

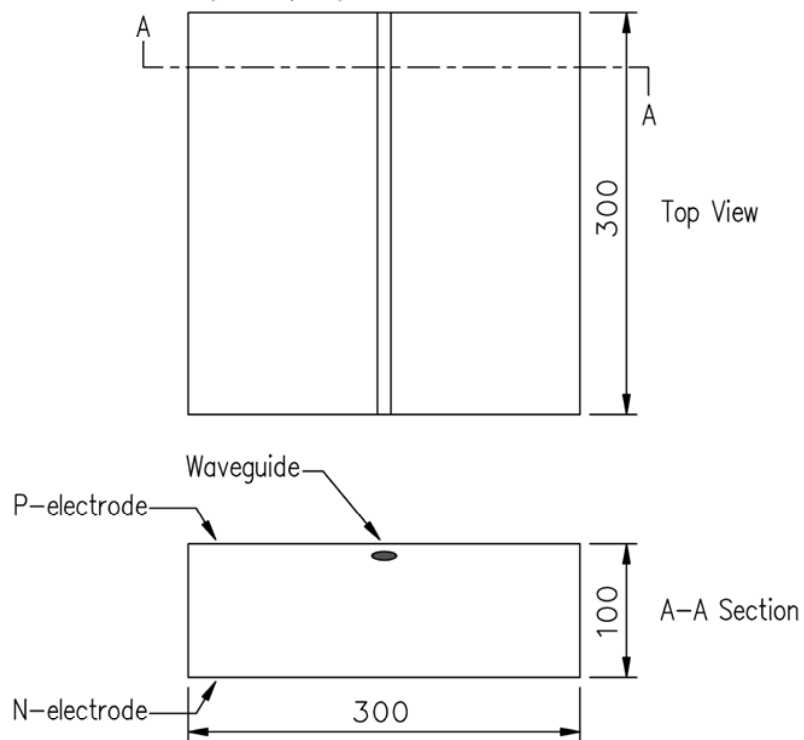


CHIP-650-P10

■ Specifications

- (1) Size : 300*300*100 μ m
- (2) Device: Laser diode bare chip
- (3) Structure Strained MQW and Multi-step MOCVD growth

■ External dimensions(Unit : μ m)



P-electrode and N-electrode are both gold pads.

■ Absolute Maximum Ratings(Tc=25°C)

| Parameter | Symbol | Rating | Unit |
|-----------------------|--------|-----------|------|
| Optical Output | Po | 12 | mW |
| Reverse Voltage | Vr | 2 | V |
| Operation Temperature | Top | -10~+40 | °C |
| Storage Temperature | Tstg | -15~+85 | °C |



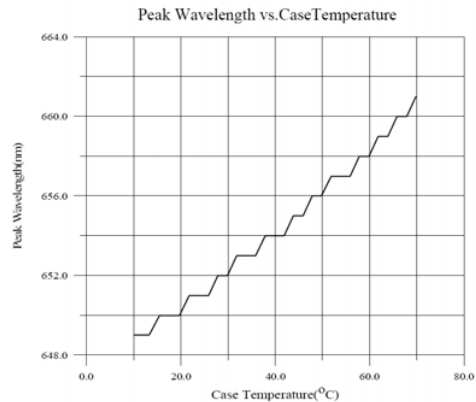
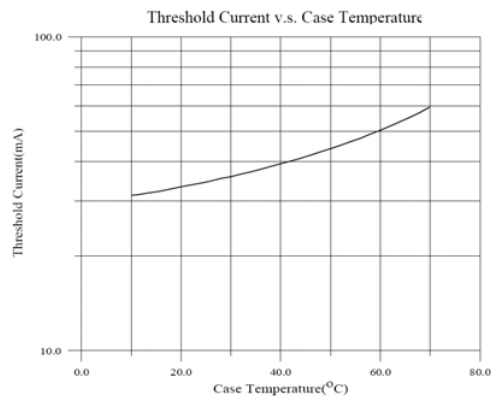
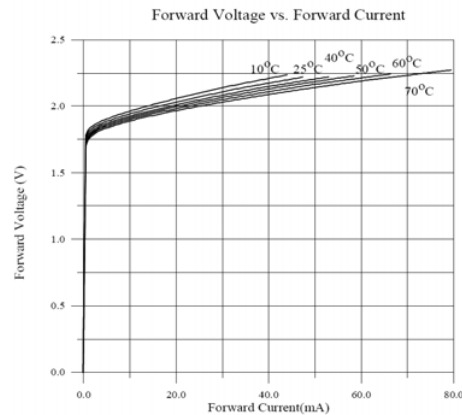
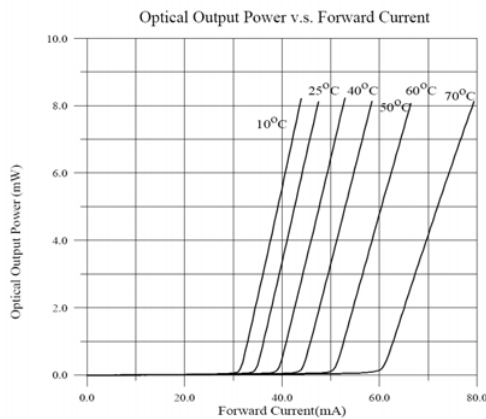
Electrical and Optical Characteristics(Tc=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit | |
|------------------------|-----------------|--|----------------------|------|------|-------|------|
| Threshold Current | I _{th} | - | - | 23 | 40 | mA | |
| Operating Current | I _{op} | P _o =10mW | - | 38 | 50 | mA | |
| Operating Voltage | V _{op} | - | - | 2.4 | 2.8 | Volt | |
| Slope Efficiency | η | 7.5mW-2.5mW | 0.3 | 0.6 | - | mW/mA | |
| | | I _{7.5mW} -I _{2.5mW} | | | | | |
| Beam Divergence (FWHM) | Parallel | $\theta //$ | P _o =10mW | 5 | 8 | 12 | deg. |
| | Perpendicular | $\theta \perp$ | P _o =10mW | 26 | 30 | 32 | deg. |
| Lasing Wavelength | λ | P _o =10mW | 640 | 655 | 665 | nm | |

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

⊙ Measuring Conditions : Pulse width=5μs , Duty cycle=1%

Typical characteristic curves



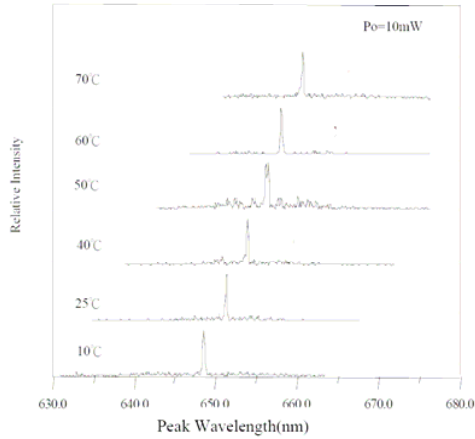


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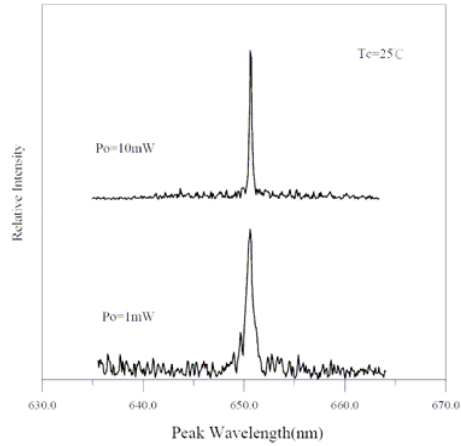
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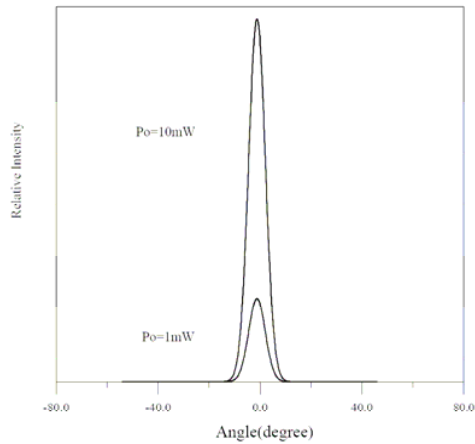
Lasing Spectrum v.s. Temperature



Lasing Spectrum v.s. Optical Output Power



Far-Field Pattern(Parallel) vs. Optical Output



Far-Field Pattern(Perpendicular) vs. Optical Output Power

