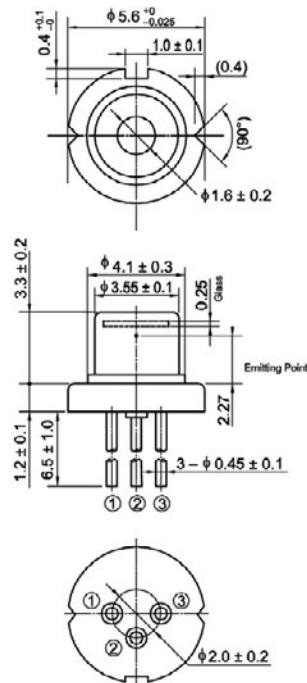


Data Sheet

HL63133DG

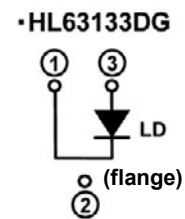
638nm / 170mW AlGaInP Laser Diode

Outline



(unit:mm)

Internal Circuit



Features

- Visible light output: 638nm Typ.
- Optical output power: 170mW (CW)
- Single transverse mode
- Low operating current: 250mA Typ.
- Low operating voltage: 2.8V Typ.
- Small package: $\phi 5.6$ mm
- TE mode oscillation

Application

- Pico projector
- Show laser
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------|--------------------|-----------|------|
| Optical output power | P _o | 170 | mW |
| LD Reverse Voltage | V _{R(LD)} | 2 | V |
| Operating Temperature | T _{opr} | -10 ~ +40 | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | °C |

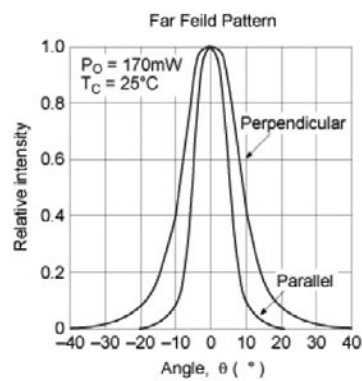
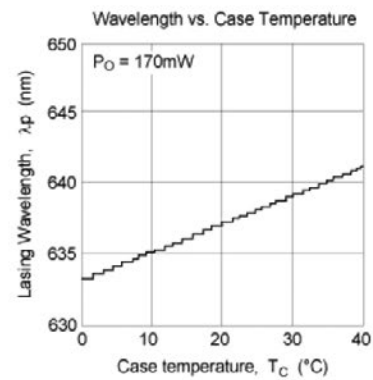
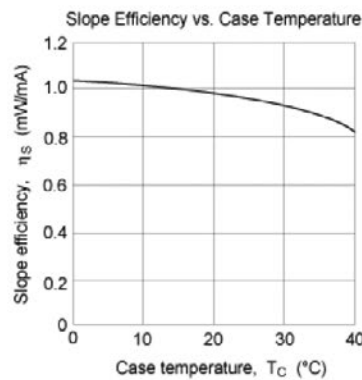
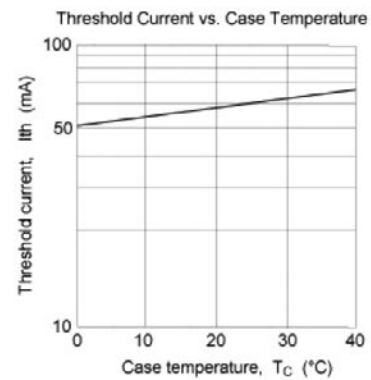
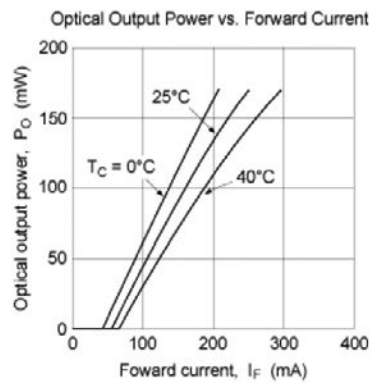
Note: Operating temperature is defined by Case temperature "Tc". High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|--|-----------------|-----|-----|-----|------|--------------------------------|
| Threshold current | I _{th} | - | 60 | 90 | mA | - |
| Operating current | I _{op} | - | 250 | 320 | mA | P _o =170mW |
| Operating voltage | V _{op} | - | 2.8 | 3.2 | V | P _o =170mW |
| Beam divergence Parallel to the junction | θ _{//} | 5 | 9 | 13 | ° | P _o =170mW, FWHM |
| Beam divergence Perpendicular to the junction | θ _⊥ | 13 | 17 | 23 | ° | P _o =170mW, FWHM |
| Lasing Wavelength | λ _p | 632 | 638 | 643 | nm | P _o =170mW |

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Typical Characteristic Curves



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Cautions

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- 2.This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.

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