

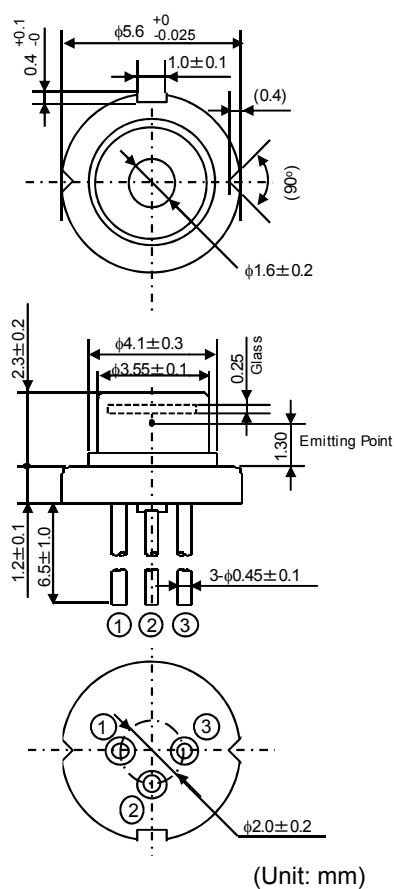
## Data Sheet

# HL40071MG [PRELIMINARY]

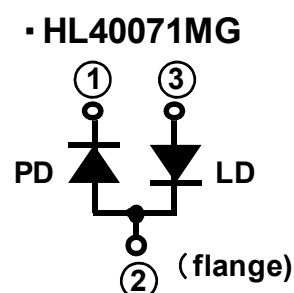
405nm / 300mW      Violet Laser Diode

USHIO

### 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: 5.9V 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 (0 ~ +25°C)	Po (0 ~ +25°C)	360	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage *	V <sub>R(PD)</sub>	20	V
Operating Temperature	Topr	0 ~ +70	°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	I <sub>th</sub>	-	53	70	mA	-
Operating current	I <sub>op</sub>	-	280	300	mA	Po=300mW
Operating voltage	V <sub>op</sub>	-	5.9	6.3	V	Po=300mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	4	5.5	8	°	Po=300mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	14	15	17	°	Po=300mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	400	405	410	nm	Po=300mW
Monitor Current *	I <sub>s</sub>	-	(0.09)	-	mA	Po=300mW, V <sub>R(PD)</sub> =5V

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