Product Status Information

HL6738MG-A is Not Recommended for New Design (NRND) status. Please refer to successor product below for new design and adoption.

NRND Product	Successor Product
HL6738MG-A	HL6750MG-A
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6738MG.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6750MG.pdf

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

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

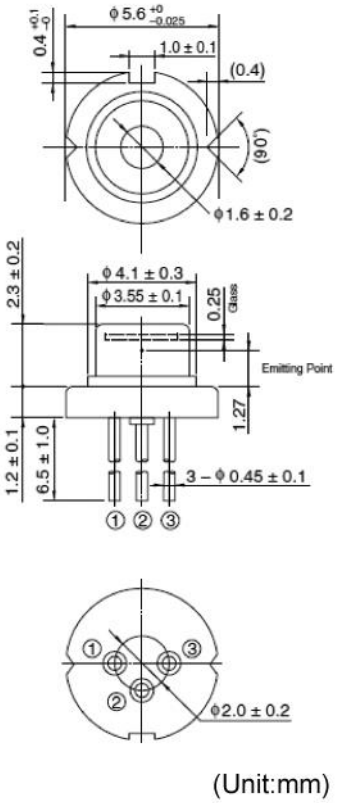
English; https://www.ushio.co.jp/en/laser/news/500958.html

Data Sheet

HL6738MG-A

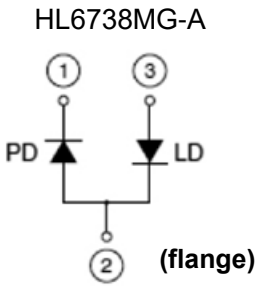
690nm / 35mW AlGaInP Laser Diode

Outline



(Unit:mm)

Internal Circuit



Features

- Operation temperature: -10~+70°C
- Optical output power: 30mW(CW)
- Visible lasing: 690nm Typ.(Po=30mW)
- Low operating voltage: 2.8V Max.
- Package: ϕ5.6mm
- Single transverse mode
- TE mode oscillation

Application

- Measurement
- Laser Module
- Sensing

Absolute Maximum Ratings (Tc=25°C)

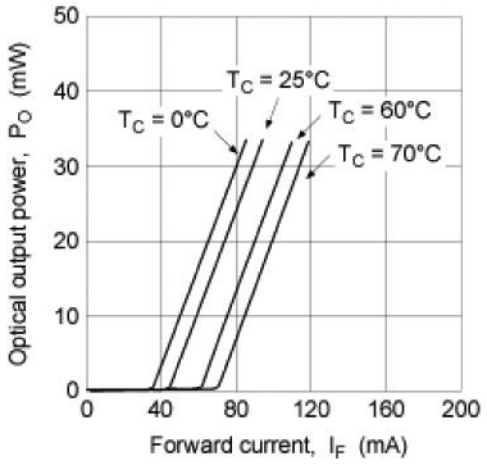
Item	Symbol	Ratings	Unit
Optical output power	Po	35	mW
Pulse optical output power	$Po_{(pulse)}$	50*	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operating Temperature	Topr	-10 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

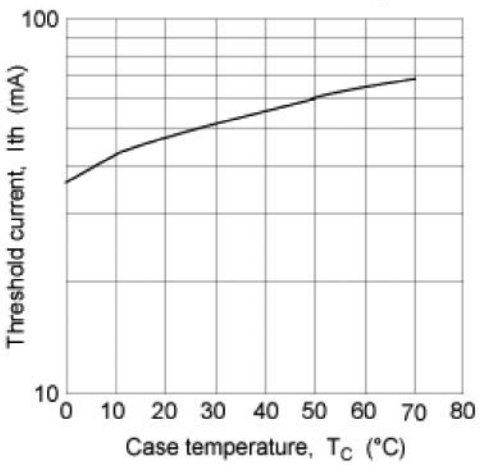
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	30	45	70	mA	-
Operating voltage	Vop	2.1	2.5	2.8	V	Po=30mW
Slope efficiency	ηs	0.5	0.7	0.9	mW/mA	$18(mW)/(I_{(24mW)}-I_{(6mW)})$
Beam divergence Parallel to the junction	θ//	7	8.5	10.5	°	Po=30mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	17	19	23	°	Po=30mW , FWHM
Lasing Wavelength	λp	680	690	695	nm	Po=30mW
Monitor Current	Is	0.02	0.10	0.45	mA	Po=30mW, $V_{R(PD)}$=5V

Typical Characteristic Curves

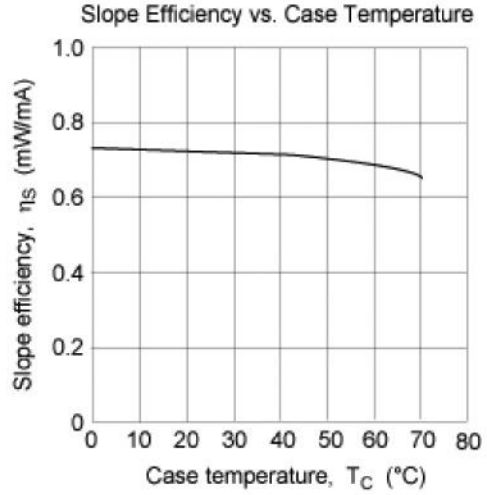
Optical Output Power vs. Forward Current



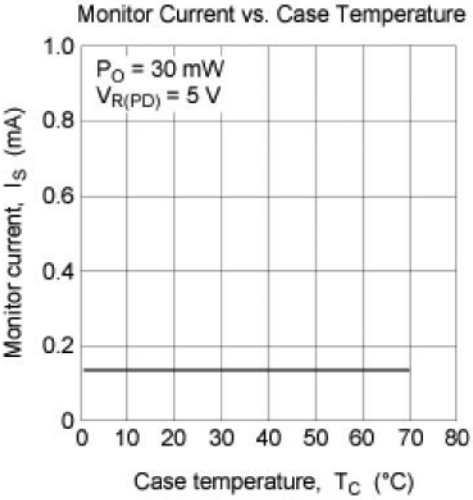
Threshold Current vs. Case Temperature



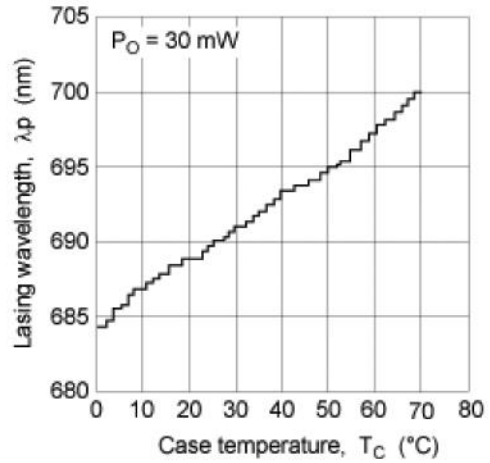
Slope Efficiency vs. Case Temperature



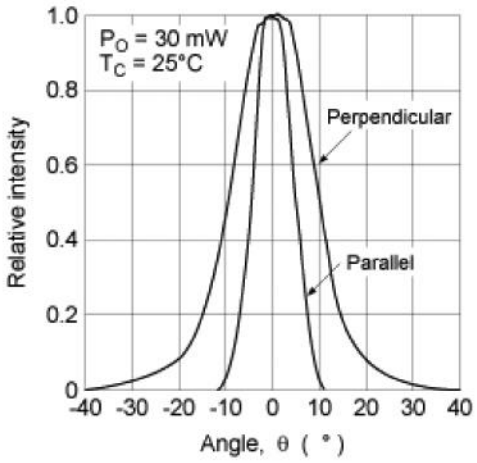
Monitor Current vs. Case Temperature



Lasing Wavelength vs. Case Temperature



Far Field Pattern



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