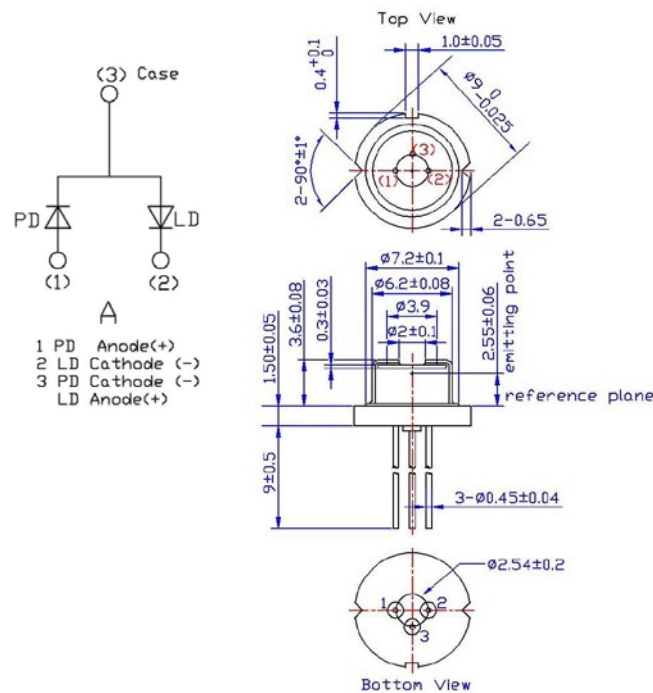


808nm IR Laser Diode LCU80E051A-preliminary

■ Specifications

- (1) Device: Laser Diode
 (2) Structure: TO-5 (ϕ 9.0mm) ,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 | -10~+85 | °C |

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808nm Laser Diode

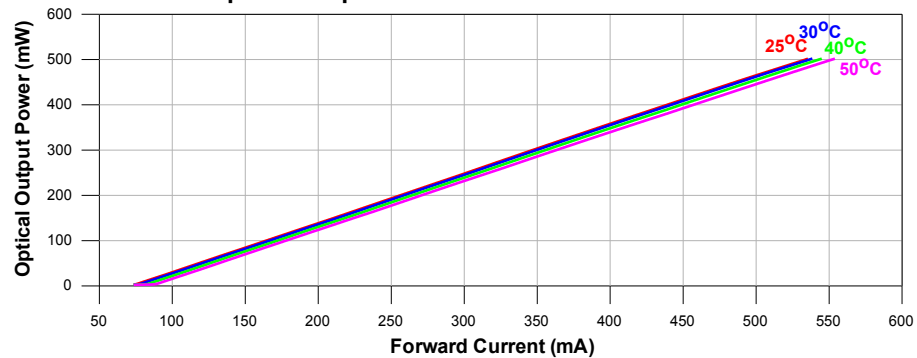
Electrical and Optical Characteristics (T_c=25°C)

| Parameter | Symbols | Conditions | Min. | Typ. | Max. | Units | |
|---------------------------|-----------------|--|-----------------------|------|------|-------|------|
| Threshold Current | I _{th} | P _o =500mW | - | 70 | 100 | mA | |
| Operating Current | I _{op} | P _o =500mW | - | 540 | 590 | mA | |
| Operating Voltage | V _{op} | P _o =500mW | - | 1.9 | 1.95 | 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 | mA | |
| Beam Divergence (FWHM) | Parallel | θ // | P _o =500mW | - | 10 | - | deg. |
| | Perpendicular | θ ⊥ | P _o =500mW | - | 31 | - | deg. |
| Lasing Wavelength* | λ | P _o =500mW | 803 | 808 | 811 | nm | |

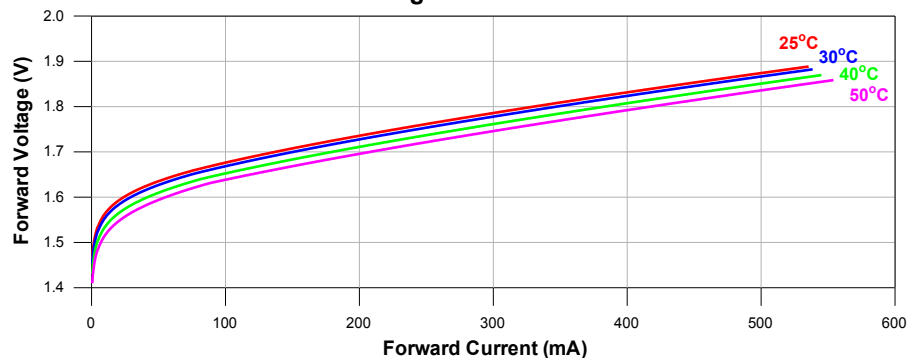
*θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

Optical Output Power v.s. Forward Current

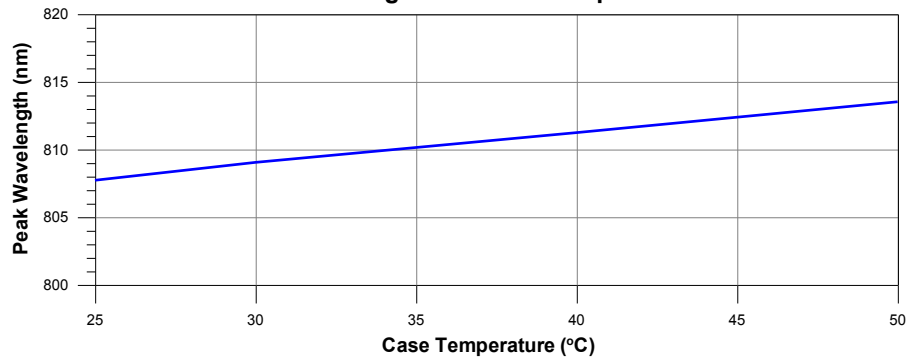


Forward Voltage v.s. Forward Current

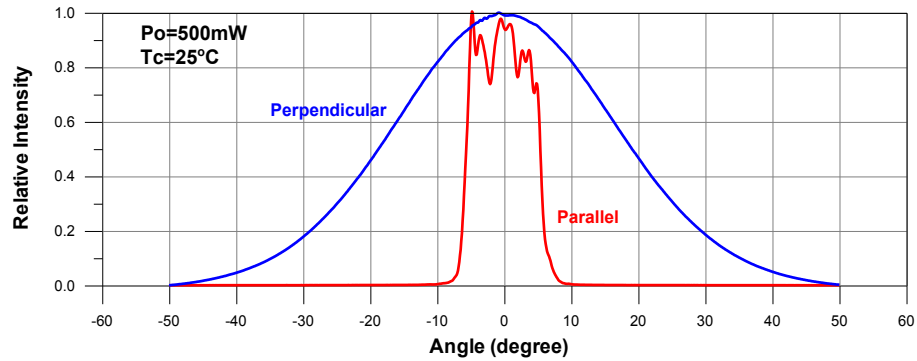


808nm Laser Diode

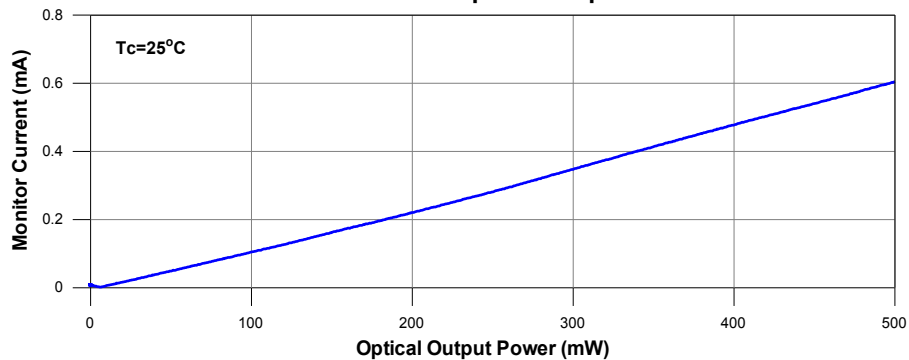
Peak Wavelength v.s. Case Temperature



Far-Field Pattern



Monitor Current v.s. Optical Output Power



808nm Laser Diode

