

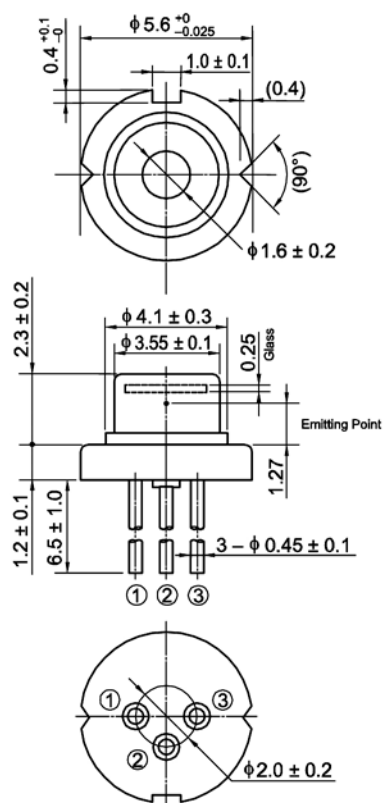
Data Sheet

HL6323MG

639nm / 30mW AlGaInP Laser Diode

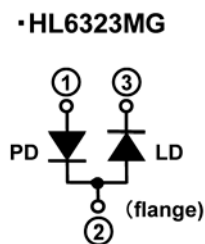
USHIO

Outline



(unit: mm)

Internal Circuit



Features

- Optical output power: 30mW(CW)*¹
- Visible light output: 639nm Typ.
- Small package: \square 5.6mm
- TM mode oscillation
- Single transverse mode

Application

- Laser markers
- High speed sensors
- Medical
- Optical Equipment for Measurement

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|----------------------------|------------|------------------|------|
| Optical output power | Po | 35* ¹ | mW |
| Pulse Optical output power | Po (pulse) | 50* ² | mW |
| LD Reverse Voltage | VR(LD) | 2 | V |
| PD Reverse Voltage | VR(PD) | 30 | V |
| Operating Temperature | Topr | -10 ~ +50 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | °C |

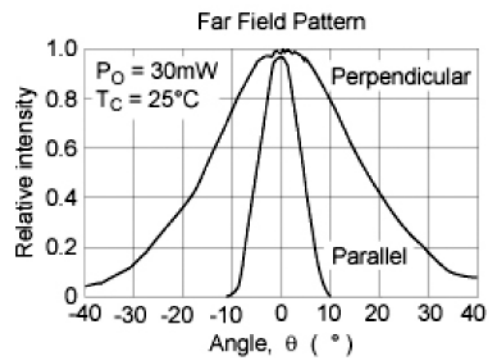
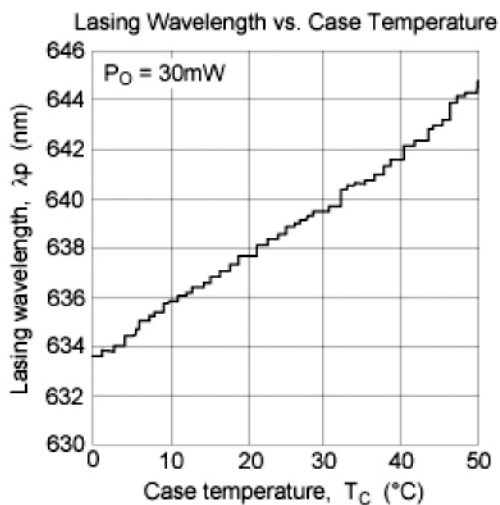
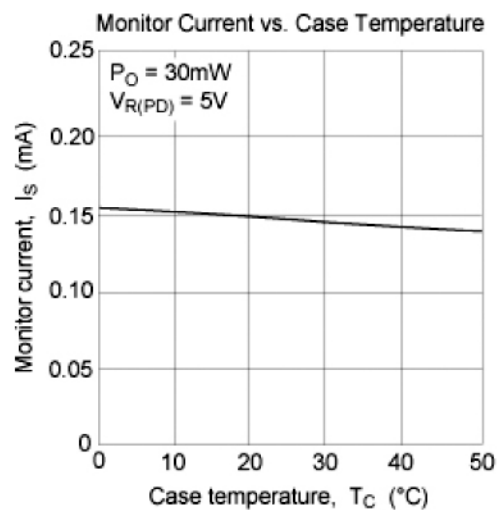
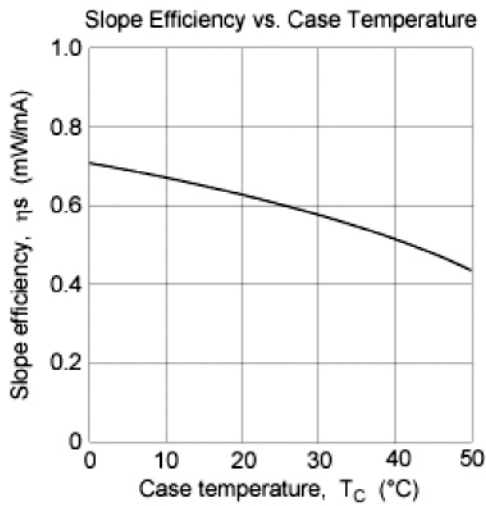
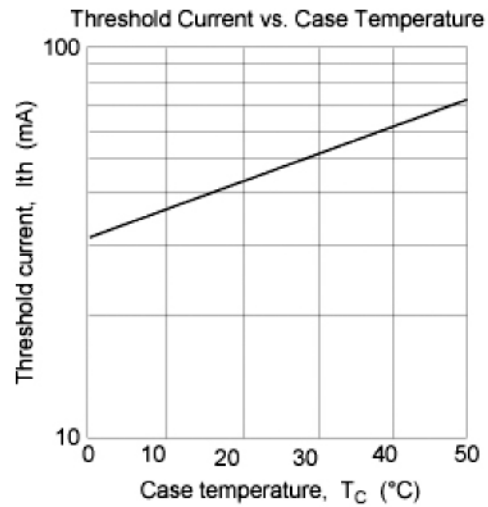
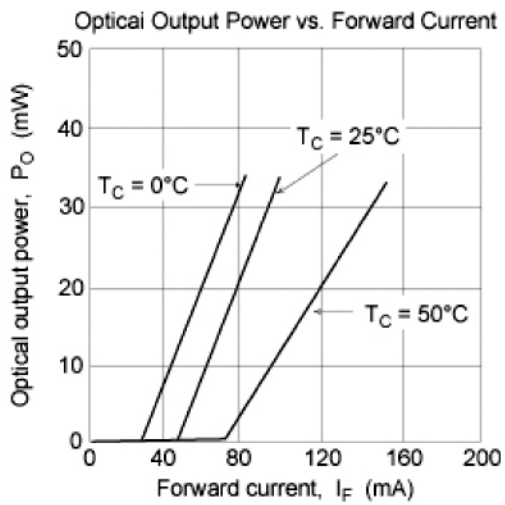
*1 : This value is not the same as the specification for long term reliability, such as life time.

*2 : Pulse condition : pulse width pw=100ns, duty =20%

Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|--|--------|------|------|------|-------|--|
| Threshold current | Ith | 30 | 45 | 65 | mA | - |
| Slope efficiency | ηs | 0.4 | 0.6 | 0.9 | mW/mA | 18(mW)/(I _(24mW) - I _(6mW)) |
| Operating current | Iop | - | 95 | 130 | mA | Po=30mW |
| Operating voltage | Vop | - | 2.3 | 2.8 | V | Po=30mW |
| Lasing Wavelength | λp | 635 | 639 | 642 | nm | Po=30mW |
| Beam divergence Parallel to the junction | θ// | 7 | 8.5 | 11 | ° | Po=30mW FWHM |
| Beam divergence Perpendicular to the junction | θ⊥ | 26 | 30 | 34 | ° | Po=30mW FWHM |
| Monitor current | Is | 0.05 | 0.15 | 0.25 | mA | Po=30mW, VR(PD)=5V |

Typical Characteristic Curves



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