



Product Status Information

HL6388MG-A is Not Recommended for New Design (NRND) status. Please refer to successor product below for new designs and adoptions.

NRND Product	Successor Product
HL6388MG-A	HL63193MG
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6388MG.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL63193MG.pdf

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

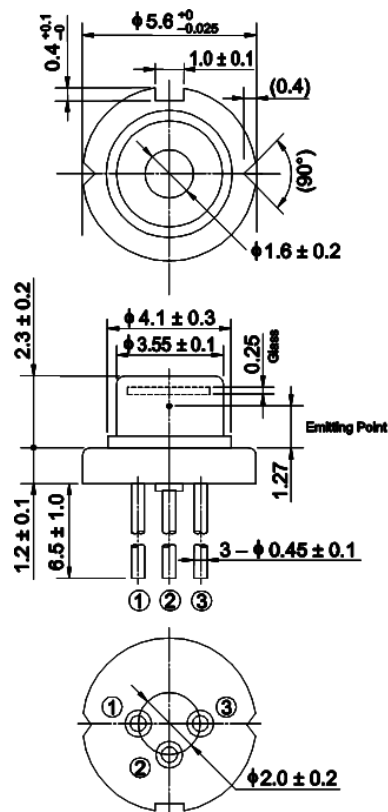
Japanese; <https://www.ushio.co.jp/jp/laser/news/500958.html>

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

HL6388MG-A

637nm / 250mW AlGaInP Laser Diode

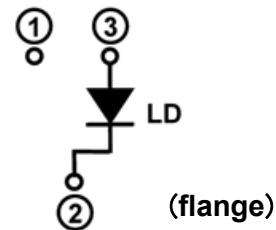
Outline



(unit:mm)

Internal Circuit

HL6388MG-A



Features

- Visible light output: 637nm Typ.
- Optical output power: 250mW (CW)
- Multi transverse mode
- High operating temperature: +50°C
- Small package: $\phi 5.6$ mm
- TM mode oscillation

Application

- Pico projector
- Laser module
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

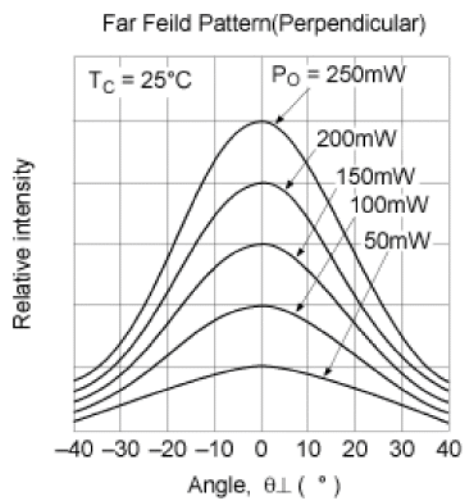
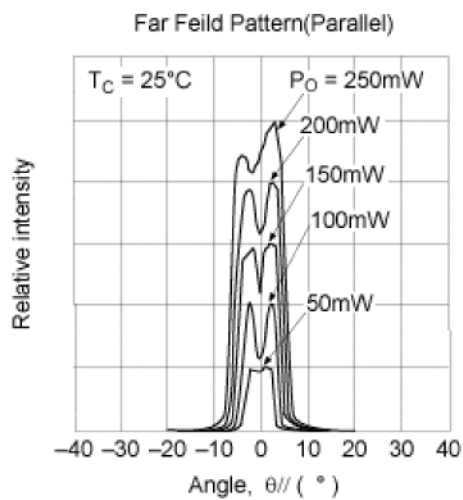
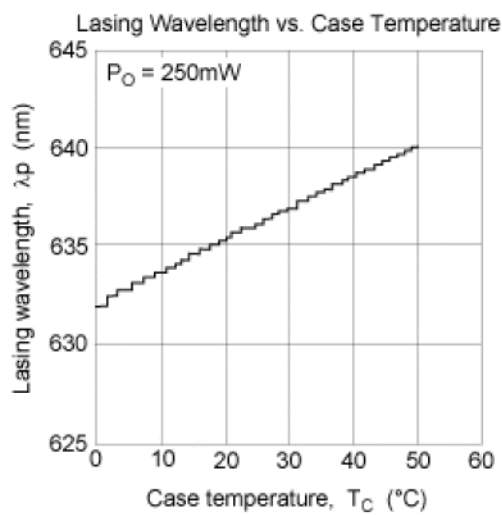
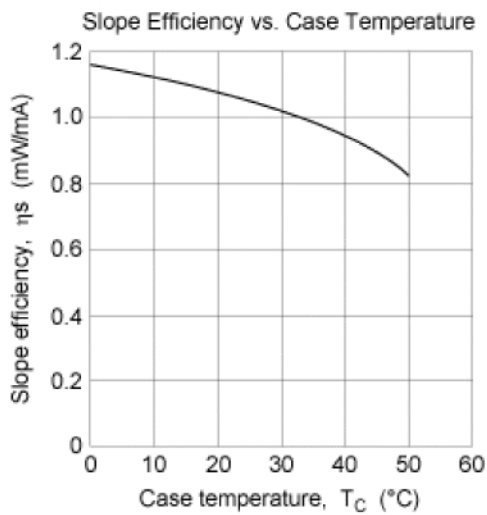
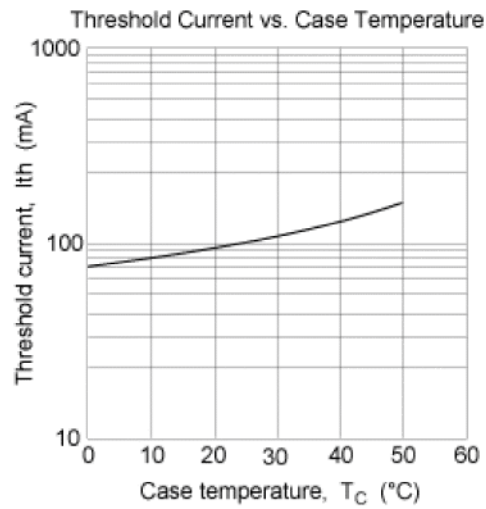
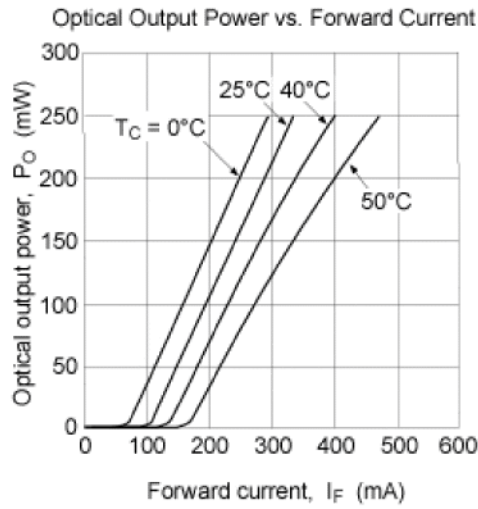
Item	Symbol	Ratings	Unit
Optical output power	Po	250	mW
LD Reverse Voltage	V _{R(LD)}	2	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Note: Operating temperature is defined by Case temperature "Tc". High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I _{th}	-	100	140	mA	-
Slope efficiency	η _s	0.7	1.05	-	mW/mA	-
Operating current	I _{op}	-	340	430	mA	Po=250mW
Operating voltage	V _{op}	-	2.3	2.8	V	Po=250mW
Beam divergence Parallel to the junction	θ _{//}	-	11	20	°	Po=250mW, FWHM
Beam divergence Perpendicular to the junction	θ _⊥	30	40	50	°	Po=250mW, FWHM
Lasing Wavelength	λ _p	632	637	642	nm	Po=250mW

Typical Characteristic Curves



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