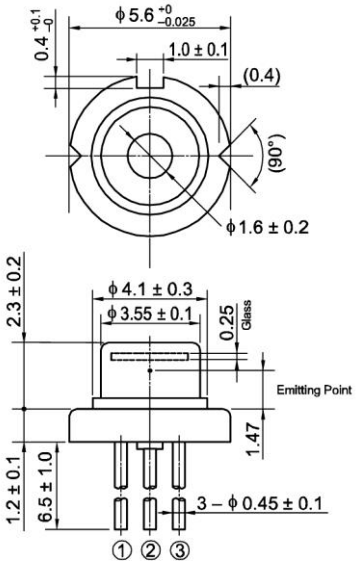
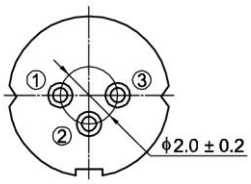
Data Sheet

HL63101MG/102MG

638nm / 7mW AlGaInP Laser Diode

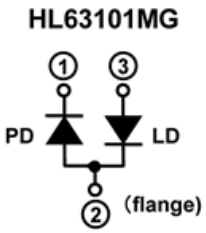
Outline

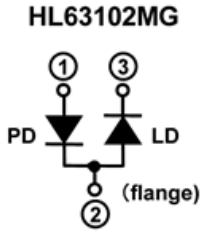




(unit : mm)

Internal Circuit





Features

- Optical output power: 5mW(CW)
- Visible light output:637nm Typ.
- Low operating current: 20mA Typ.
- Low operating voltage: 2.4V Max.
- Operating temperature: 60℃
- TE mode oscillation
- Single transverse mode

Application

- Laser leveler
- Laser pointer
- Distance meter
- Light source of optical equipment

Absolute Maximum Ratings (Tc=25°C)

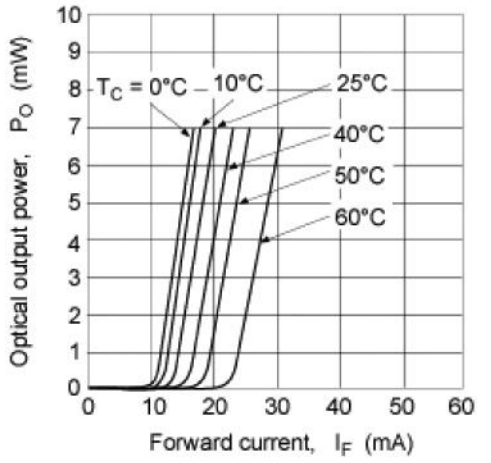
Item	Symbol	Ratings	Unit
Optical output power	Po	7	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

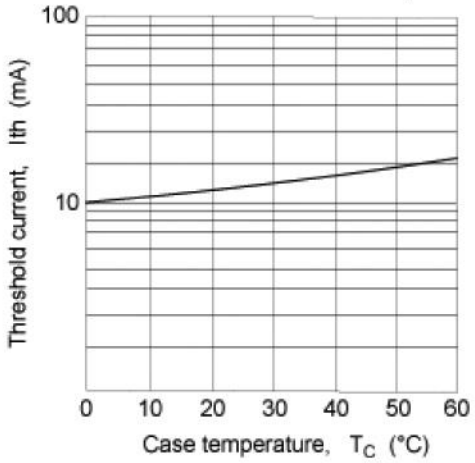
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	15	20	mA	-
Operating current	Iop	-	20	25	mA	Po=5mW
Operating voltage	Vop	-	2.2	2.4	V	Po=5mW
Lasing Wavelength	λp	630	637	640	nm	Po=5mW
Beam divergence Parallel to the junction	θ//	5	8	11	°	Po=5mW FWHM
Beam divergence Perpendicular to the junction	θ⊥	28	34	40	°	Po=5mW FWHM
Monitor current	Is	0.1	0.2	0.5	mA	Po=5mW, $V_{R(PD)}$ =5V

Typical Characteristic Curves

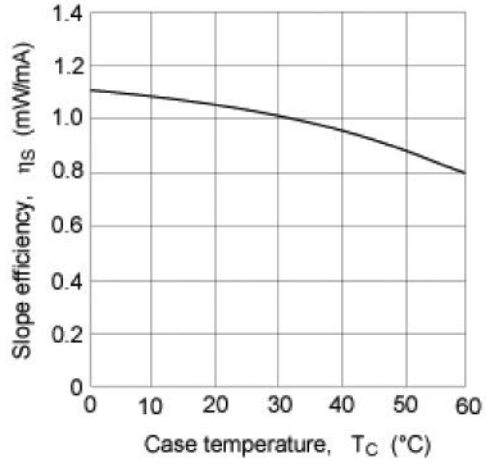
Optical Output Power vs. Forward Current



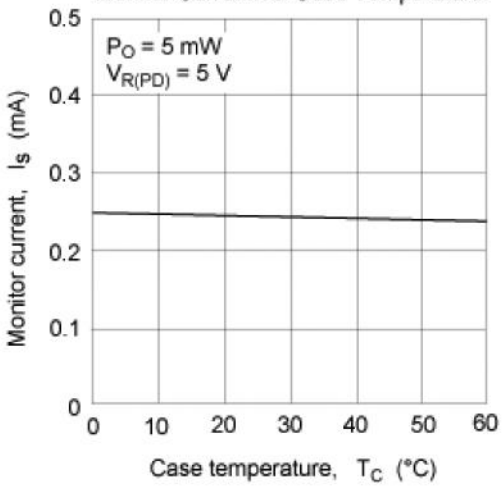
Threshold Current vs. Case Temperature



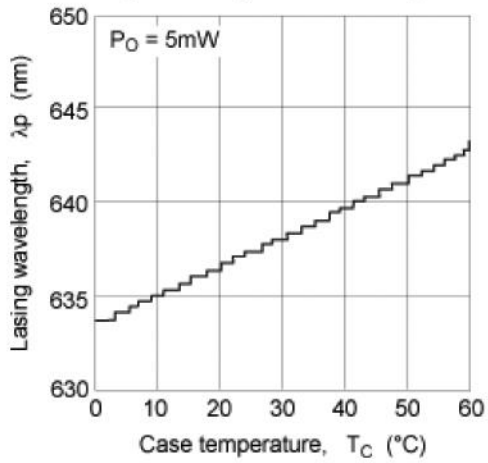
Slope Efficiency vs. Case Temperature



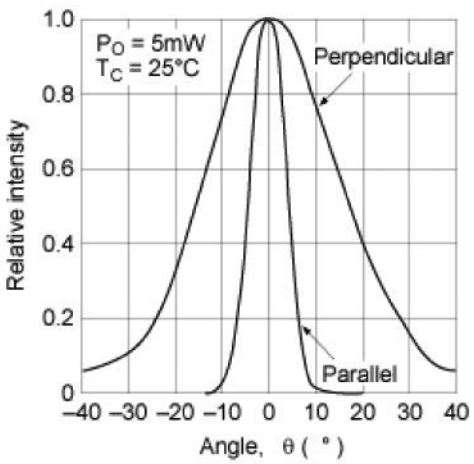
Monitor Current vs. Case Temperature



Lasing Wavelength vs. Case Temperature



Far Feild Pattern



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