

HL6385DG

Visible High Power Laser Diode

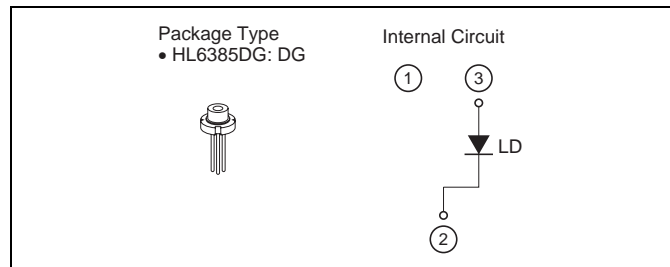
ODE2001-00 (M)
Rev.0
Apr. 03, 2008

Description

The HL6385DG is 0.64 μm band AlGaInP laser diodes with a multi-quantum well (MQW) structure. It is suitable as light sources for laser display and various other types of optical equipment.

Features

- Visible light output: 642 nm Typ
- Single longitudinal mode
- Optical output power: 150 mW CW
- Operating temperature: +40°C
- TE mode oscillation
- Small package: $\phi 5.6\text{mm}$



Absolute Maximum Ratings

($T_C = 25^\circ\text{C}$)

Item	Symbol	Ratings	Unit
Optical output power	P_O	150	mW
LD reverse voltage	$V_{R(LD)}$	2	V
Operating temperature	T_{opr}	-10 to +40	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Note: Operating Temperature is defined by Case Temperature " T_C ". High increase in temperature of LD chip itself is expected during operation due to high current density.

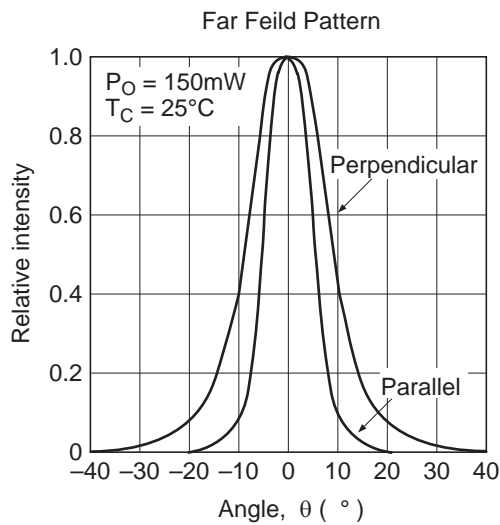
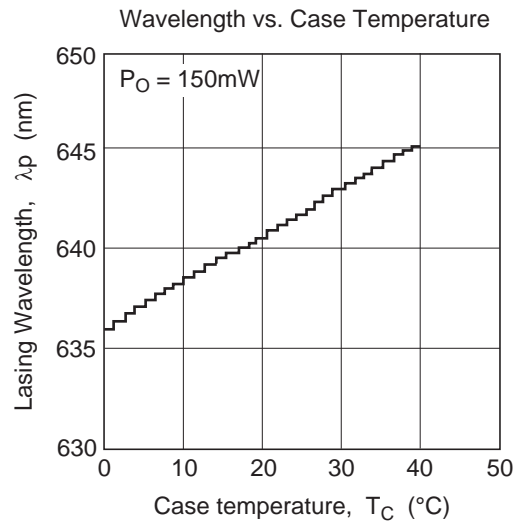
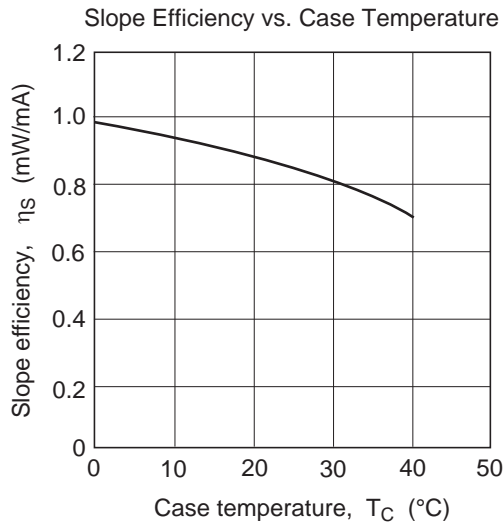
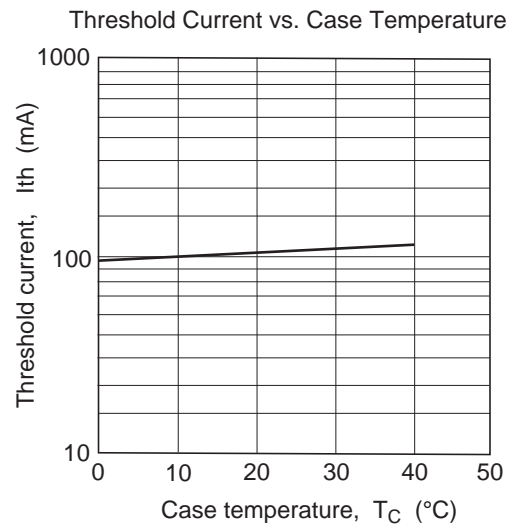
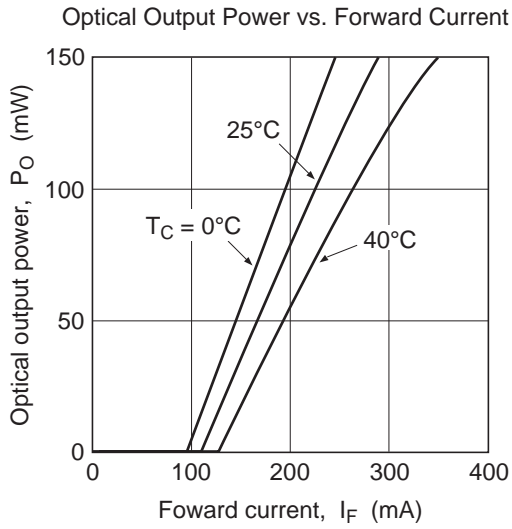
Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

Optical and Electrical Characteristics

($T_C = 25^\circ\text{C}$)

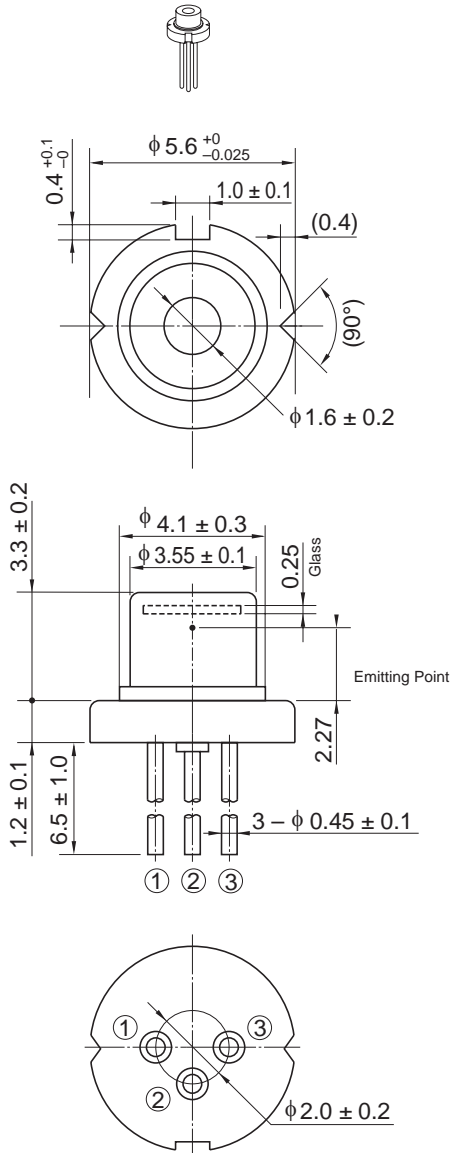
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I_{th}	—	110	140	mA	—
Operating current	I_{OP}	—	280	350	mA	$P_O = 150\text{ mW}$
Operating voltage	V_{OP}	—	2.6	3.0	V	$P_O = 150\text{ mW}$
Beam divergence parallel to the junction	$\theta_{//}$	6	9	13	$^\circ$	$P_O = 150\text{ mW}$
Beam divergence perpendicular to the junction	θ_{\perp}	13	17	22	$^\circ$	$P_O = 150\text{ mW}$
Lasing wavelength	λ_p	635	642	647	nm	$P_O = 150\text{ mW}$

Typical Characteristic Curves



Package Dimensions

As of May, 2006
Unit: mm



OPJ Code	LD/DG
JEDEC	—
JEITA	—
Mass (reference value)	0.35g

Cautions

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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.
When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

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