

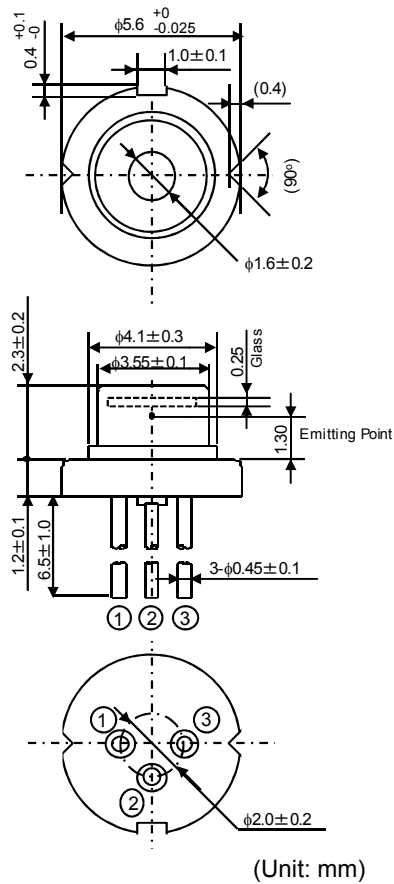
# Data Sheet

# HL40071MG [PRELIMINARY]

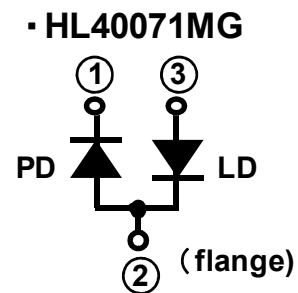
405nm / 300mW Violet Laser Diode



## Outline



## Internal Circuit



\* Monitor PD for initial checking purpose only

## Features

- Operation temperature:  $-0 \sim +70^\circ\text{C}$
- Optical output power: 300mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating voltage: 6.0V Typ.
- Package:  $\phi 5.6\text{mm}$
- Single transverse mode
- TE mode oscillation

## Application

- Bio & Medical
- Measurement
- 3D Printer

## Absolute Maximum Ratings (Tc=25°C)

| Item                                   | Symbol | Ratings   | Unit |
|--|--------|-----------|------|
| Optical output power (Refer to Fig.1)  | Po     | 360       | mW   |
| LD Reverse Voltage                     | VR(LD) | 2         | V    |
| PD Reverse Voltage *                   | VR(PD) | 20        | V    |
| Operating Temperature (Refer to Fig.1) | Topr   | 0 ~ +70   | °C   |
| Storage Temperature                    | Tstg   | -40 ~ +85 | °C   |

\* Monitor PD for initial checking purpose only

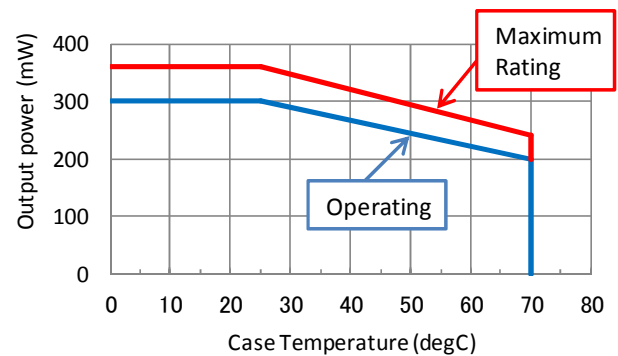


Fig.1

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

| Parameter  | Symbol | Min  | Typ  | Max  | Unit | Test Condition         |
|--|--------|------|------|------|------|------------------------|
| Threshold current                                | Ith    | -    | 50   | 80   | mA   | -                      |
| Operating current                                | Iop    | -    | 280  | 350  | mA   | Po=300mW               |
| Operating voltage                                | Vop    | -    | 6.0  | 7.0  | V    | Po=300mW               |
| Beam divergence<br>Parallel to the junction      | θ//    | 3    | 6    | 9    | °    | Po=300mW,<br>FWHM      |
| Beam divergence<br>Perpendicular to the junction | θ⊥     | 11   | 15   | 19   | °    | Po=300mW,<br>FWHM      |
| Lasing Wavelength                                | λp     | 400  | 405  | 410  | nm   | Po=300mW               |
| Monitor Current *                                | Is     | 0.02 | 0.09 | 0.16 | mA   | Po=300mW,<br>VR(PD)=5V |

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