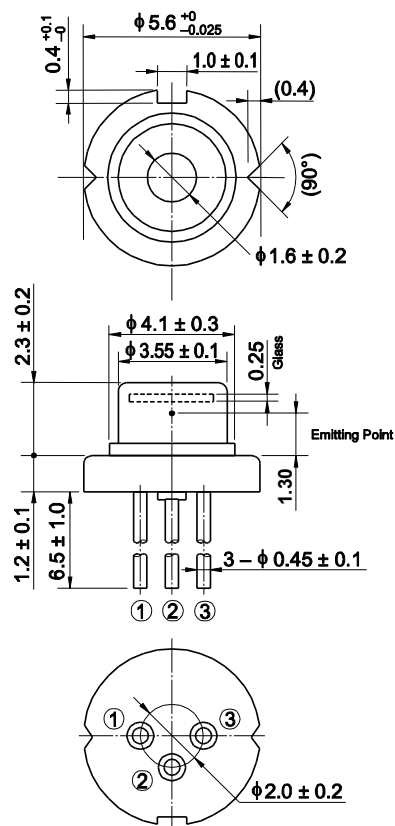


## HL40173MG/175MG

405nm/600mW Violet Laser Diode

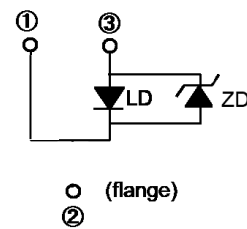
### Outline



(Unit: mm)

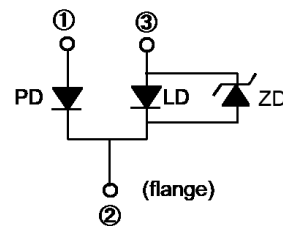
### Internal Circuit

•HL40173MG



○ (flange)  
②

•HL40175MG



○ (flange)  
②

### Features

- Optical output power: 600mW (CW)
- Violet Lasing: 400~410nm
- Low operating current: 450mA Typ.
- Low operating voltage: 4.2V Typ.
- Package:  $\phi 5.6$ mm
- Multiple transverse mode
- TE mode oscillation.
- Monitor PD selectable (HL40175MG type)

### Application

- Direct Imaging for PCB
- Industry
- Bio & Medical
- Measurement

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

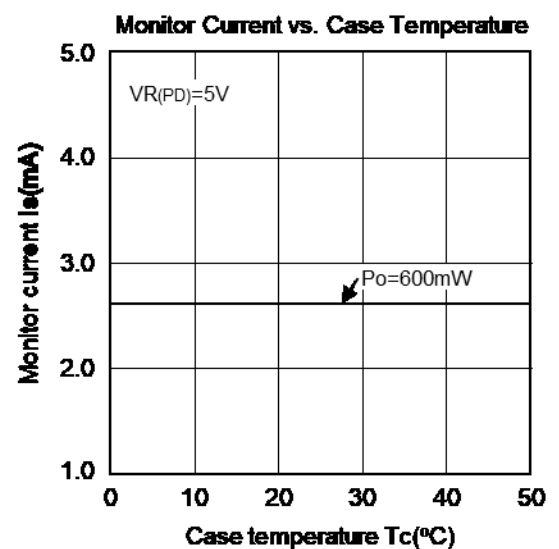
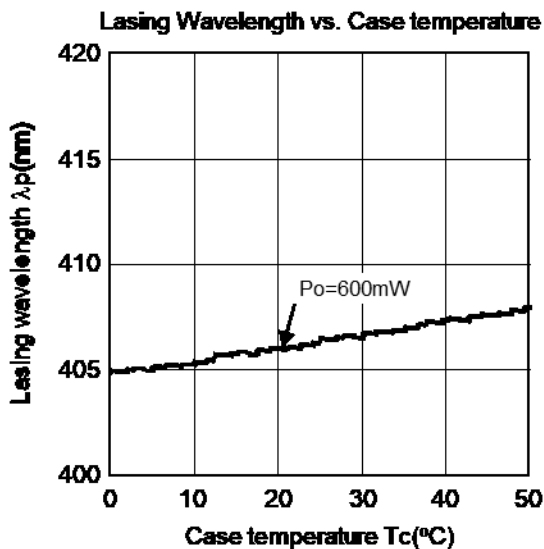
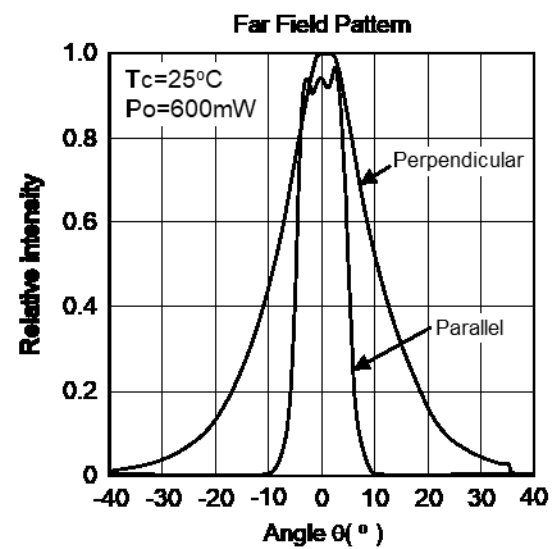
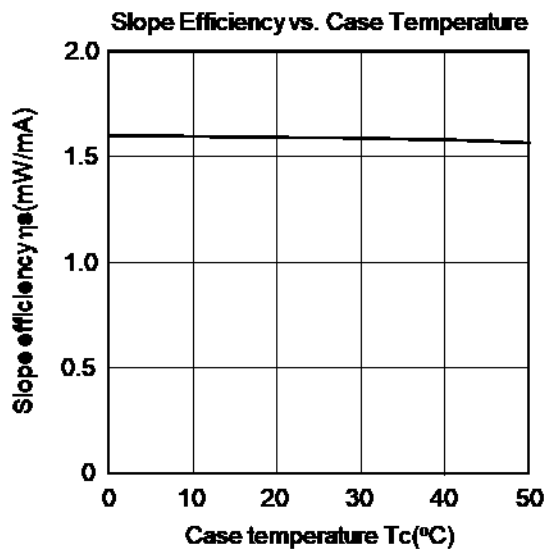
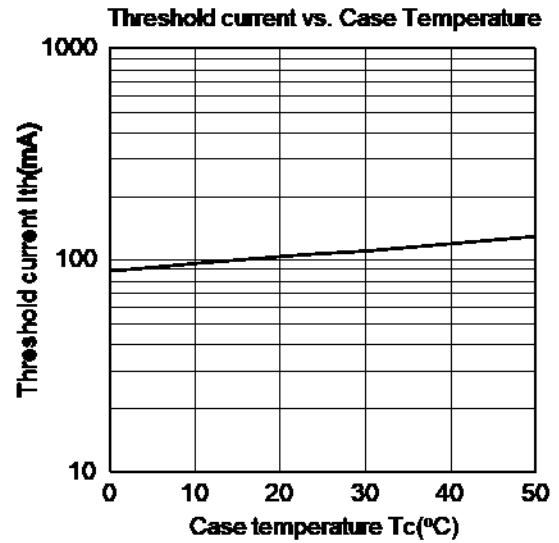
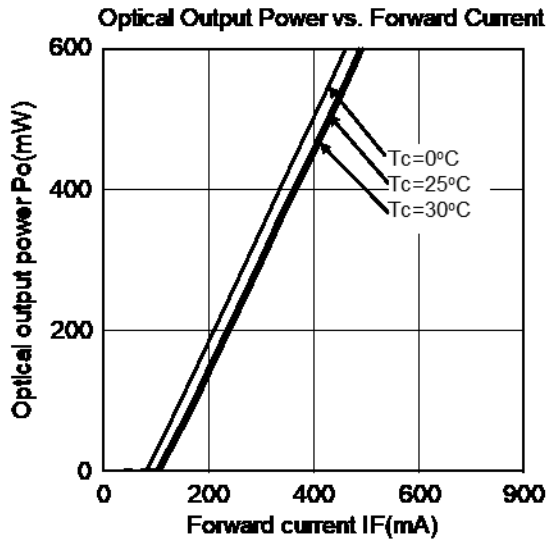
Item	Symbol	Ratings	Unit
Optical output power	Po	700	mW
LD Reverse Current	IR(LD)	85	mA
PD Reverse Voltage <sup>Note1)</sup>	VR(PD)	15	V
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-40 ~ +85	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	70	110	180	mA	-
Operating current	Iop	400	450	600	mA	Po=600mW
Operating voltage	Vop	3.8	4.2	4.9	V	Po=600mW
Beam divergence Parallel to the junction	$\theta_{//}$	8	13	20	°	Po=600mW, Full angle 1/e <sup>2</sup>
Beam divergence Perpendicular to the junction	$\theta_{\perp}$	35	42	47	°	Po=600mW, Full angle 1/e <sup>2</sup>
Lasing Wavelength <sup>Note1)</sup>	$\lambda_p$	400	405	410	nm	Po=600mW
Monitor Current <sup>Note1)</sup>	Is	1	2	5	mA	Po=600mW VR(PD)=5V

Note1) for only initial checking and for only HL40175MG type

## Typical Characteristic Curves



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