Product Status Information

HL6385DG-A is Not Recommended for New Design (NRND) status. Please refer to successor product below for new designs and adoptions.

NRND Product	Successor Product
HL6385DG-A	HL63643DG
https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL6385DG.pdf	https://www.ushio.co.jp/jp/products/product_file/file/UIE_DS_HL63643DG.pdf

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

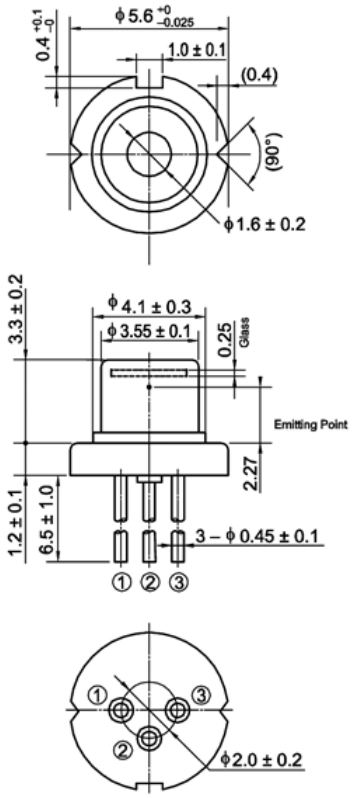
Japanese; https://www.ushio.co.jp/jp/laser/news/500958.html

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

HL6385DG-A

642nm／150mW　AlGaInP Laser Diode

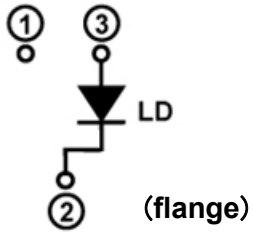
Outline



(unit:mm)

Internal Circuit

HL6385DG-A



Features

- Visible light output: 642nm Typ.
- Optical output power: 150mW (CW)
- Single transverse mode
- Operating temperature: +40ºC
- Small package: ϕ5.6mm
- TE mode oscillation

Application

- Laser module
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	150	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature	Topr	-10 ~ +40	°C
Storage Temperature	Tstg	-40 ~ +85	°C

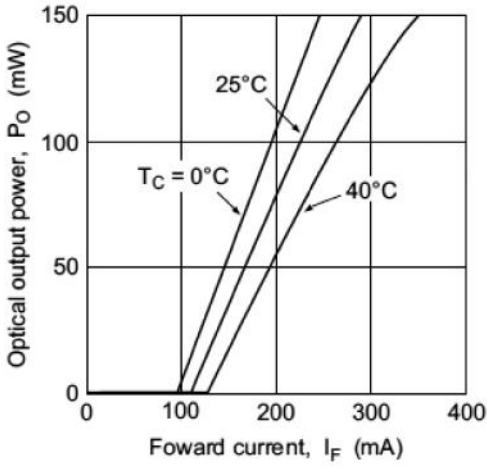
Note: Operating temperature is defined by Case temperature “Tc”. High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It 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)

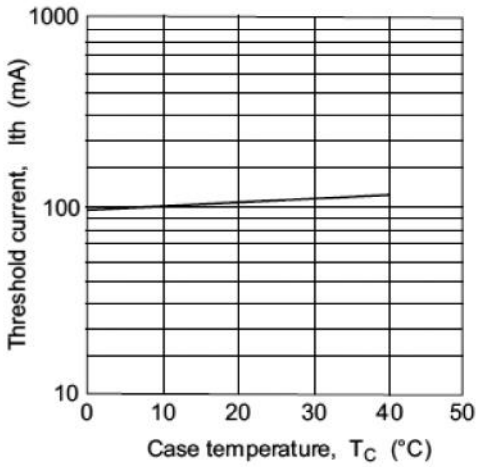
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	110	140	mA	-
Operating current	Iop	-	280	350	mA	Po=150mW
Operating voltage	Vop	-	2.6	3.0	V	Po=150mW
Beam divergence Parallel to the junction	θ//	6	9	13	o	Po=150mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	13	17	22	o	Po=150mW, FWHM
Lasing Wavelength	λp	635	642	647	nm	Po=150mW

Typical Characteristic Curves

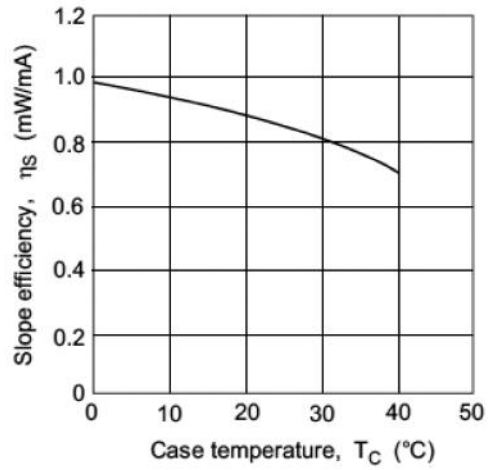
Optical Output Power vs. Forward Current



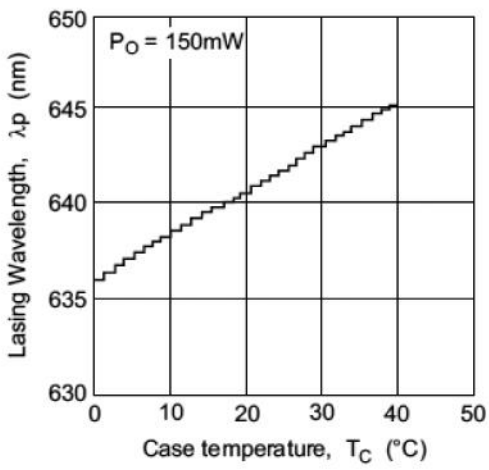
Threshold Current vs. Case Temperature



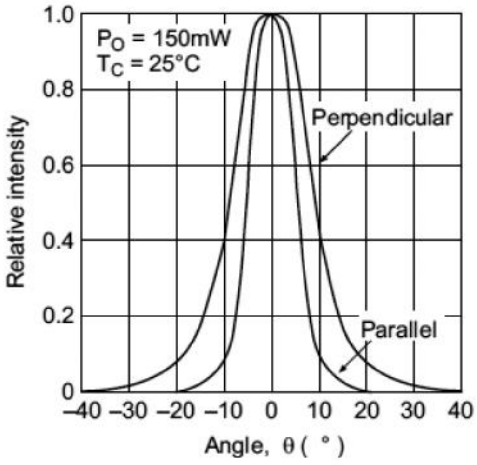
Slope Efficiency vs. Case Temperature



Wavelength vs. Case Temperature



Far Feild Pattern



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