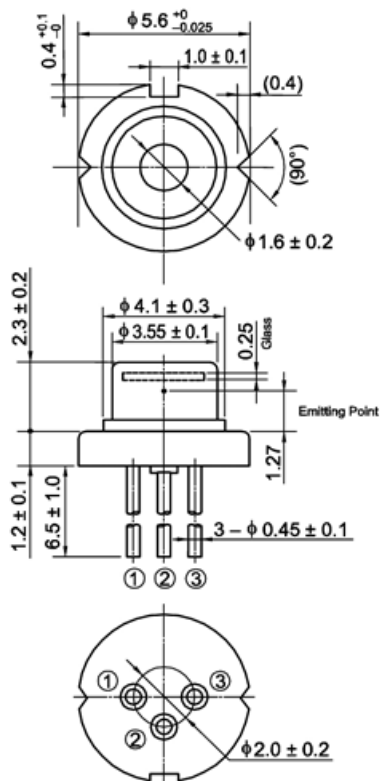


HL40053MG

404nm/500mW Violet Laser Diode

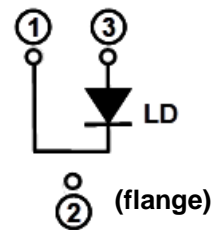
Outline



(Unit: mm)

Internal Circuit

-HL40053MG



Features

- Optical output power: 400mW (CW)
- Violet Lasing: 398~410nm
- Low operating current: 370mA Typ.
- Low operating voltage: 4.9V Max.
- Package: $\phi 5.6$ mm
- Multiple transverse mode
- TE mode oscillation

Application

- Bio & Medical
- Measurement

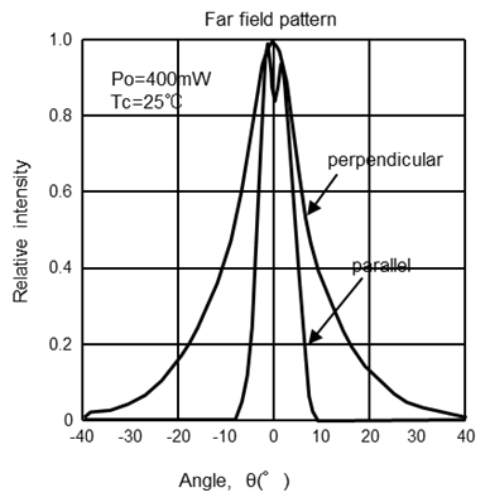
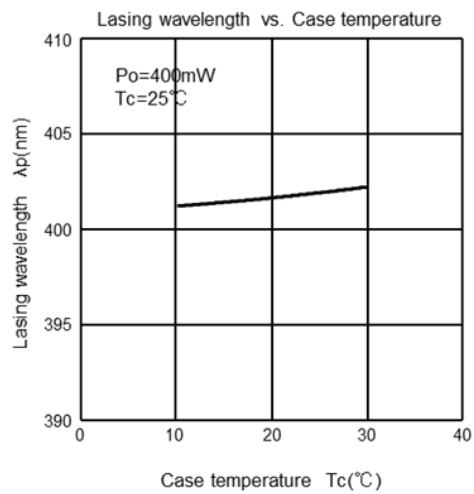
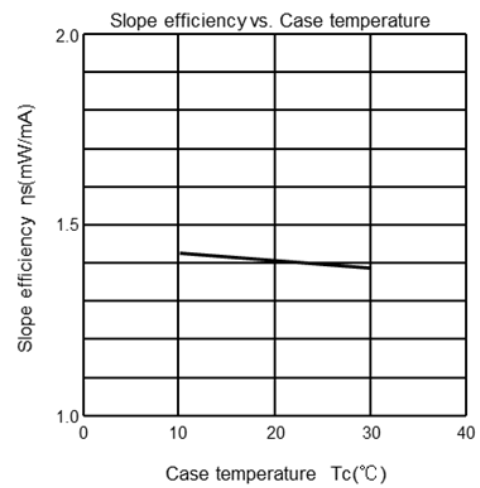
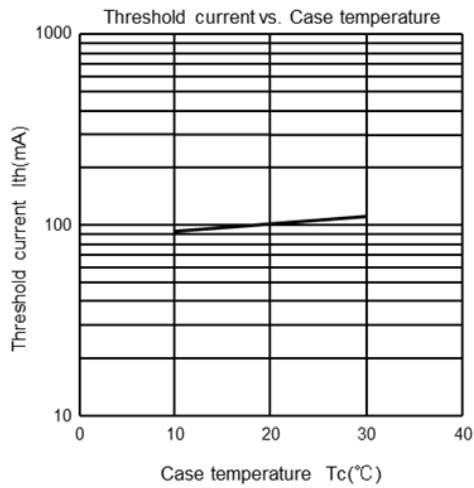
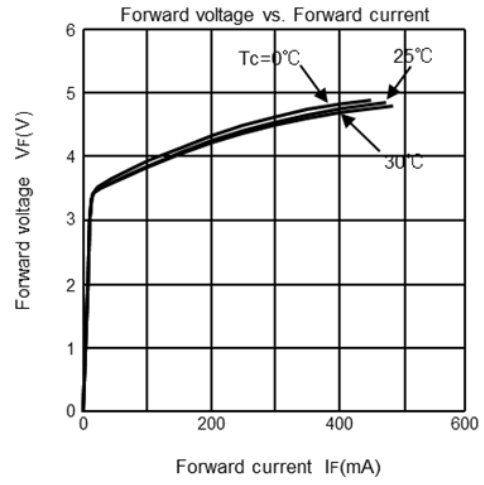
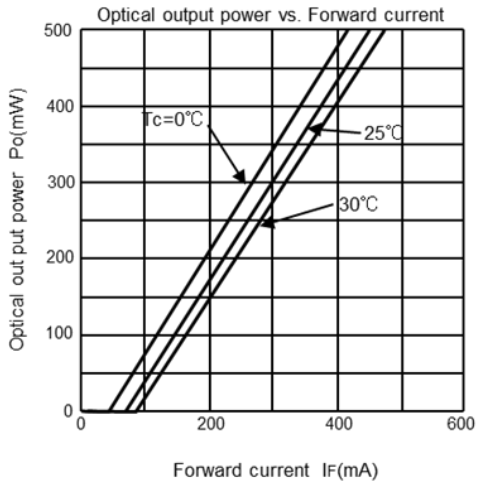
Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------|--------------------|-----------|------|
| Optical output power | Po | 500 | mW |
| LD Reverse Voltage | V _{R(LD)} | 5 | V |
| Operating Temperature | Topr | 0 ~ +30 | °C |
| Storage Temperature | Tstg | -35 ~ +85 | °C |

Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|--|-----------------|-----|-----|-----|------|--|
| Threshold current | I _{th} | - | 110 | 130 | mA | - |
| Operating current | I _{op} | - | 370 | 410 | mA | Po=400mW |
| Operating voltage | V _{op} | - | - | 4.9 | V | Po=400mW |
| Beam divergence Parallel to the junction | θ _{//} | 5 | 13 | 25 | ° | Po=400mW, Full angle 1/e ² |
| Beam divergence Perpendicular to the junction | θ _⊥ | 30 | 42 | 50 | ° | Po=400mW, Full angle 1/e ² |
| Lasing Wavelength | λ _p | 398 | 404 | 410 | nm | Po=400mW |

Typical Characteristic Curves



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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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