HL6395MG/96MG

High Temperature Low Operating Current Visible Laser Diode

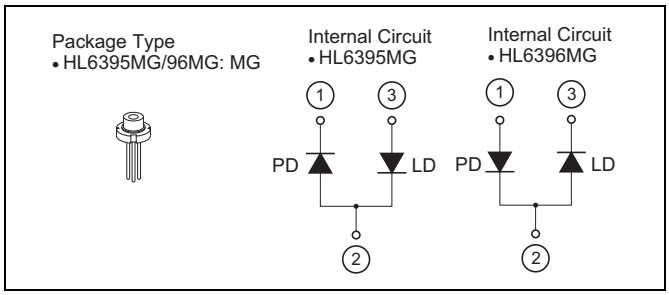
ODE2066-03 (M)
Rev.3
Feb. 26, 2010

Description

The HL6395MG/96MG are 0.63 µm band AlGaInP laser diodes with a multi-quantum well (MQW) structure. They are suitable as light sources for laser levelers and optical equipment for measurement.

Features

- Optical output power: 10 mW CW
- Visible light output: 639 nm Typ
- Single longitudinal mode
- Low operating current: 55 mA Typ
- Low operating voltage: 2.5 V Max
- Operating temperature: +60°C
- TE mode oscillation



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	Unit
Optical output power	P_O	12	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	Topr	–10 to +60	°C
Storage temperature	Tstg	–40 to +85	°C

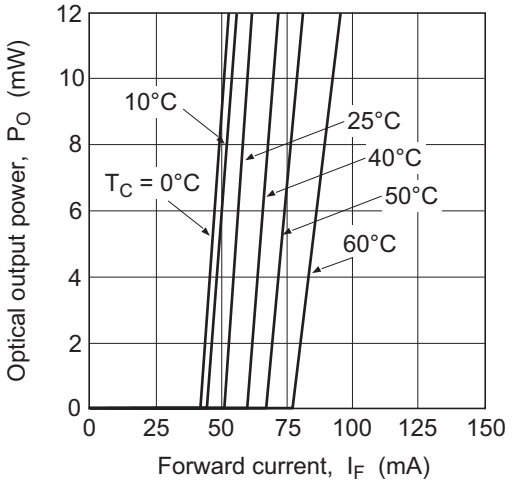
Optical and Electrical Characteristics

(T_C = 25°C)

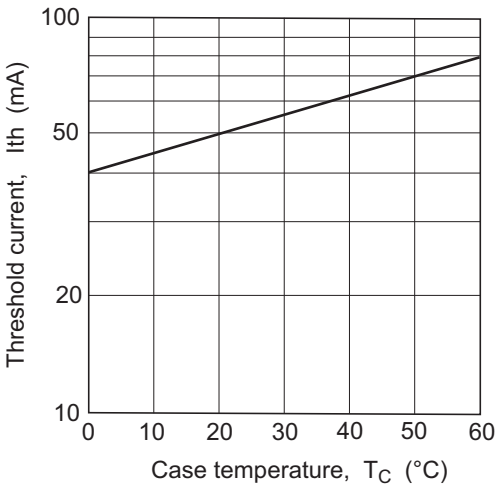
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	—	45	60	mA	—
Operating current	I_{OP}	—	55	70	mA	P_O = 10 mW
Operating voltage	V_{OP}	—	2.3	2.5	V	P_O = 10 mW
Lasing wavelength	λp	—	639	643	nm	P_O = 10 mW
Beam divergence parallel to the junction	θ//	6	9	12	°	P_O = 10 mW
Beam divergence perpendicular to the junction	θ⊥	16	21	24	°	P_O = 10 mW
Monitor current	I_S	0.04	0.07	0.15	mA	P_O = 10 mW , $V_{R(PD)}$ = 5 V

Typical Characteristic Curves

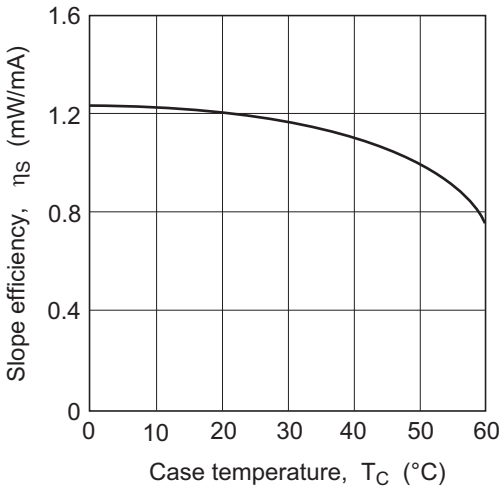
Optical Output Power vs. Forward Current



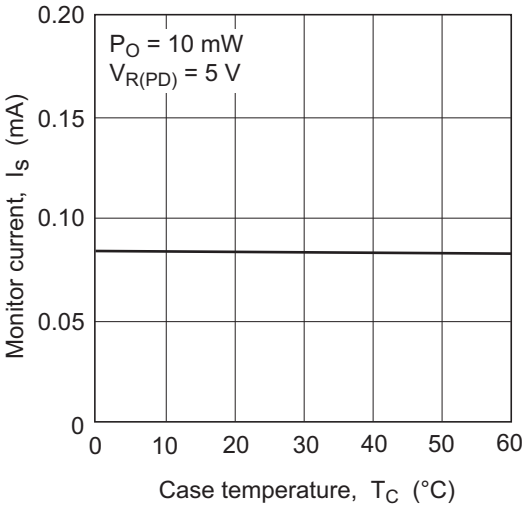
Threshold Current vs. Case Temperature



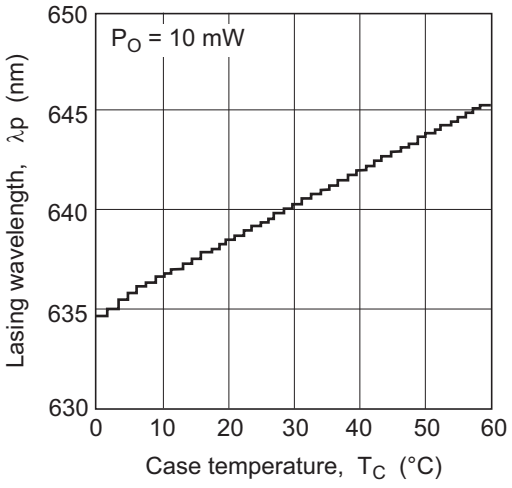
Slope Efficiency vs. Case Temperature



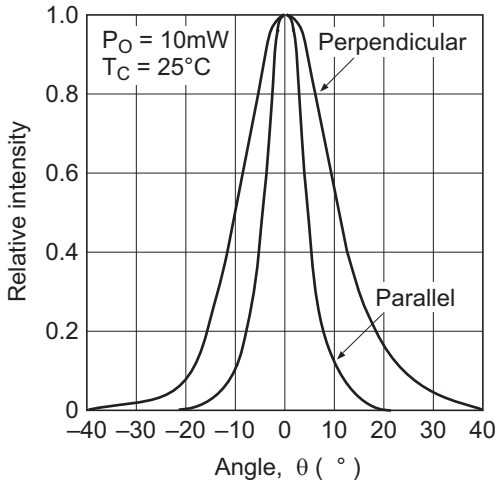
Monitor Current vs. Case Temperature



Lasing Wavelength vs. Case Temperature



Far Field Pattern



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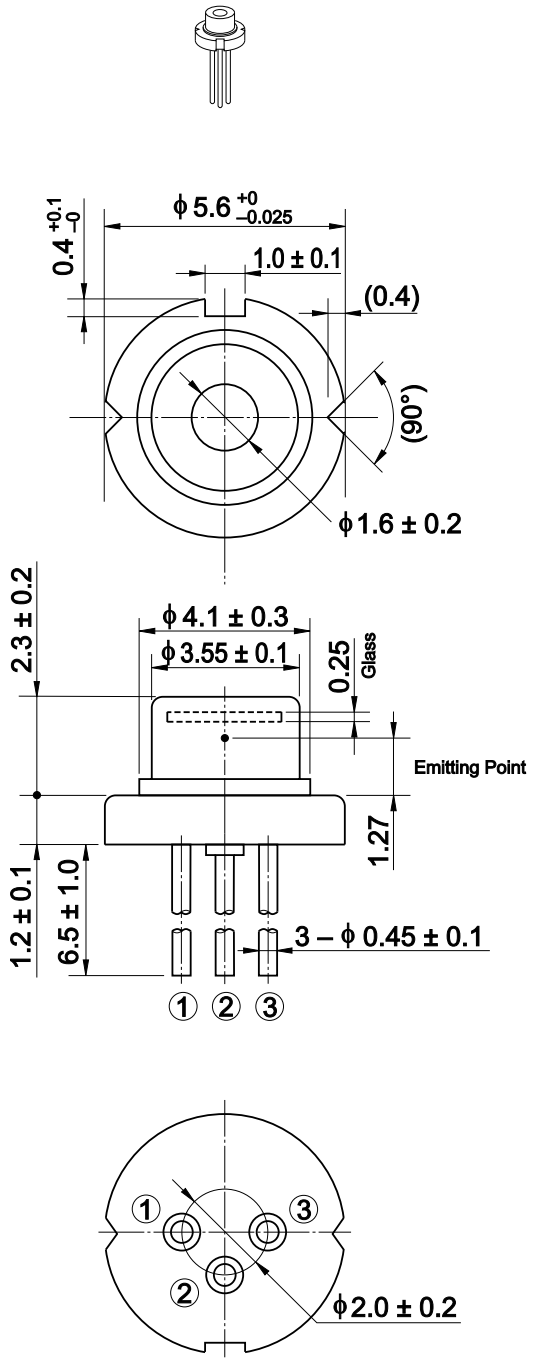
Package Dimensions

Unit: mm



OPJ Code	LD/MG
JEDEC	—
JEITA	—
Mass (reference value)	0.3 g

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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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