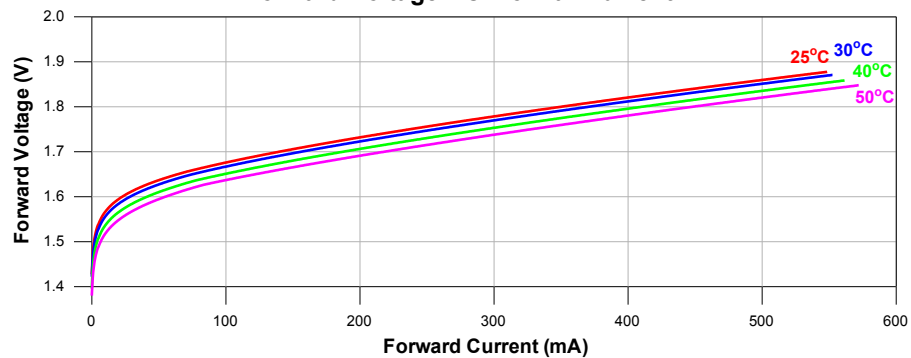
\*θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

#### Typical characteristic curves

Optical Output Power v.s. Forward Current

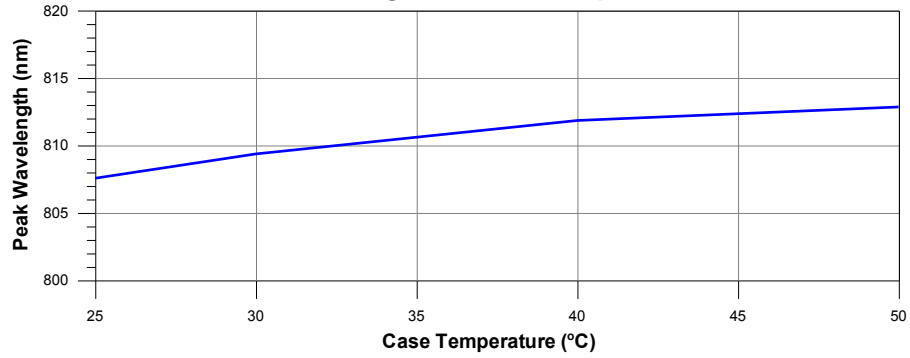


Forward Voltage v.s. Forward Current

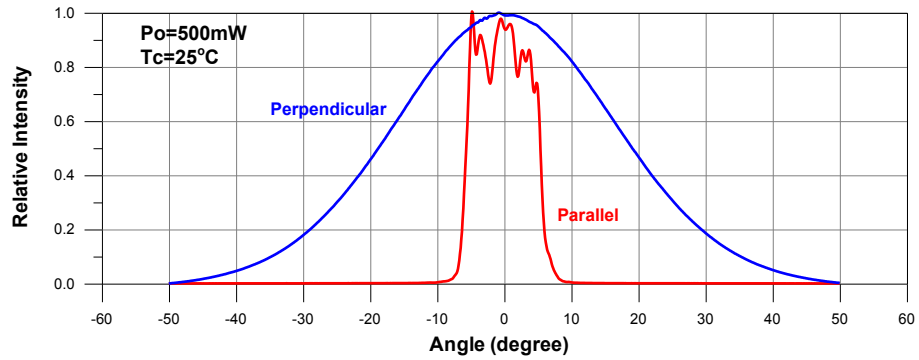


**808nm Laser Diode**

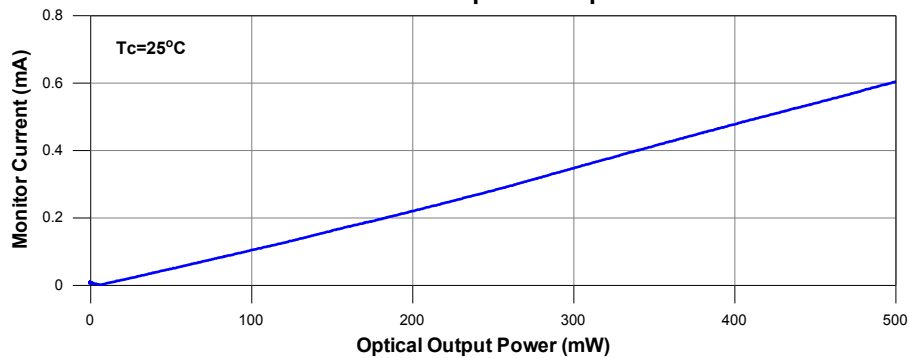
**Peak Wavelength v.s. Case Temperature**



**Far-Field Pattern**



**Monitor Current v.s. Optical Output Power**



**808nm Laser Diode**

