

LCU835060Ap/62Ap

LCU83xx SERIES LASER DIODE

■ Features

1. Small perpendicular divergence angle
2. Lateral single mode lasing
3. Standard optical power output : 50mW (CW)
4. Type :

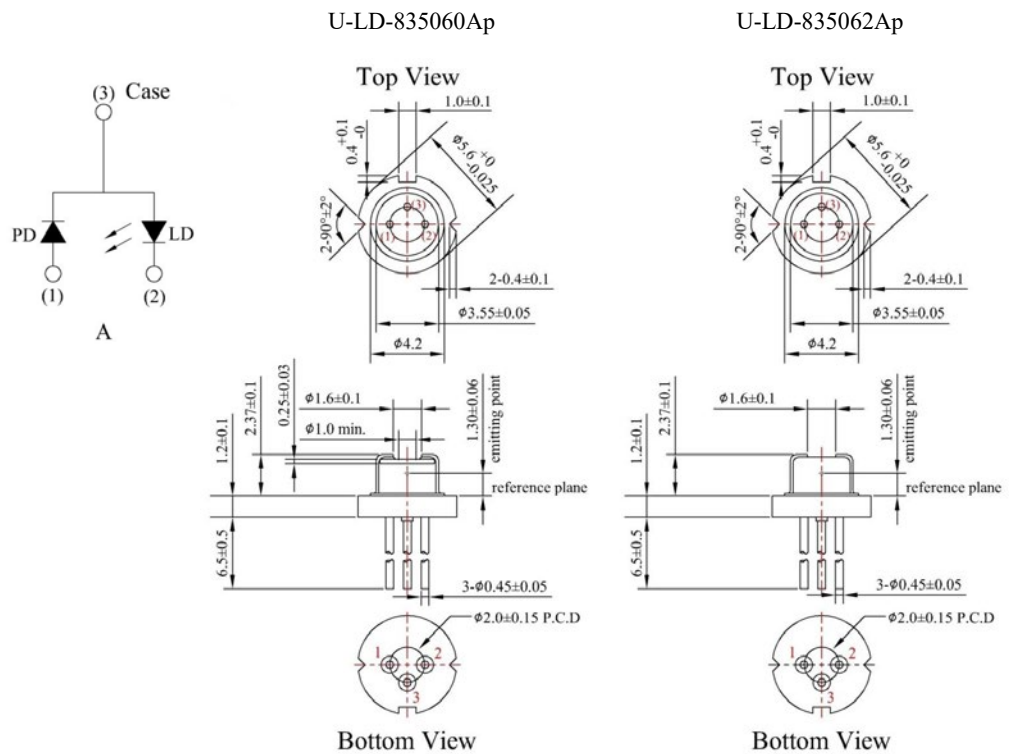
| TYPE | DESCRIPTION |
|----------------|---|
| U-LD- 835060Ap | TO-56 (ϕ 5.6mm) Packaged, with Pb-free window cap. |
| U-LD- 835062Ap | TO-56 (ϕ 5.6mm) Packaged, without Pb-free window cap. |

5. Built-in Photo Diode for monitoring laser diode.

■ Applications

1. Motion sensor
2. 3D depth sensor
3. Illumination
4. Industry
5. Medical application

■ External dimensions(Unit : mm)



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■ Absolute Maximum Ratings(Tc=25°C)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|--------|-----------|------|
| Optical Output | Po | 50 | mW |
| Reverse Voltage | Vr | 2 | V |
| Operating Temperature (Case) | Top | -10~+60 | °C |
| Storage Temperature | Tstg | -40~+85 | °C |

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

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---------------------------|---------------|------------------|-------------|-------------|------------|-------|
| Threshold Current | Ith | Po=50mW | - | 13 | 18 | mA |
| Operating Current | Iop | Po=50mW | - | 62 | 75 | mA |
| Operating Voltage | Vop | Po=50mW | - | 2.1 | 2.6 | V |
| Slope Efficiency | η | Po=12.5-37.5mW | - | 1.0 | - | mW/mA |
| Monitor Current | Im | Po=50mW | 0.05 | 0.12 | 0.5 | mA |
| Beam Divergence (FWHM) | Parallel | $\theta_{//}$ | - | 11 | 16 | deg. |
| | Perpendicular | θ_{\perp} | - | 20 | 25 | deg. |
| Lasing Wavelength | λ | Po=50mW | 820 | 830 | 840 | nm |

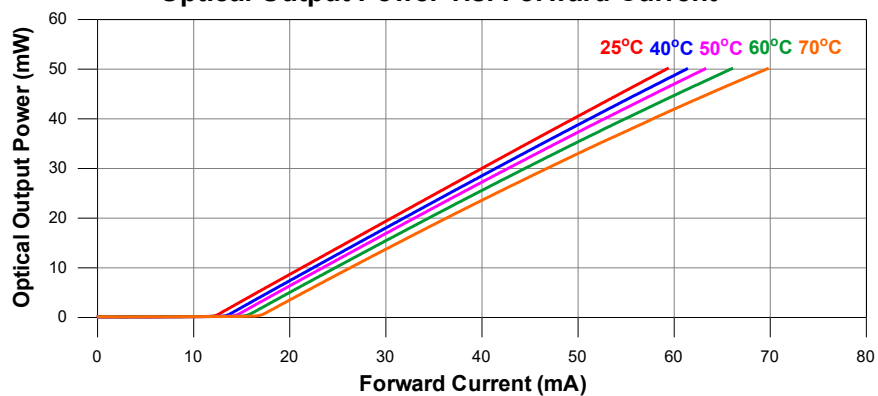
◎ $\theta_{//}$ and θ_{\perp} are defined as the angle within which the intensity is 50% of the peak value.

■ Quality Notice

This device is still under product development.

■ Typical characteristic curves

Optical Output Power v.s. Forward Current

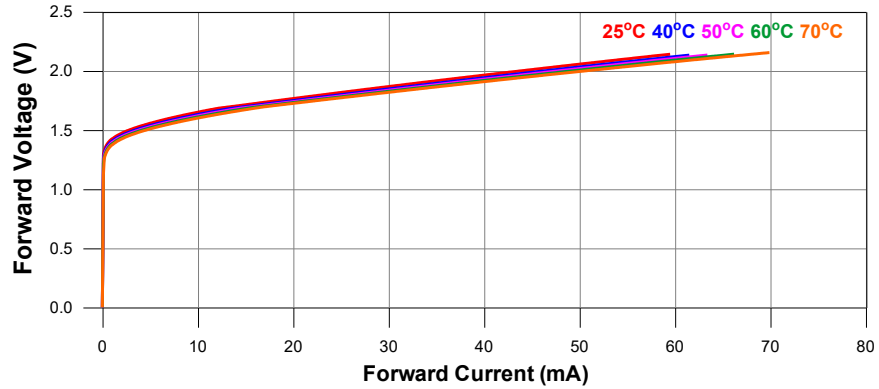


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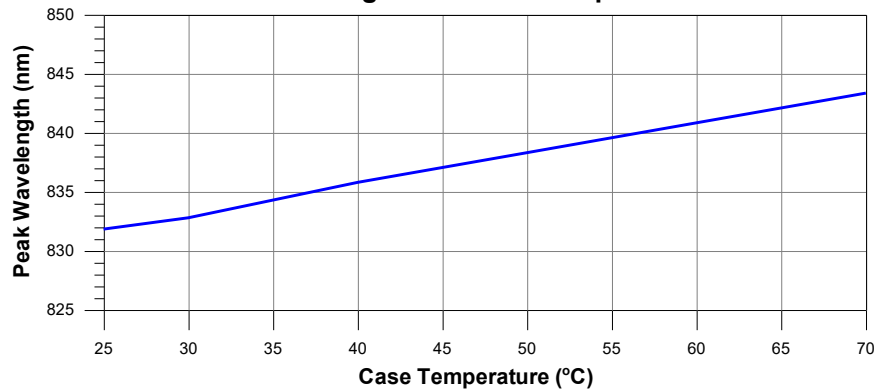
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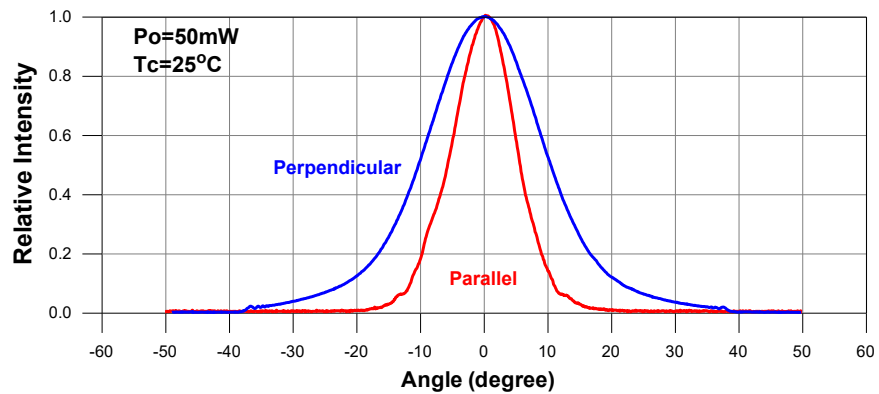
Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern

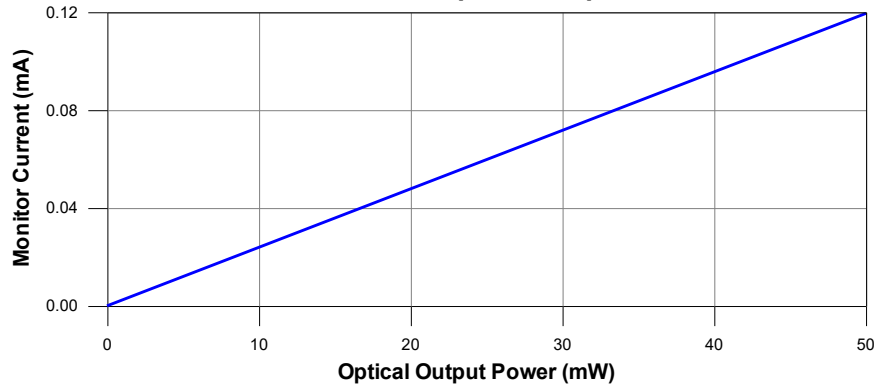


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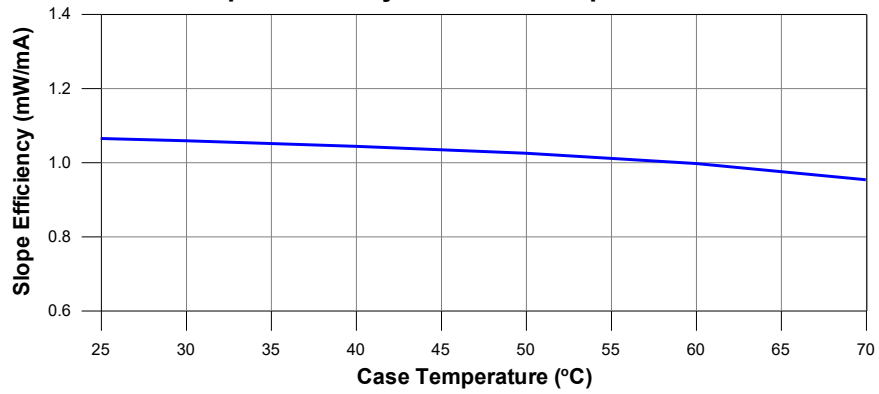
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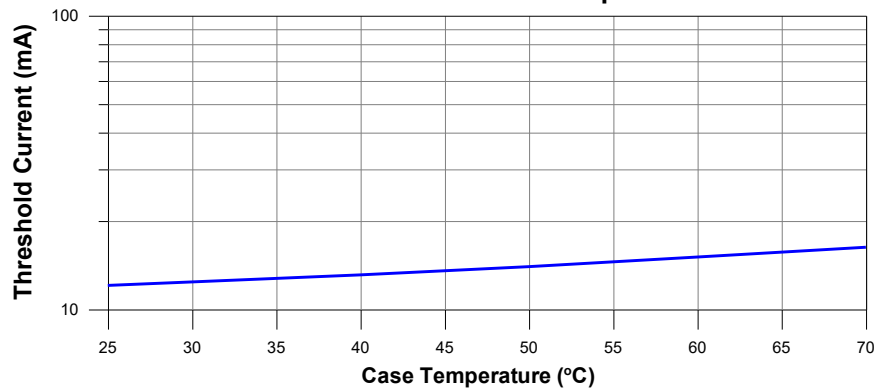
Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.