

Data Sheet

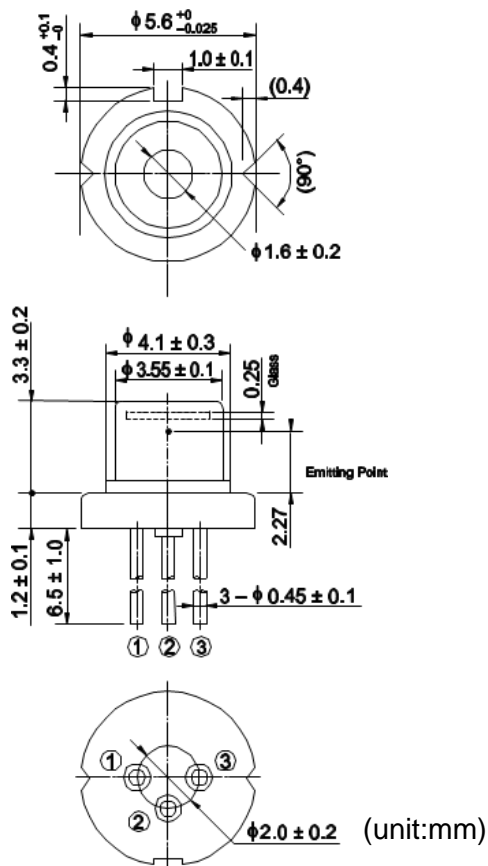
HL65231DG/232DG/233DG

660nm/160mW(CW)/320mW(Pulse)

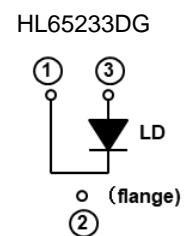
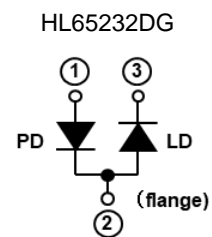
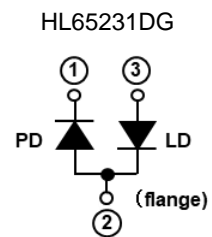
AlGaInP Laser Diode

USHIO

Outline



Internal Circuit



Features

- Visible light output: 660nm Typ.
- Optical output power:
160mW (CW), 320mW (Pulse)
- Low operating current:
190mA Typ. (150mW (CW))
310mA Typ. (300mW (Pulse))
- Operating temperature: +75°C
- Single transverse mode
- TE mode oscillation

Application

- Sensor application
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power (1) (Tc=-10~60°C)	Po(1)	160	mW
Optical output power (2) (Tc=75°C)	Po(2)	120	mW
Pulse optical output power (1) (Tc=-10~60°C) ^{Note1)}	Po(pulse)(1)	320	mW
Pulse optical output power (2) (Tc=75°C) ^{Note1)}	Po(pulse)(2)	240	mW
LD Reverse Voltage	VR(LD)	2	V
PD Reverse Voltage ^{Note2)}	VR(PD)	30	V
Operating Temperature	Topr	-10 ~ +75	°C
Storage Temperature	Tstg	-40 ~ +85	°C

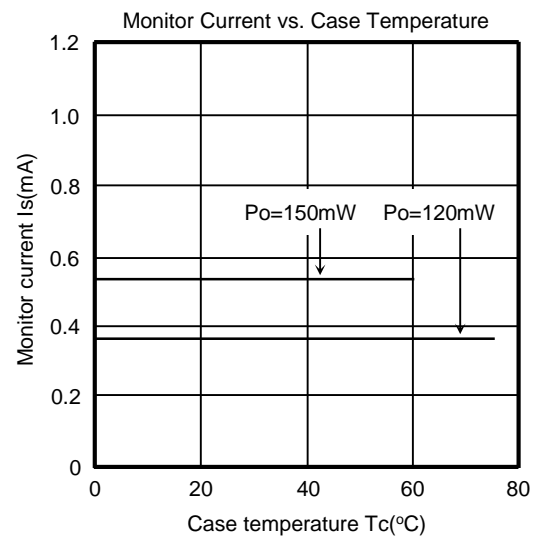
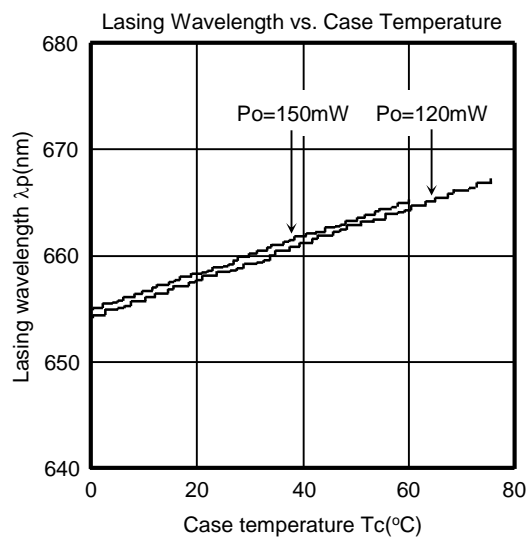
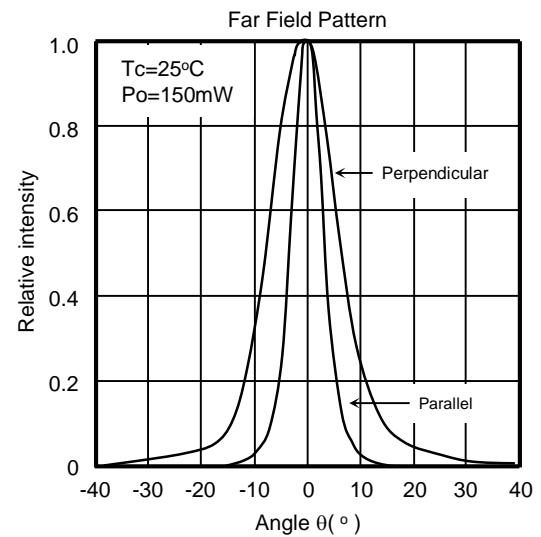
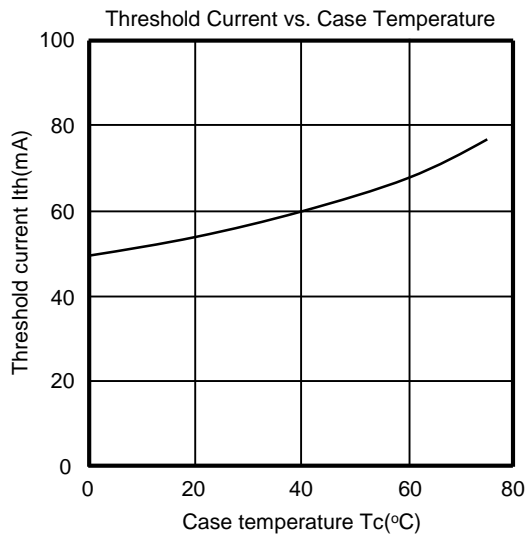
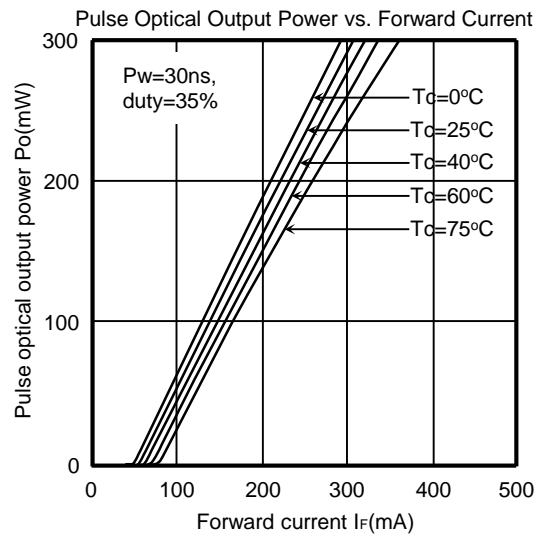
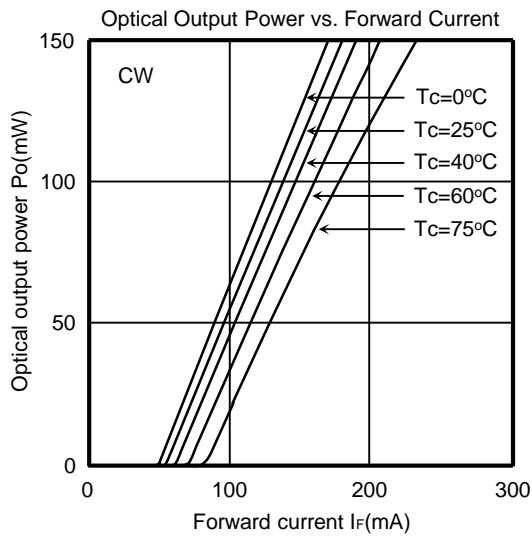
Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	60	90	mA	-
Operating current	Iop	-	190	230	mA	Po=150mW
	Iop(pulse)	-	310	-	mA	Po(Pulse)=300mW, Note1
Operating voltage	Vop	-	2.55	3.00	V	Po=150mW
Beam divergence Parallel to the junction	θ//	4	7.5	10	°	Po=150mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	11	15	19	°	Po=150mW, FWHM
Lasing Wavelength	λp	652	660	665	nm	Po=150mW
Monitor current ^{Note2)}	Is	0.05	0.55	1.00	mA	Po=150mW, VR(PD)=5V

Note1) Pulse condition: Pulse width = 30nsec, duty = 35%

Note2) Not applicable to HL63233DG.

Typical Characteristic Curves



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