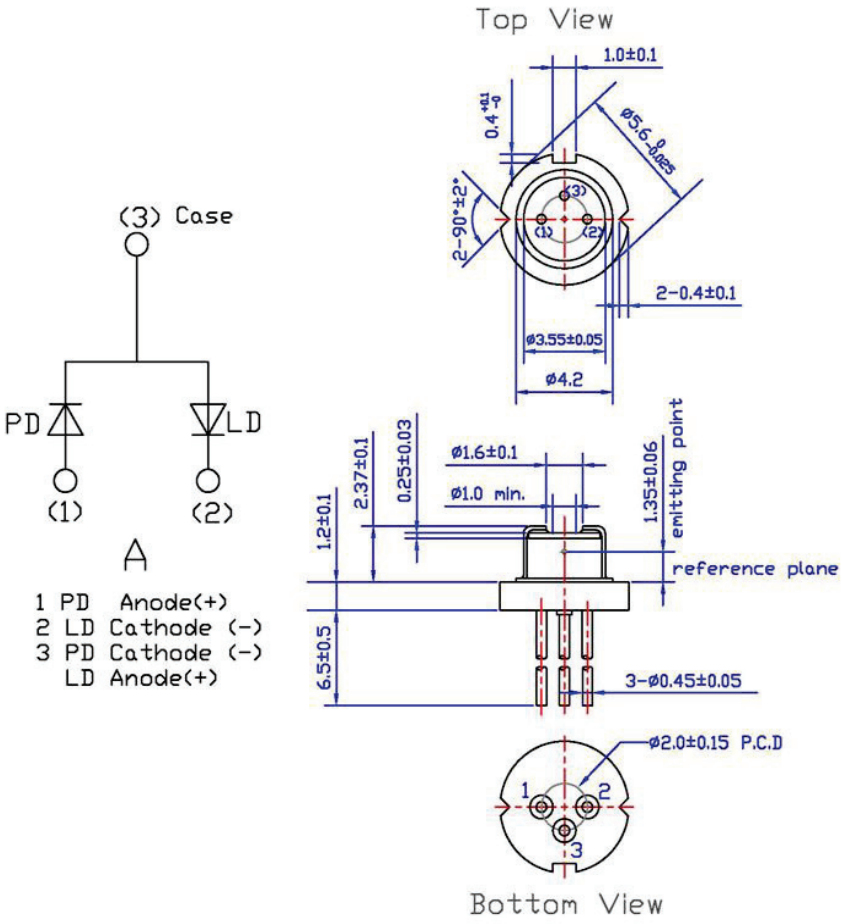
# 830nm IR Laser Diode
# LCU83C051A-preliminary

## ■Specifications

(1) Device: Laser Diode

(2) Structure: TO-18（ $\phi$ 5.6mm ),With Pb free glass cap, PD

## ■External dimensions(Unit : mm)




## ■Absolute Maximum Ratings(Tc=25℃)

| Parameter | | Symbols | Ratings | Units |
|---|---|---|---|---|
| Optical Output | | Po | **300** | mW |
| Reverse Voltage | Laser | Vr | **2** | V |
| | PIN PD | Vr(PIN) | **30** | V |
| Operating Temperature | | Top | -10～+50 | ℃ |
| Storage Temperature | | Tstg | -40～+85 | ℃ |



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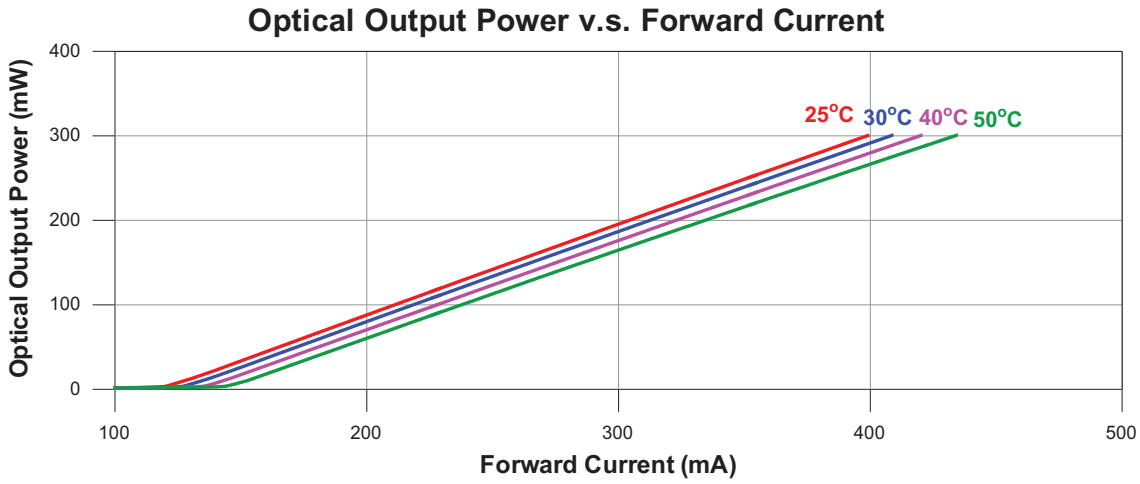
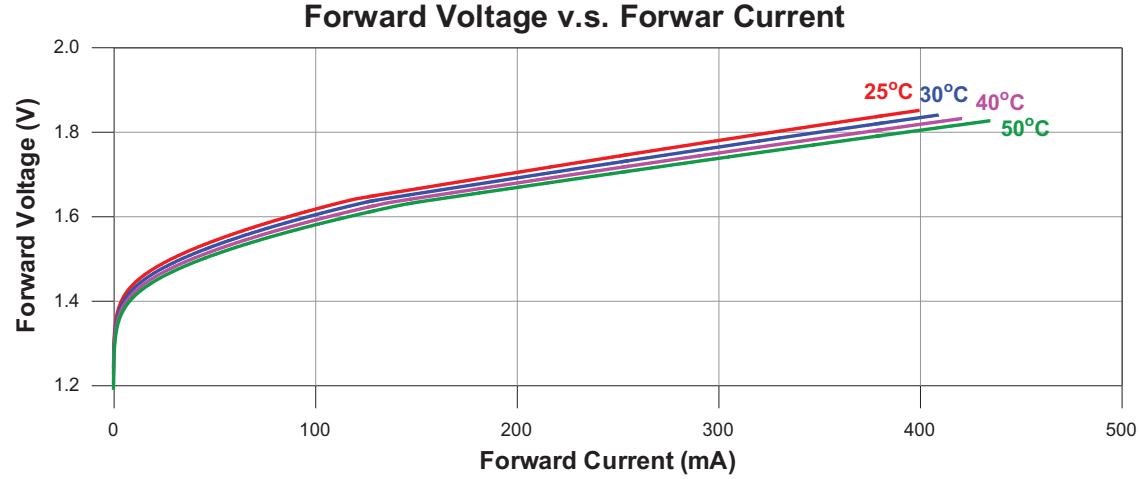
■Electrical and Optical Characteristics(Tc=25℃)

| Parameter | | Symbols | Conditions | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Threshold Current | | Ith | - | - | **115** | **130** | mA |
| Operating Current | | Iop | Po=300mW | - | **410** | **450** | mA |
| Operating Voltage | | Vop | - | - | **1.85** | **2** | Volts |
| Slope Efficiency | | η | 225mW-75mW / $I_{225mW}$-$I_{75mW}$ | - | **1.0** | - | mW/mA |
| Monitor Current | | Im | Po=300mW | **0.1** | **0.5** | **1** | mA |
| Beam Divergence (FWHM) | Parallel | θ // | Po=300mW | - | **9** | **14** | deg. |
| | Perpendicular | θ ⊥ | Po=300mW | - | **17** | **22** | deg. |
| Lasing Wavelength* | | λ | Po=300mW | **820** | **830** | **840** | nm |

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

■Typical characteristic curves



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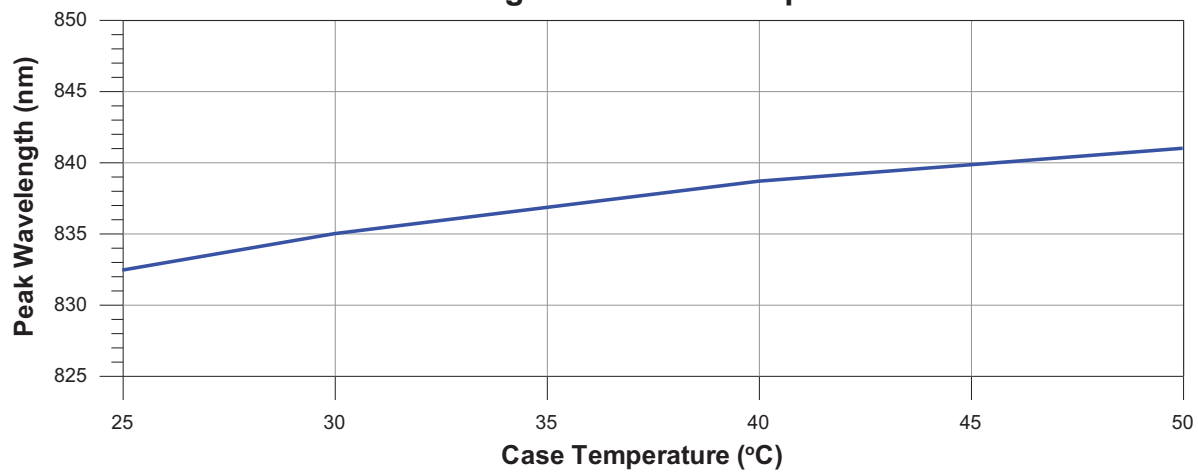
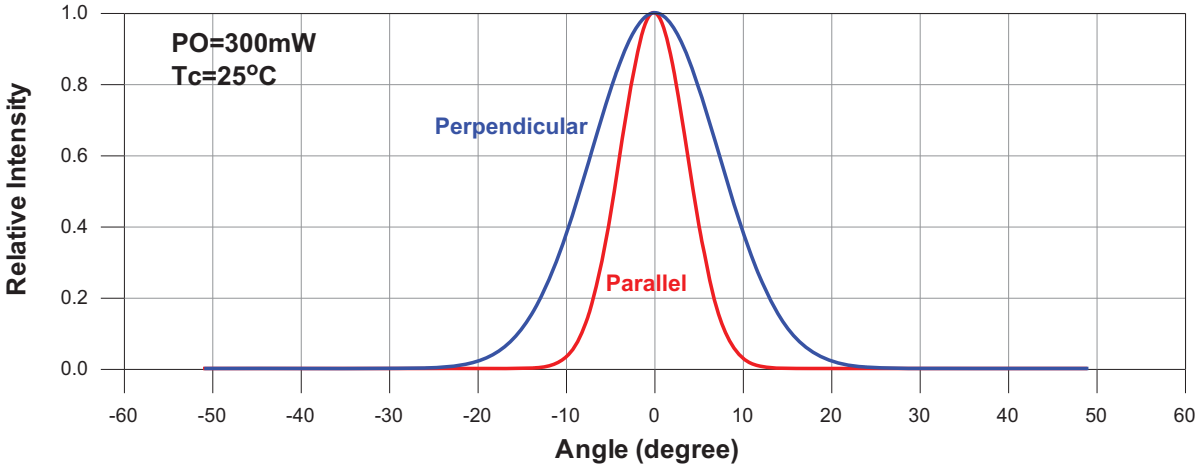
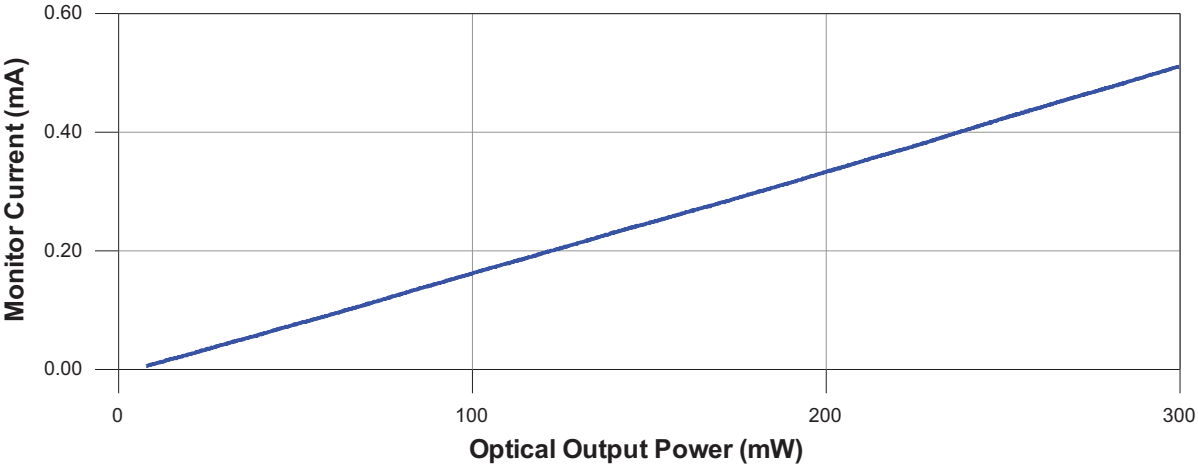
## Peak Wavelength v.s. Case Temperature




## Far-Field Pattern




## Monitor Current v.s. Optical Output Power



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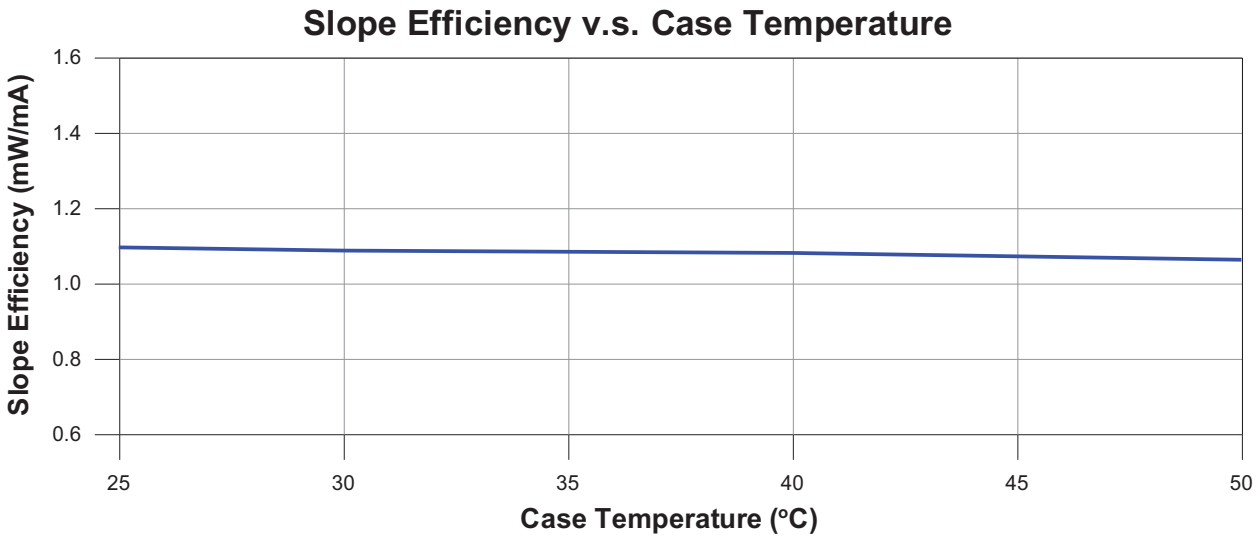


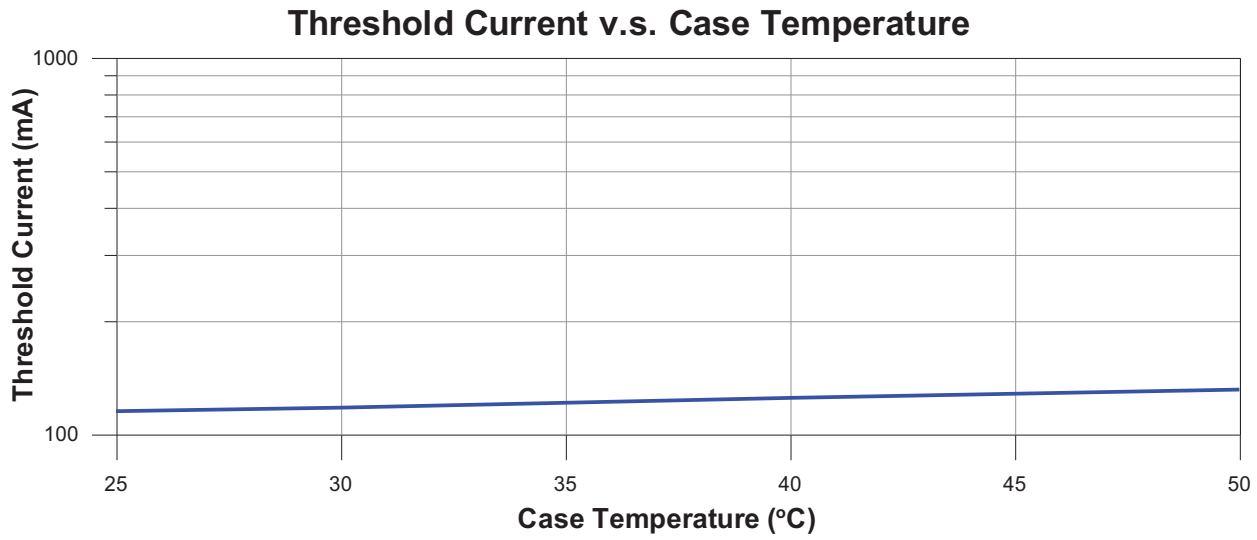




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