Product Status Information

HL6398MG-A is Not Recommended for New Design (NRND) status. Please refer to successor product below for new design and adoption.

NRND Product	Successor Product
HL6398MG-A	HL6362MG-A
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6398MG.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6362MG.pdf

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

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

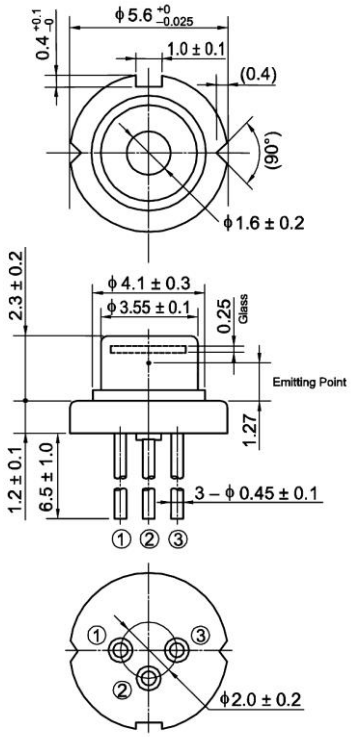
English; https://www.ushio.co.jp/en/laser/news/500958.html

Data Sheet

HL6397MG-A/98MG-A

639nm / 25mW AlGaInP Laser Diode

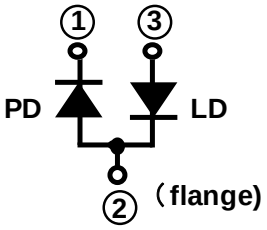
Outline



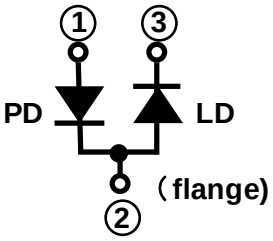
(unit:mm)

Internal Circuit

HL6397MG-A



HL6398MG-A



Features

- Visible light output: 639nm Typ.
- Optical output power: 20mW (CW)
- Single transverse mode
- Low operating current: 65mA Typ.
- Low operating voltage: 2.5V Max.
- Operating temperature: +60°C
- TE mode oscillation

Application

- Laser leveler
- Laser scanner
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

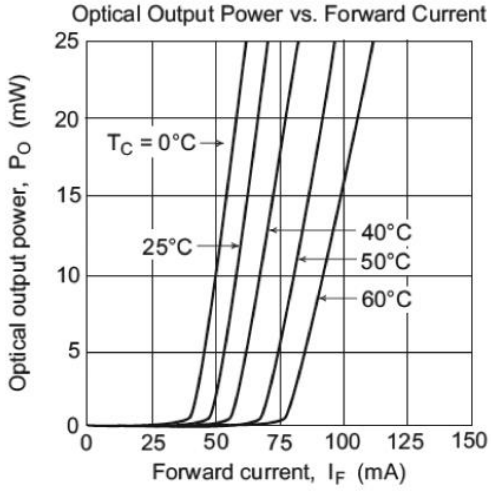
Item	Symbol	Ratings	Unit
Optical output power	Po	25	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

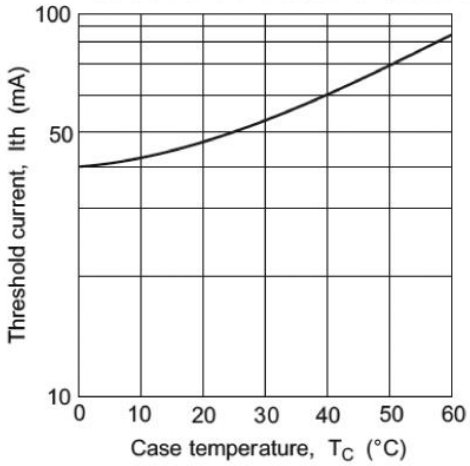
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	45	60	mA	-
Operating current	Iop	-	65	80	mA	Po=20mW
Operating voltage	Vop	-	2.3	2.5	V	Po=20mW
Beam divergence Parallel to the junction	θ//	6	9	12	°	Po=20mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	16	21	24	°	Po=20mW, FWHM
Lasing Wavelength	λp	630	639	643	nm	Po=20mW
Monitor Current	Is	0.1	0.2	0.4	mA	Po=20mW, $V_{R(PD)}$=5V

Typical Characteristic Curves

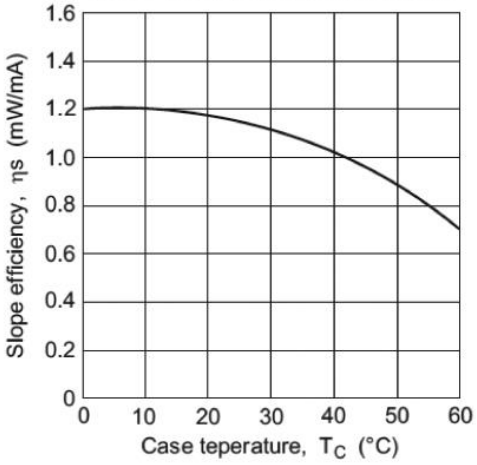
Optical Output Power vs. Forward Current



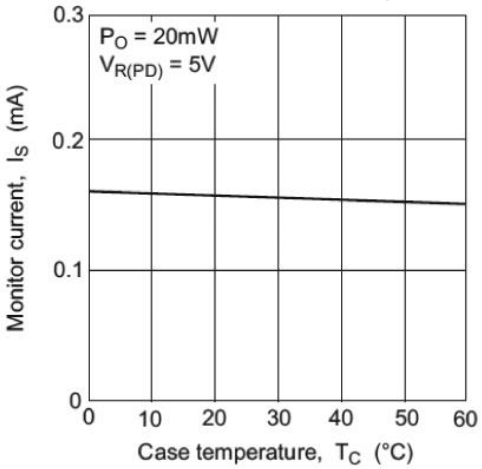
Threshold Current vs. Case Temperature



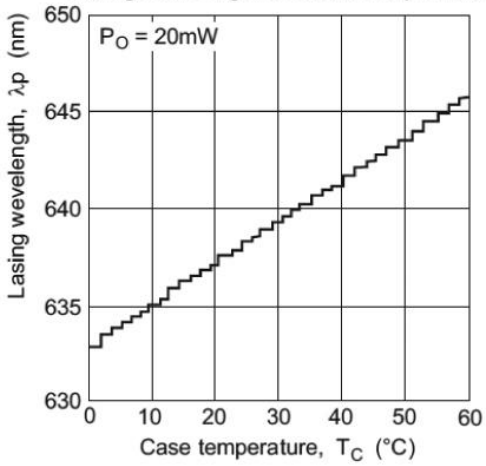
Slope Efficiency vs. Case Teperature



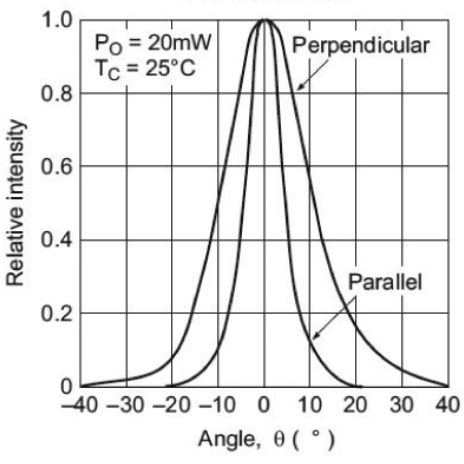
Monitor Current vs. Case Temperature



Lasing Wevelength vs. Case Temperature



Far Field Pattern



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