

Data Sheet

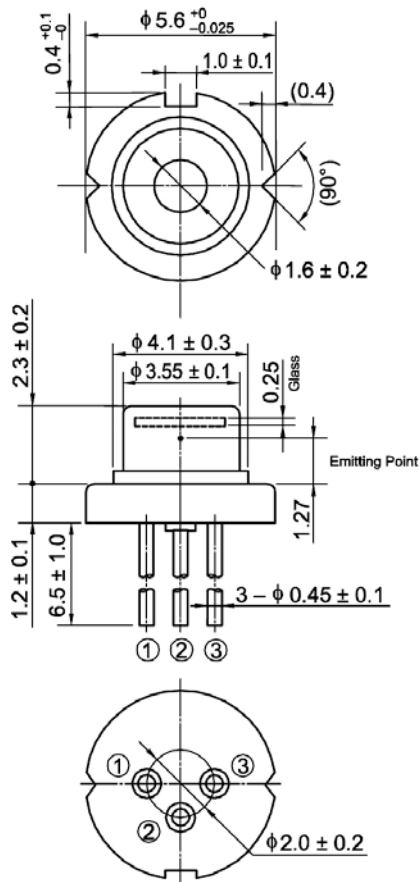
HL6501MG

658nm / 35mW

AlGaInP Laser Diode

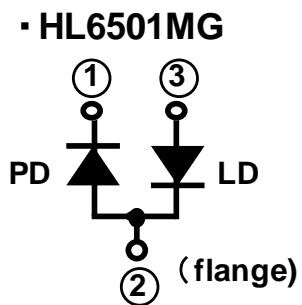
USHIO

Outline



(Unit: mm)

Internal Circuit



Features

- Visible light output: 658nm Typ.
- Optical output power: 30mW (CW)
- Operating temperature: +60°C
- Built-in monitor diode
- Single transverse mode
- TE mode oscillation

Application

- Laser leveler
- Laser scanner
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

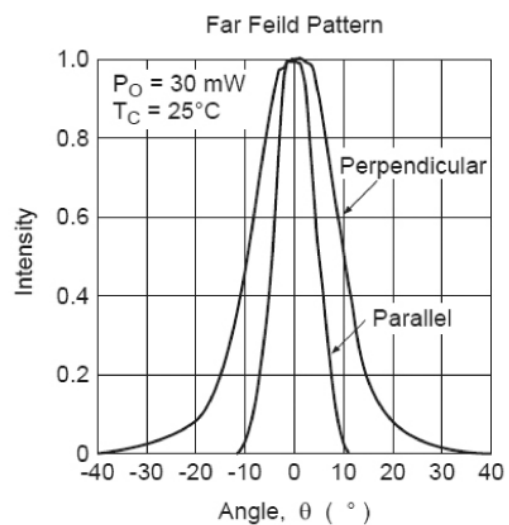
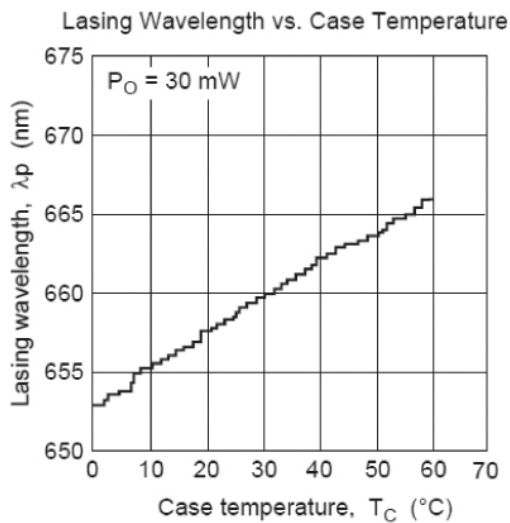
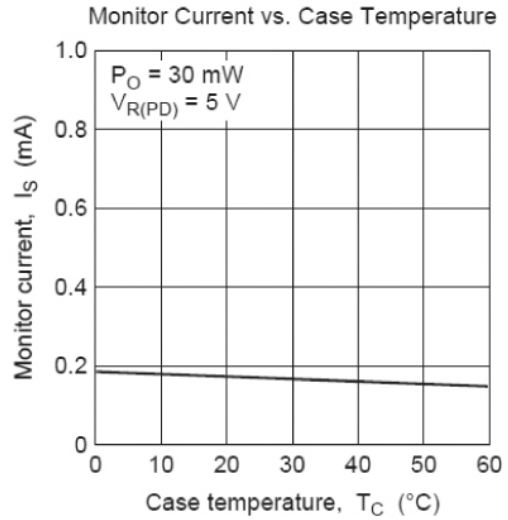
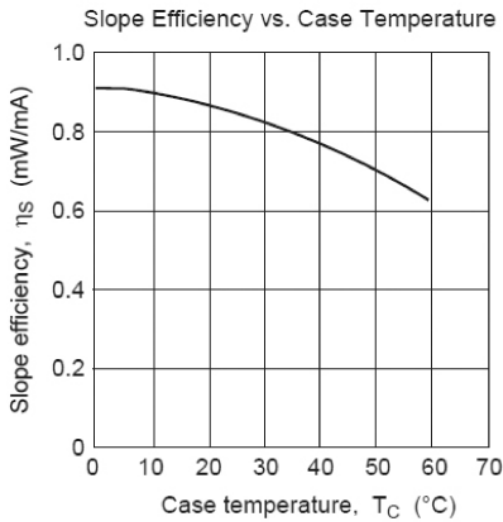
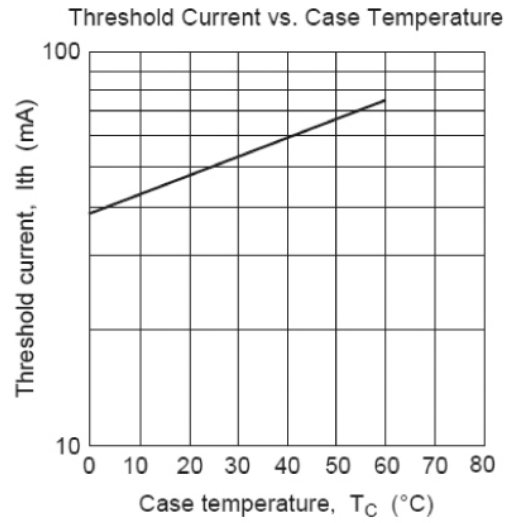
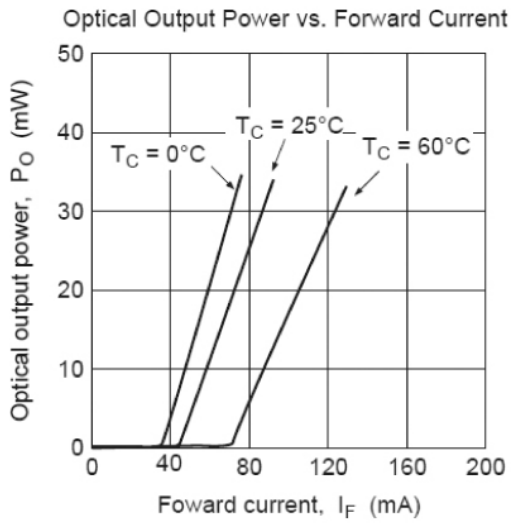
| Item | Symbol | Ratings | Unit |
|----------------------------|-----------------------|-----------|------|
| Optical output power | Po | 35 | mW |
| Pulse optical output power | Po _(pulse) | 50 | mW |
| LD Reverse Voltage | V _{R(LD)} | 2 | V |
| PD Reverse Voltage | V _{R(PD)} | 30 | V |
| Operating Temperature | Topr | -10 ~ +60 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | °C |

Note: Pulse condition: Pulse width = 30nsec, duty = 35%

Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|--|-----------------|------|-----|------|------|------------------------------------|
| Threshold current | I _{th} | 30 | 45 | 70 | mA | - |
| Operating current | I _{op} | 70 | 85 | 120 | mA | Po=30mW |
| Operating voltage | V _{op} | 2.1 | 2.6 | 3.0 | V | Po=30mW |
| Beam divergence Parallel to the junction | θ _{//} | 7 | 8.5 | 10.5 | ° | Po=30mW, FWHM |
| Beam divergence Perpendicular to the junction | θ _⊥ | 18 | 22 | 26 | ° | Po=30mW, FWHM |
| Lasing Wavelength | λ _p | 645 | 658 | 665 | nm | Po=30mW |
| Monitor Current | I _s | 0.05 | 0.3 | 1.5 | mA | Po=30mW, V _{R(PD)} =5V |

Typical Characteristic Curves



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