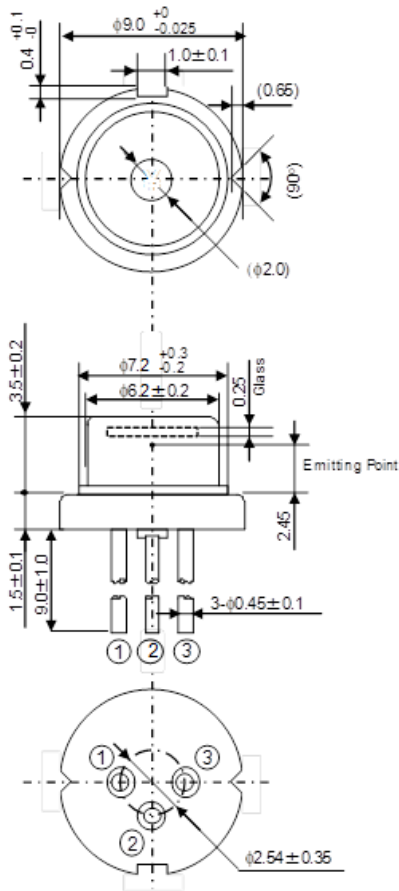


## HL40085G

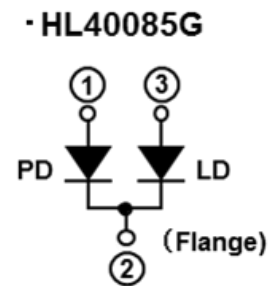
405nm / 1,000mW Violet Laser Diode

### Outline



(Unit: mm)

### Internal Circuit



### Features

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

### Application

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

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

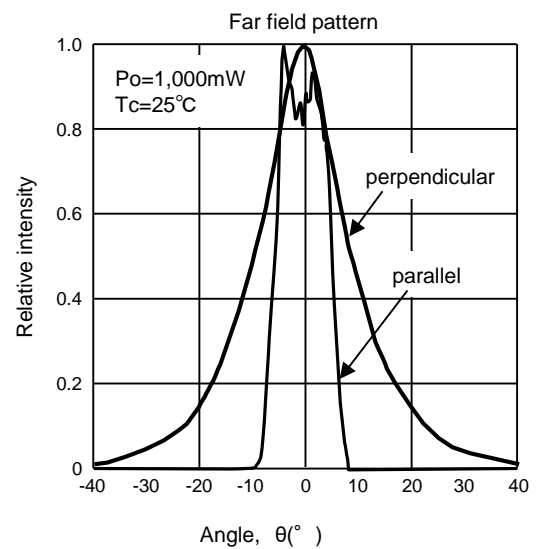
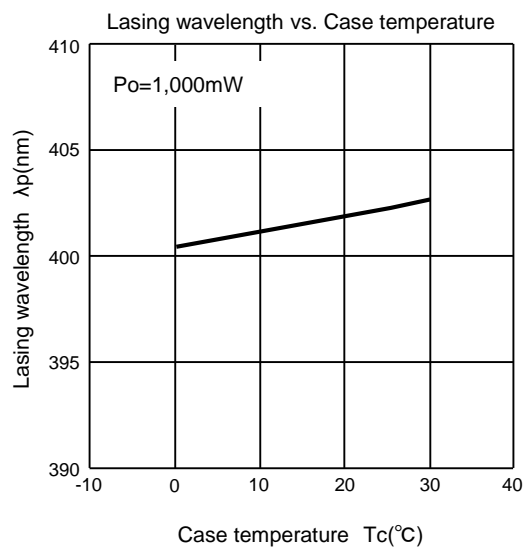
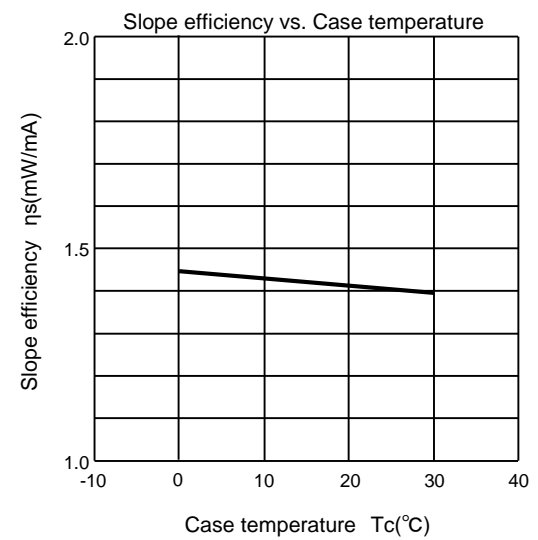
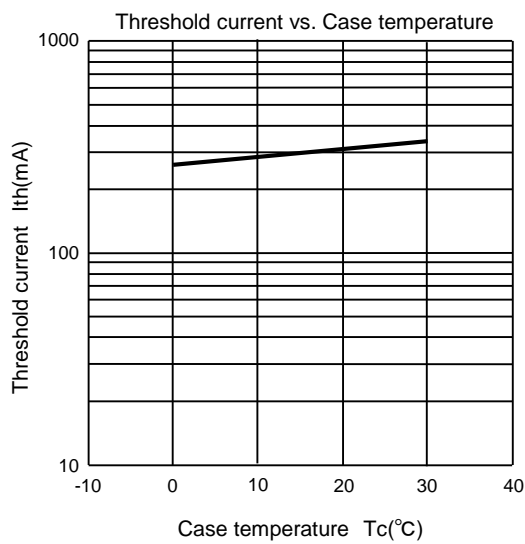
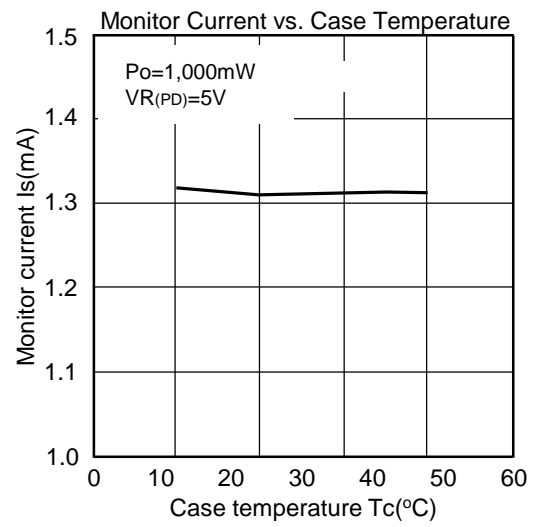
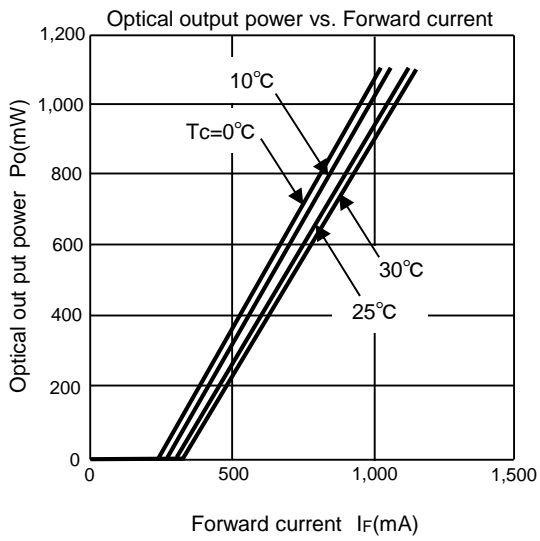
Item	Symbol	Ratings	Unit
Optical output power	Po	1,100	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	20	V
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-40 ~ +85	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	250	320	400	mA	-
Operating current	I <sub>op</sub>	-	1,000	1,300	mA	Po=1,000mW
Operating voltage	V <sub>op</sub>	-	-	5.0	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	42	50	°	Po=1,000mW, Full angle 1/e <sup>2</sup>
Lasing Wavelength	λ <sub>p</sub>	400	405	410	nm	Po=1,000mW
Monitor Current (*1)	I <sub>s</sub>	0.5	1.3	2.5	mA	Po=1,000mW, V <sub>R(PD)</sub> =5V

\*1 for only initial checking

## Typical Characteristic Curves



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