



## Product Status Information

HL40115MG is Not Recommended for New Design (NRND) status. Please refer to successor product below for new design and adoption.

NRND Product	Successor Product
HL40115MG	HL40175MG
<a href="https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40115MG.pdf">https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40115MG.pdf</a>	<a href="https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40175MG.pdf">https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL40175MG.pdf</a>

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

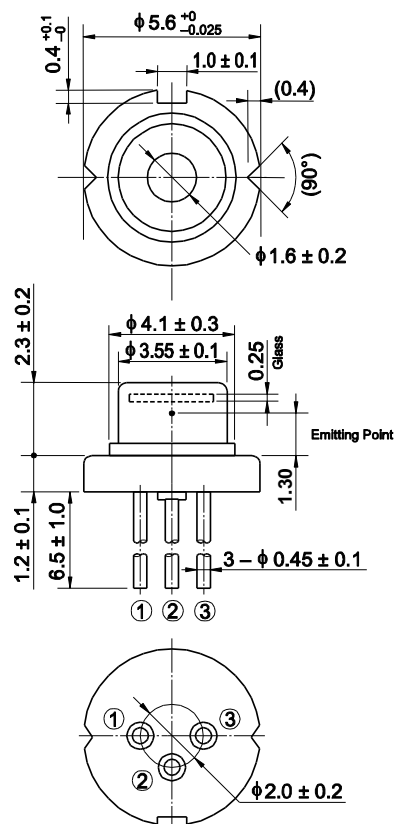
Japanese; <https://www.ushio.co.jp/jp/laser/news/500958.html>

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

## HL40115MG

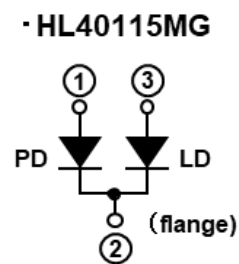
405nm/600mW Violet Laser Diode

### Outline



(Unit: mm)

### Internal Circuit



### Features

- Optical output power: 600mW (CW)
- Violet Lasing: 400~410nm
- Low operating current: 475mA Typ.
- Low operating voltage: 4.2V Typ.
- Built-in Monitor PD
- Package:  $\phi 5.6$ mm
- Multiple transverse mode
- TE mode oscillation.

### 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 Voltage	V <sub>R(LD)</sub>	5	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>	70	110	180	mA	-
Operating current	I <sub>op</sub>	400	475	600	mA	Po=600mW
Operating voltage	V <sub>op</sub>	3.8	4.2	4.9	V	Po=600mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	5	13	25	°	Po=600mW, Full angle 1/e <sup>2</sup>
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	30	45	50	°	Po=600mW, Full angle 1/e <sup>2</sup>
Lasing Wavelength	λ <sub>p</sub>	400	405	410	nm	Po=600mW
Monitor Current (*1)	I <sub>m</sub>	1	2	5	mA	Po=600mW, V <sub>R(PD)</sub> =5V

\*1 for only initial checking

## Cautions

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