



Product Status Information

HL40033G is Not Recommended for New Design (NRND) status. Please refer to successor product below for new design and adoption.

NRND Product	Successor Product
HL40033G	HL40123GL
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40033G.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40123GL.pdf

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

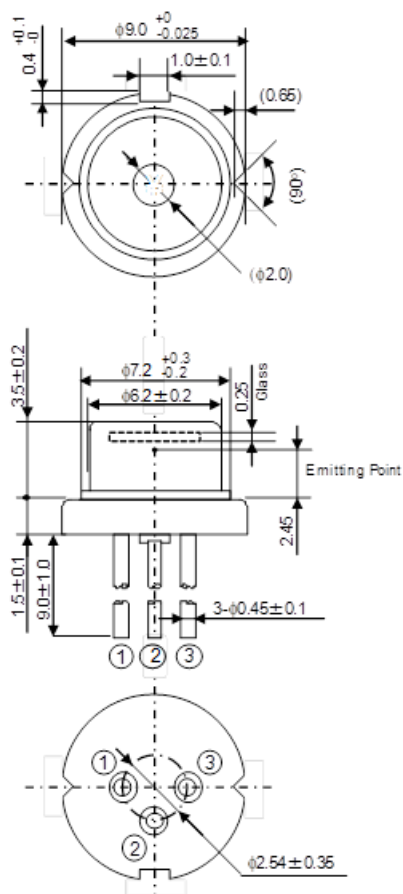
Japanese; <https://www.ushio.co.jp/jp/laser/news/500958.html>

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

HL40033G

405nm/1,000mW Violet Laser Diode

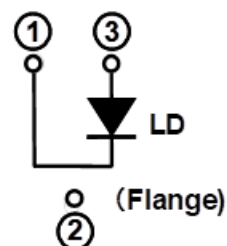
Outline



(Unit: mm)

Internal Circuit

HL40033G



Features

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

Application

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

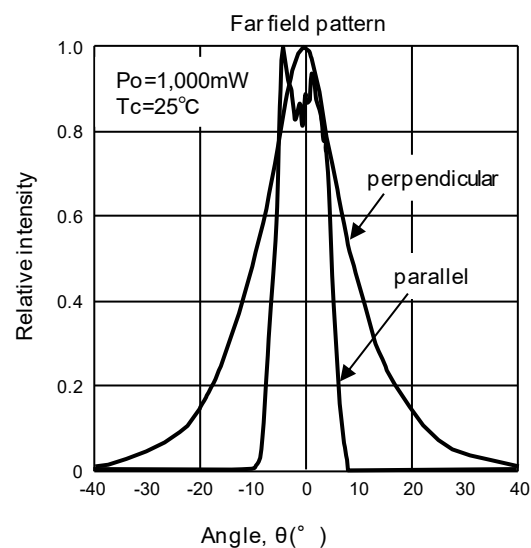
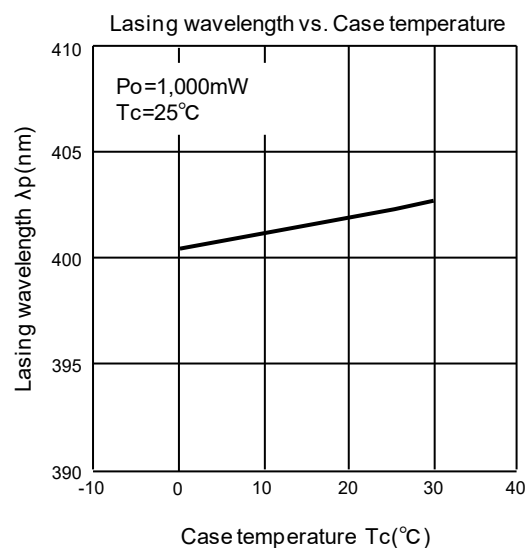
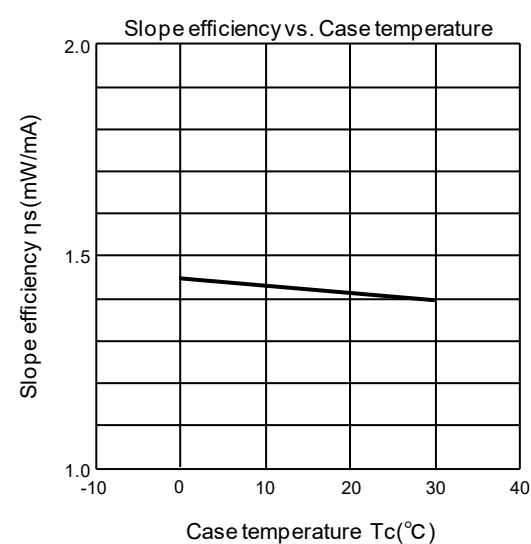
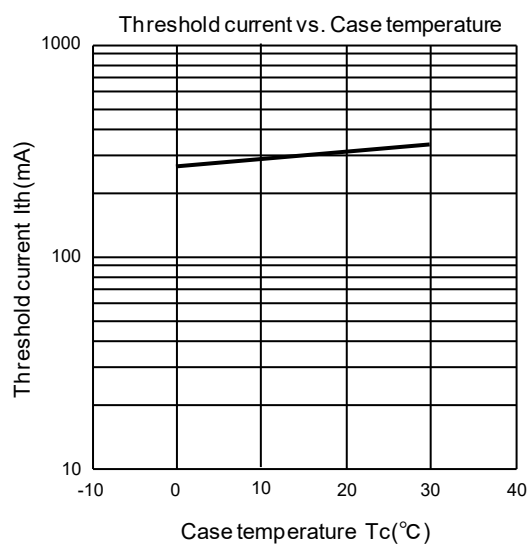
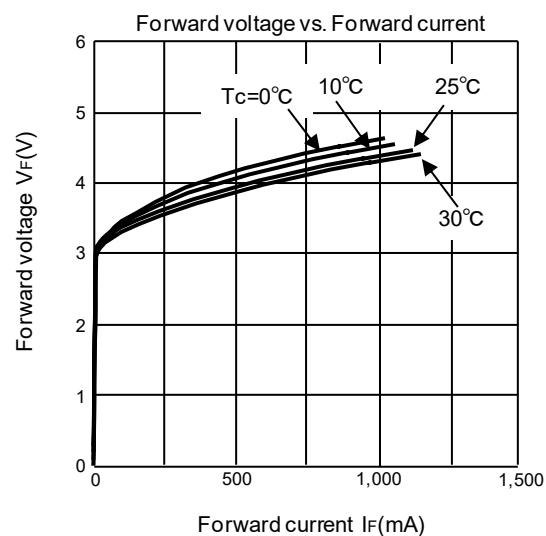
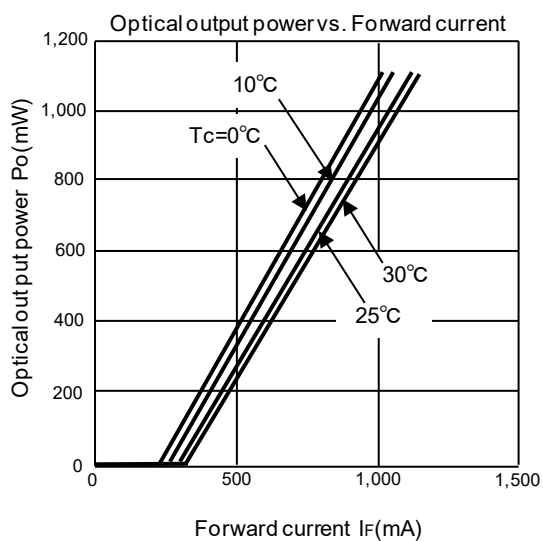
Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	1,100	mW
LD Reverse Voltage	V _{R(LD)}	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 _{th}	250	320	400	mA	-
Operating current	I _{op}	-	1,000	1,300	mA	Po=1,000mW
Operating voltage	V _{op}	-	-	5.0	V	Po=1,000mW
Beam divergence Parallel to the junction	θ _{//}	5	13	25	°	Po=1,000mW, Full angle 1/e ²
Beam divergence Perpendicular to the junction	θ _⊥	30	42	50	°	Po=1,000mW, Full angle 1/e ²
Lasing Wavelength	λ _p	400	405	410	nm	Po=1,000mW

Typical Characteristic Curves



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