

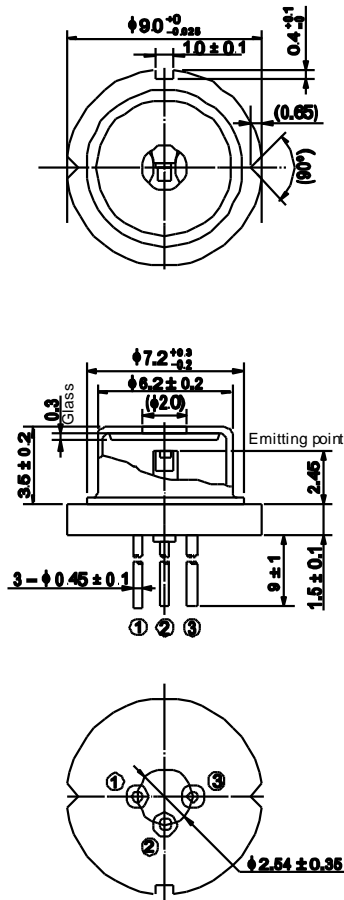
# Data Sheet

## HL40033G (PRELIMINARY)

405nm / 1,000mW Violet Laser Diode



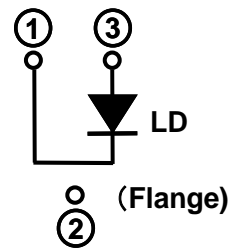
### Outline



(Unit: mm)

### Internal Circuit

HL40033G



### Features

- Optical output power: 1,000mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating current: 900mA Typ.
- Low operating voltage: 5.0V Max.
- Package:  $\phi$ 9.0mm
- Multiple transverse mode
- TE mode oscillation

### Application

- Direct imaging for PCB
- Industry
- Display
- Bio & Medical

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

Item	Symbol	Ratings	Unit
Optical output power	Po	1,100	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-40 ~ +85	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	150	230	400	mA	-
Operating current	I <sub>op</sub>	700	900	1,200	mA	Po=1,000mW
Operating voltage	V <sub>op</sub>	-	5.0	5.5	V	Po=1,000mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	5	13	25	°	Po=1,000mW, Full angle 1/e <sup>2</sup>
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	30	45	60	°	Po=1,000mW, Full angle 1/e <sup>2</sup>
Lasing Wavelength	λ <sub>p</sub>	400	405	410	nm	Po=1,000mW

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