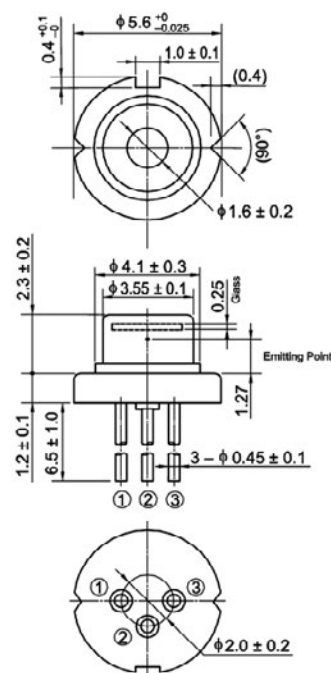


## Data Sheet

# HL40053MG

404nm/500mW Violet Laser Diode

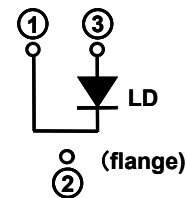
### Outline



(Unit: mm)

### Internal Circuit

#### HL40053MG



### Features

- Optical output power: 400mW (CW)
- Violet Lasing: 398~410nm
- Low operating current: 370mA Typ.
- Low operating voltage: 4.9V Max.
- Package:  $\phi 5.6$ mm
- Multiple transverse mode
- TE mode oscillation

### Application

- Bio & Medical
- Measurement

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

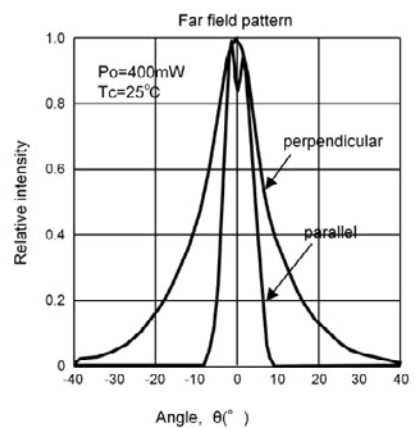
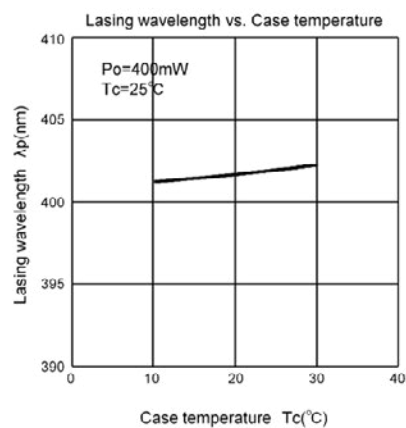
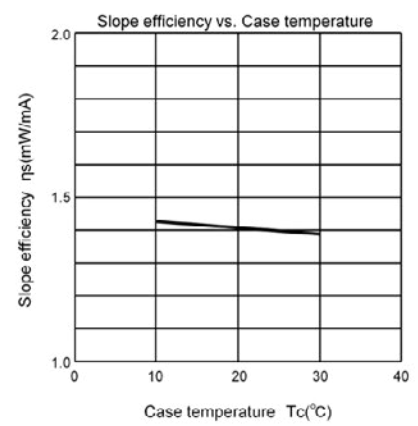
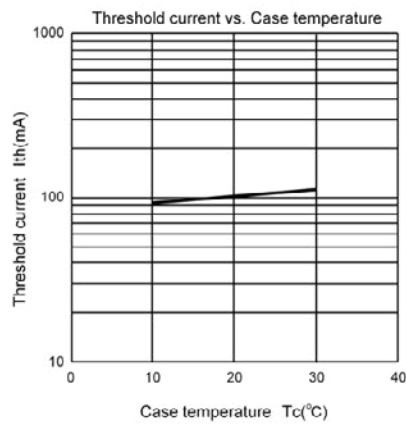
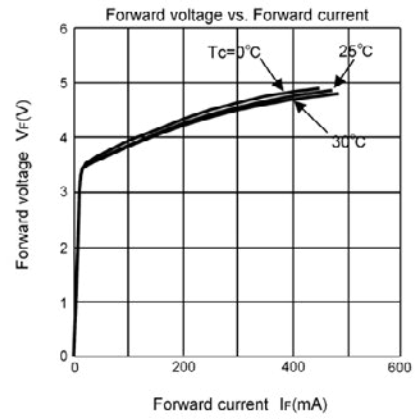
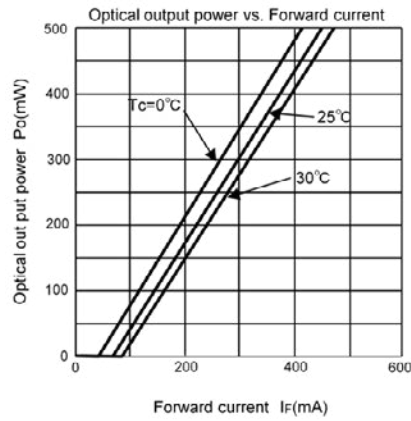
Item	Symbol	Ratings	Unit
Optical output power	Po	500	mW
LD Reverse Voltage	VR(LD)	5	V
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-35 ~ +85	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	110	130	mA	-
Operating current	Iop	-	370	410	mA	Po=400mW
Operating voltage	Vop	-	-	4.9	V	Po=400mW
Beam divergence Parallel to the junction	$\theta_{//}$	5	13	25	°	Po=400mW, Full angle 1/e <sup>2</sup>
Beam divergence Perpendicular to the junction	$\theta_{\perp}$	30	42	50	°	Po=400mW, Full angle 1/e <sup>2</sup>
Lasing Wavelength	$\lambda_p$	398	404	410	nm	Po=400mW

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### Typical Characteristic Curves



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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.



Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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