



Product Status Information

HL40053MG is Not Recommended for New Design (NRND) status. Please refer to successor product below for new designs and adoptions.

NRND Product	Successor Product
HL40053MG	HL40093MG
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40053MG.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40093MG.pdf

For the “Product Life Cycle” definition, please refer to below link.

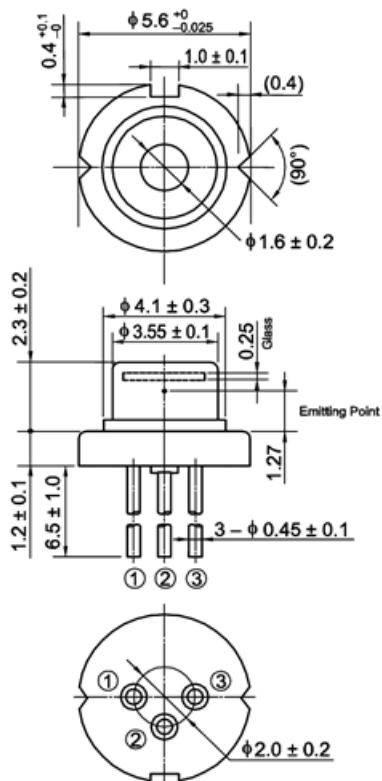
Japanese; <https://www.ushio.co.jp/jp/laser/news/500958.html>

English; <https://www.ushio.co.jp/en/laser/news/500958.html>

HL40053MG

404nm/500mW Violet Laser Diode

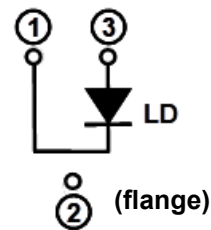
Outline



(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

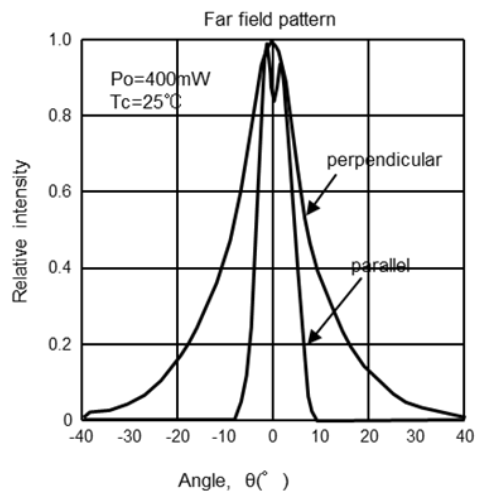
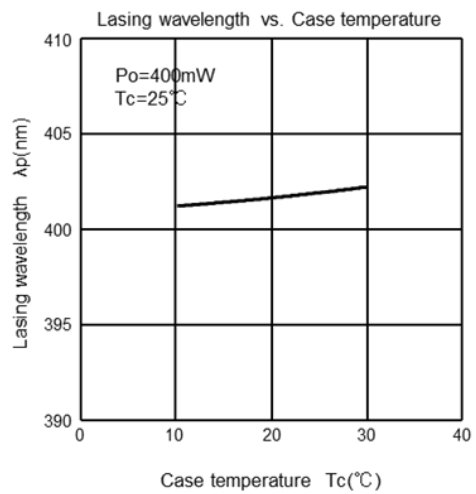
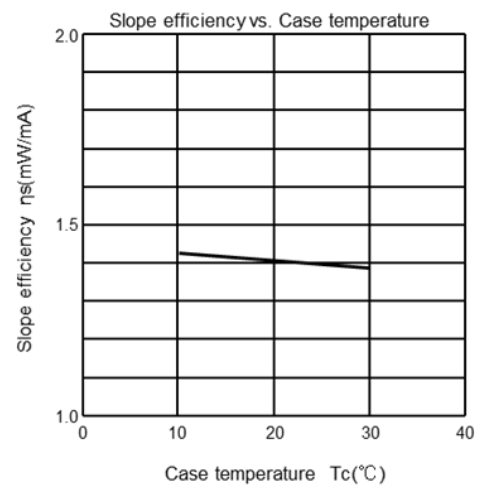
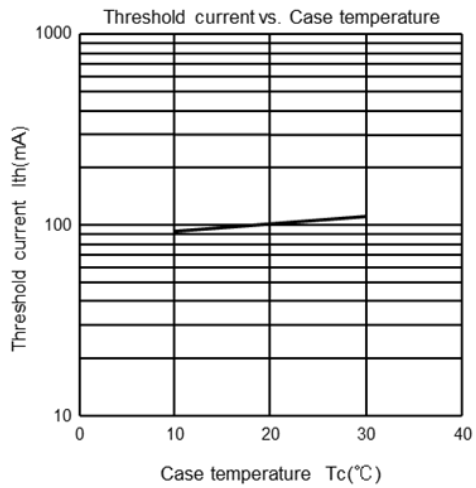
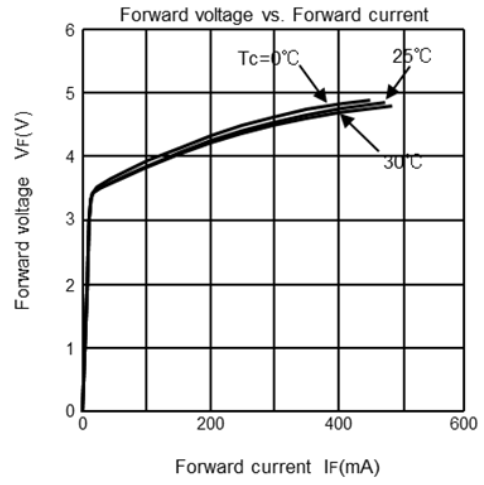
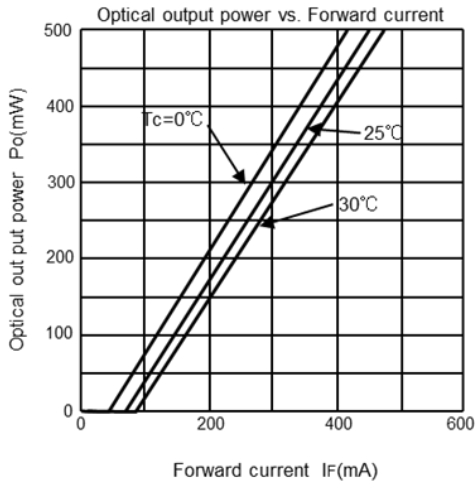
Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	500	mW
LD Reverse Voltage	V _{R(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	I _{th}	-	110	130	mA	-
Operating current	I _{op}	-	370	410	mA	Po=400mW
Operating voltage	V _{op}	-	-	4.9	V	Po=400mW
Beam divergence Parallel to the junction	θ _{//}	5	13	25	°	Po=400mW, Full angle 1/e ²
Beam divergence Perpendicular to the junction	θ _⊥	30	42	50	°	Po=400mW, Full angle 1/e ²
Lasing Wavelength	λ _p	398	404	410	nm	Po=400mW

Typical Characteristic Curves



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