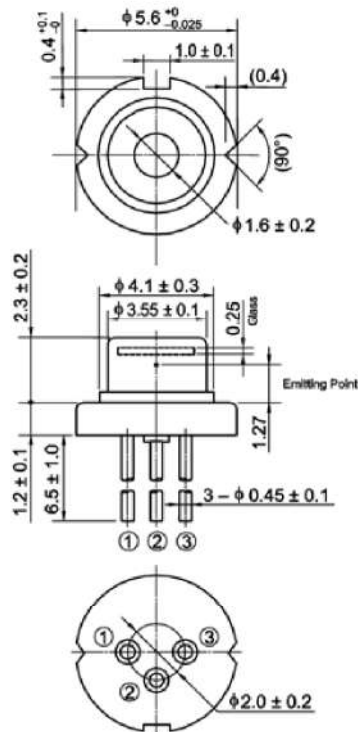


## HL40041MG

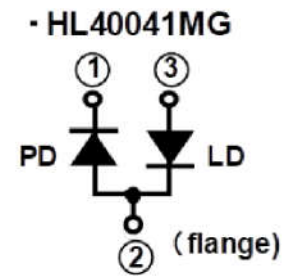
404nm / 150mW Violet Laser Diode

### Outline



(Unit: mm)

### Internal Circuit



\* Monitor PD for initial checking purpose only

### Features

- Operation temperature:  $-10 \sim +50^\circ\text{C}$
- Optical output power: 150mW (CW)
- Violet Lasing: 404nm Typ.
- Low operating voltage: 5.0V Max.
- Package:  $\phi 5.6\text{mm}$
- Multiple transverse mode
- TE mode oscillation

### Application

- Bio & Medical
- Measurement

**Absolute Maximum Ratings (Tc=25°C)**

| Item                  | Symbol | Ratings   | Unit |
|-----------------------|--------|-----------|------|
| Optical output power  | Po     | 150       | mW   |
| LD Reverse Voltage    | VR(LD) | 2         | V    |
| PD Reverse Voltage *  | VR(PD) | 20        | V    |
| Operating Temperature | Topr   | -10 ~ +50 | °C   |
| Storage Temperature   | Tstg   | -40 ~ +85 | °C   |

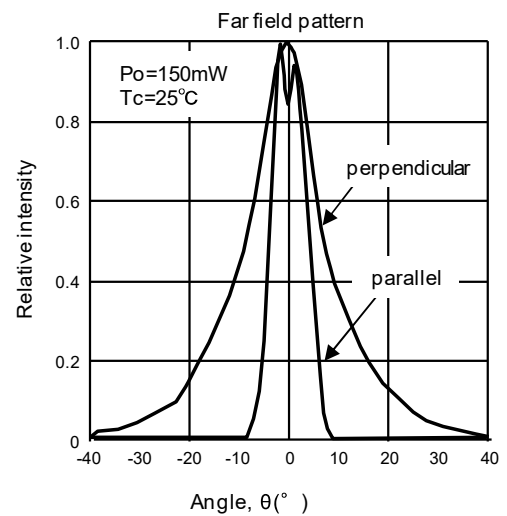
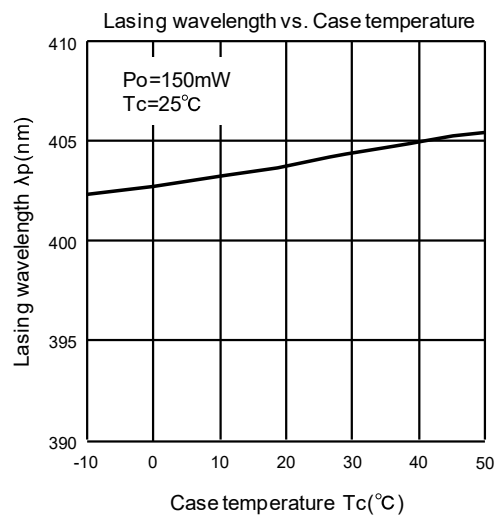
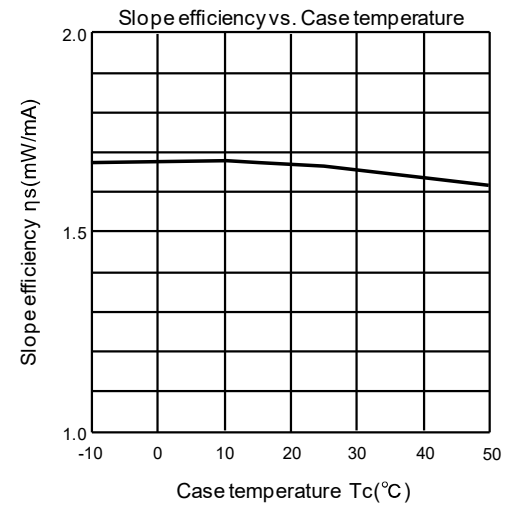
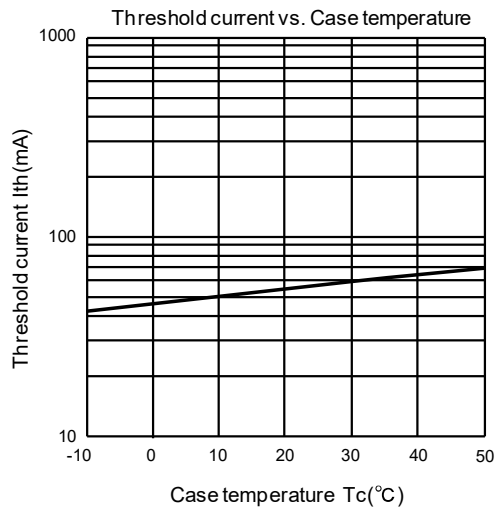
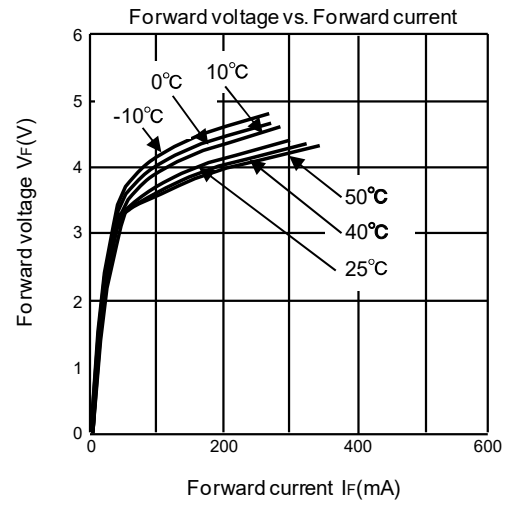
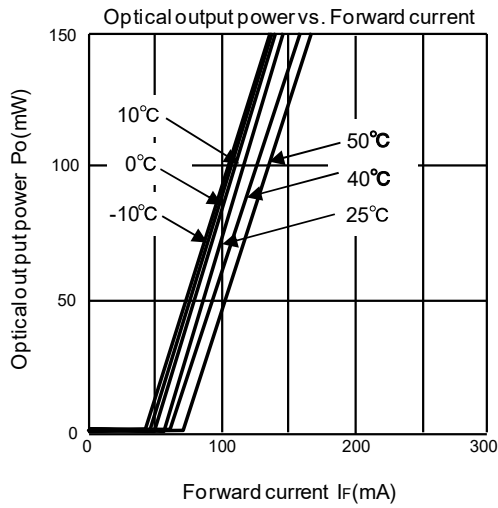
\* Monitor PD for initial checking purpose only

**Optical and Electrical Characteristics (Tc=25°C)**

| Parameter  | Symbol           | Min  | Typ  | Max  | Unit | Test Condition                  |
|--|------------------|------|------|------|------|---------------------------------|
| Threshold current                                | Ith              | -    | 60   | 120  | mA   | -                               |
| Operating current                                | Iop              | -    | 150  | 250  | mA   | Po=150mW                        |
| Operating voltage                                | Vop              | -    | -    | 5.0  | V    | Po=150mW                        |
| Beam divergence<br>Parallel to the junction      | $\theta_{//}$    | 5    | 13   | 25   | °    | Po=150mW,<br>Full angle $1/e^2$ |
| Beam divergence<br>Perpendicular to the junction | $\theta_{\perp}$ | 30   | 45   | 60   | °    | Po=150mW,<br>Full angle $1/e^2$ |
| Lasing Wavelength                                | $\lambda_p$      | 398  | 404  | 410  | nm   | Po=150mW                        |
| Monitor Current *                                | Is               | 0.05 | 0.20 | 0.50 | mA   | Po=150mW,<br>VR(PD)=5V          |

\* Monitor PD for initial checking purpose only

## Typical Characteristic Curves



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