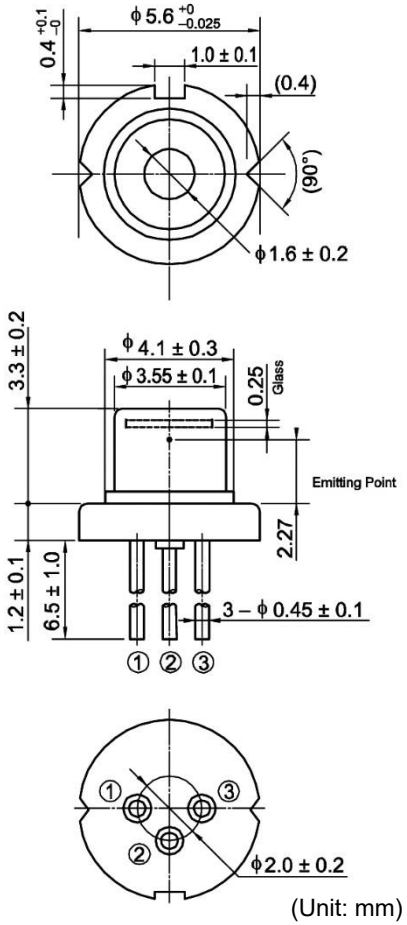
Preliminary Data Sheet

HL69001DG89

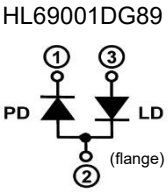
689nm/210mW/Built-in monitor PD
AlGaInP Laser Diode

Outline



(Unit: mm)

Internal Circuit



Features

- Visible light output: 689nm Typ.
- Optical output power: 210mW
- Low operating current: 220mA Typ.
- Built in monitor PD
- Operating temperature: +75°C
- Single transverse mode
- TE mode oscillation

Application

- Life science
- Bio-medical
- Quantum technology
- Light source of optical equipments

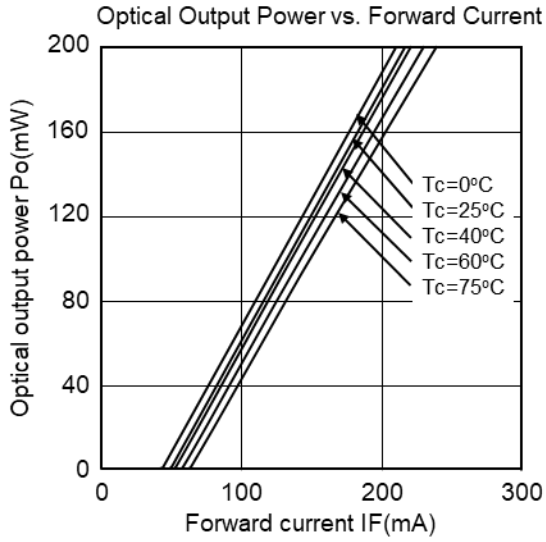
Absolute Maximum Ratings (Tc=25°C)

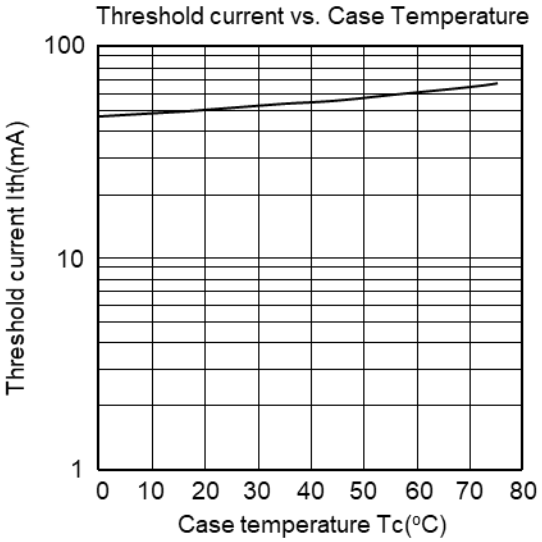
Item	Symbol	Ratings	Unit
Optical output power (1) (Tc=-10~60ºC)	Po(1)	210	mW
Optical output power (2) (Tc=75ºC)	Po(2)	150	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operating Temperature	Topr	-10 ~ +75	°C
Storage Temperature	Tstg	-40 ~ +85	°C

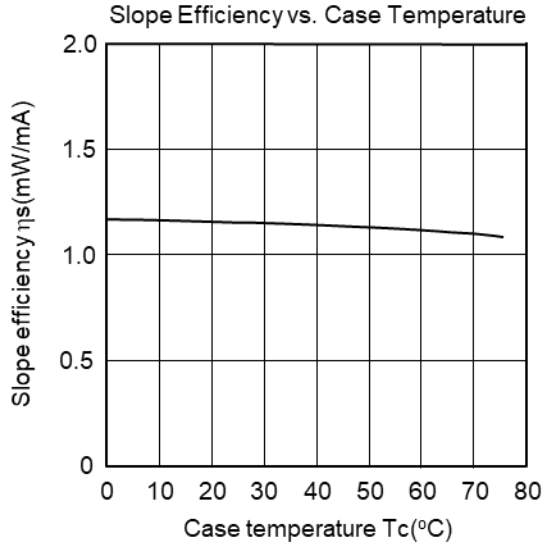
Optical and Electrical Characteristics (Tc=25°C)

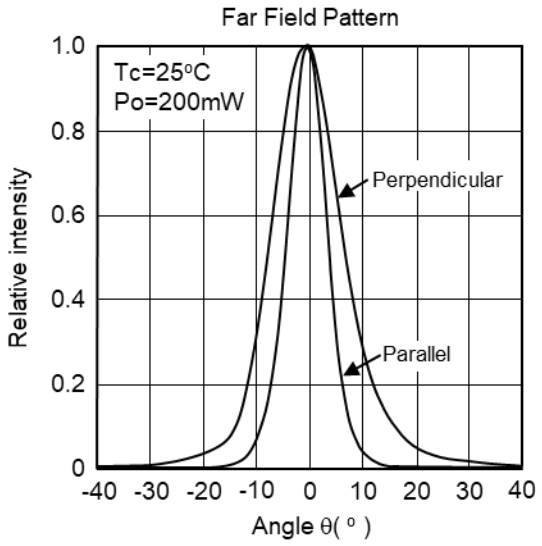
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	50	80	mA	-
Operating current	Iop	-	220	270	mA	Po=200mW
Operating voltage	Vop	-	2.7	3.2	V	Po=200mW
Beam divergence Parallel to the junction	θ//	5	8	11	º	Po=200mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	11	15	19	º	Po=200mW, FWHM
Lasing Wavelength	λp	686	689	692	nm	Po=200mW
Monitor current	Is	0.1	0.8	1.8	mA	Po=200mW, $V_{R(PD)}$=5V

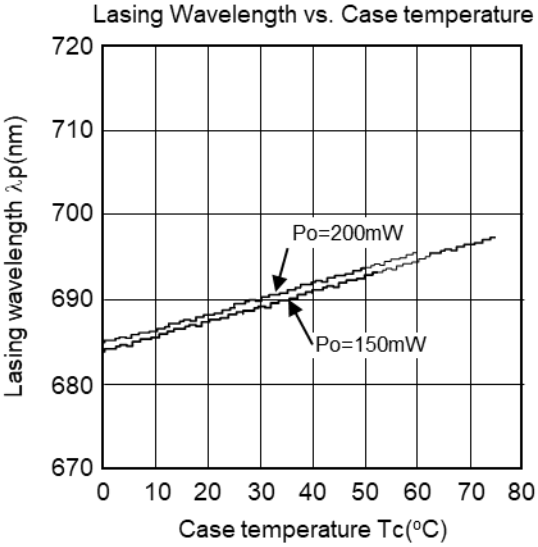
Typical Characteristic Curves

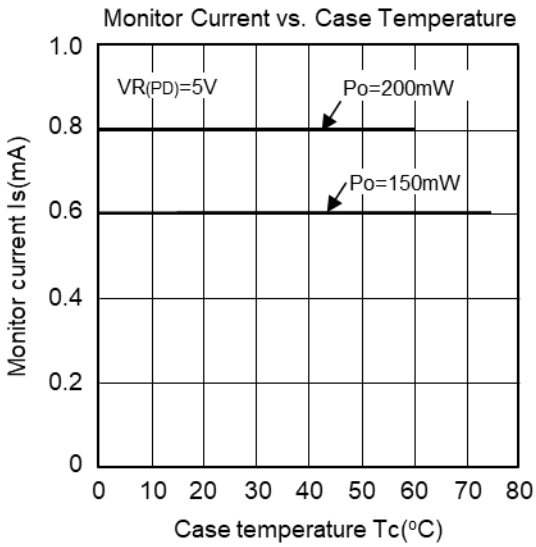












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