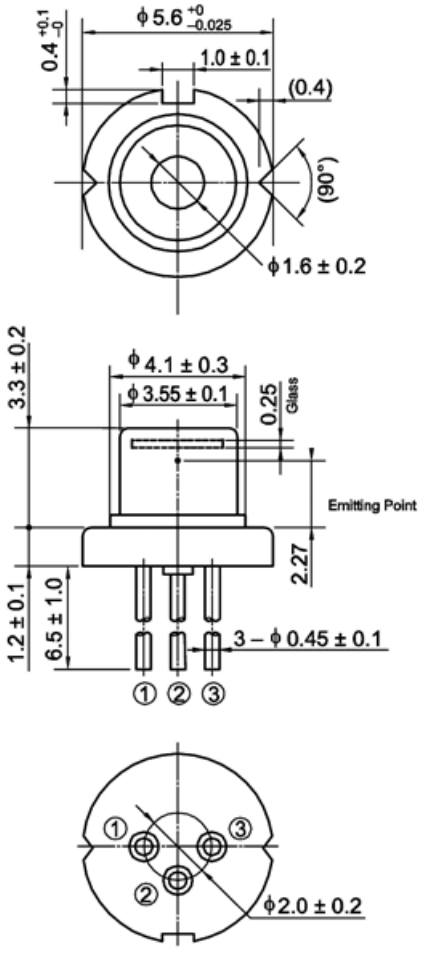
HL63192DG

638nm / 700mW AlGaInP Laser Diode

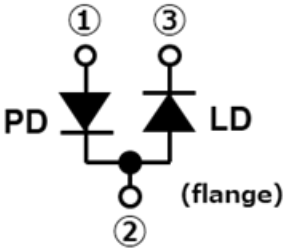
Outline



(Unit: mm)

Internal Circuit

▪HL63192DG



Features

- Visible light output: 638nm Typ.
- Optical output power: 700mW (CW)
- Multi transverse mode
- Small package: ϕ5.6mm
- TM mode oscillation
- Built-in Monitor PD

Application

- Laser projector
- Show Laser
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

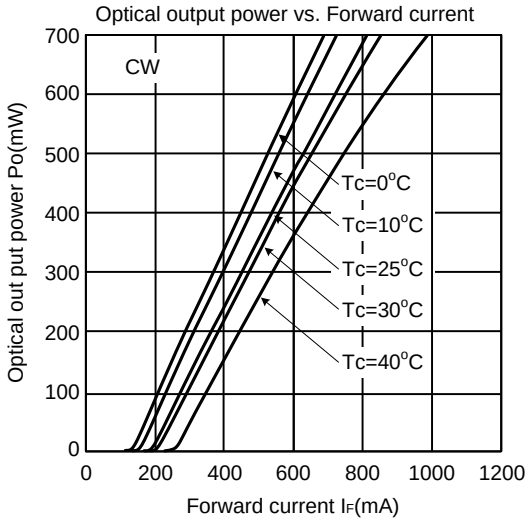
Item	Symbol	Ratings	Unit
Optical output power(1) (-10 to +30 °C) Note2)	Po (1)	700	mW
Optical output power(2) (+30 to +40 °C) Note2)	Po (2)	550	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operating Temperature Note2)	Topr	-10 ~ +40	°C
Storage Temperature	Tstg	-40 ~ +85	°C

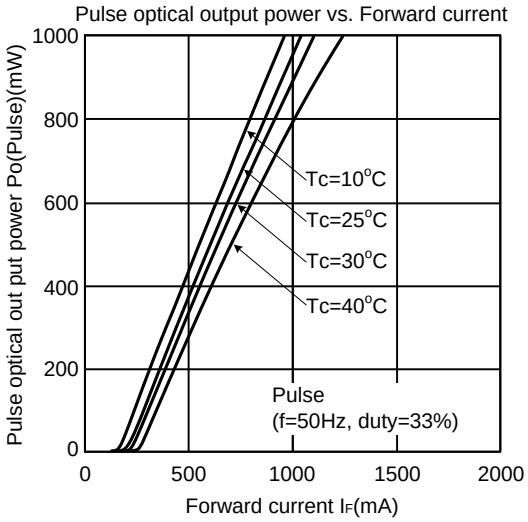
Note1) These values should not be exceeded under any conditions.
Note2) Operating temperature “Topr” is defined by Case temperature “Tc”. LD chip temperature is getting higher during operation due to its high current density and small package. Thus, without proper heat dissipation less optical output power than specified one could be observed or it results to LD degradation. It is advised that sufficient heat dissipation should be taken not to exceed the maximum operating temperature during actual operation.

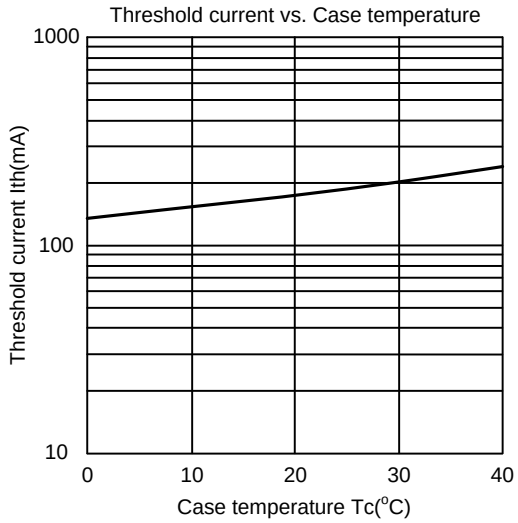
Optical and Electrical Characteristics (Tc=25°C)

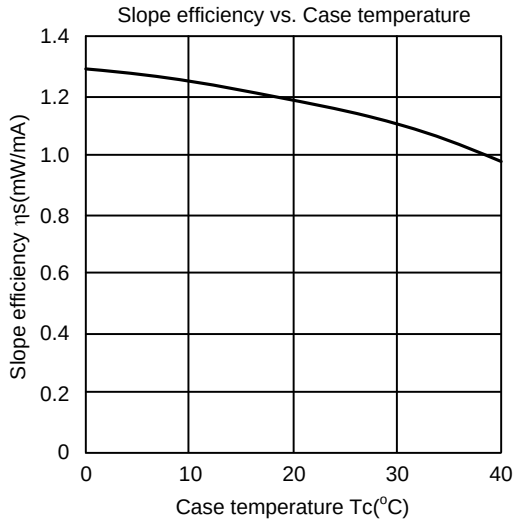
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	200	250	mA	-
Operating current	Iop	-	820	1000	mA	Po=700mW
Operating voltage	Vop	-	2.2	2.6	V	Po=700mW
Beam divergence Parallel to the junction	θ//	1	9	20	o	Po=700mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	25	35	45	o	Po=700mW, FWHM
Lasing Wavelength	λp	632	638	643	nm	Po=700mW
Monitor Current	Is	0.3	2.0	5.5	mA	Po=700mW, $V_{R(PD)}$=5V

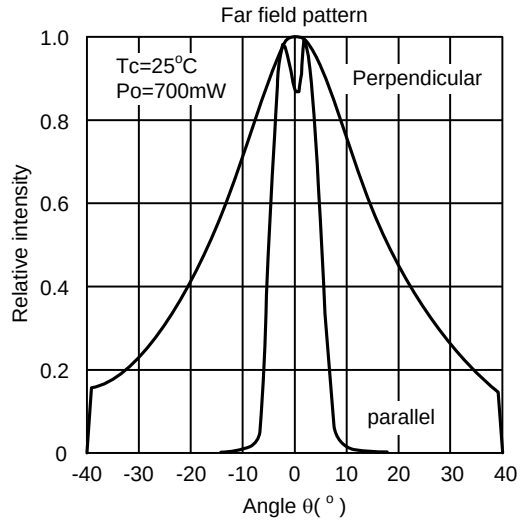
Typical Characteristic Curves

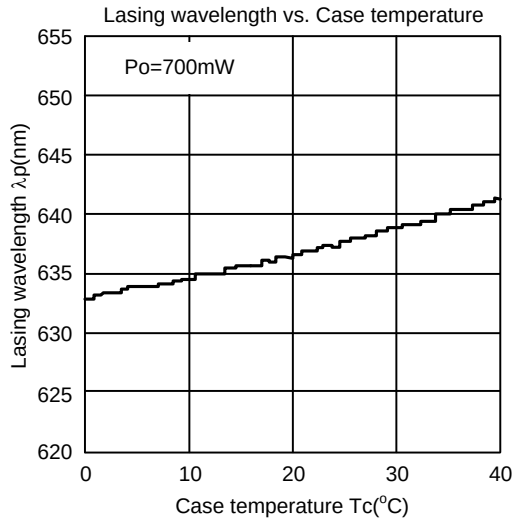












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