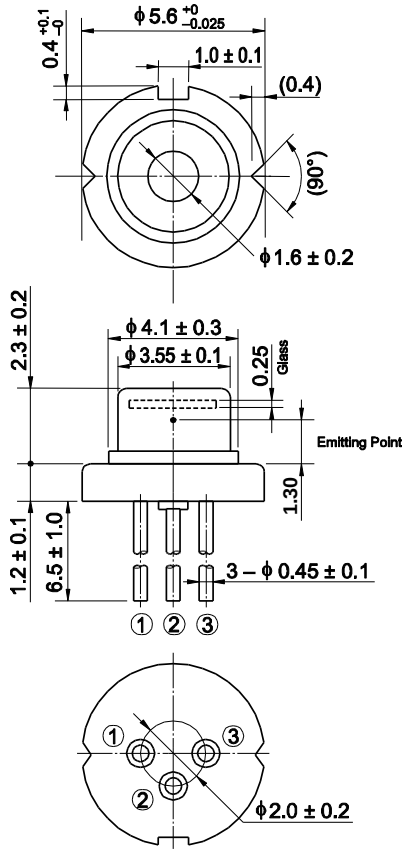
Preliminary Data Sheet

HL40161MG/163MG

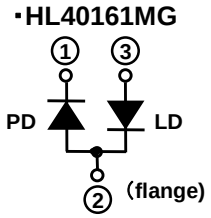
405nm/175mW Violet Laser Diode

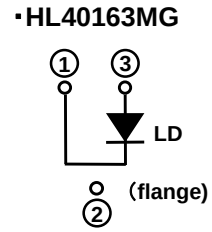
Outline



(Unit: mm)

Internal Circuit





Features

- Operation temperature: -5~+85°C
- Optical output power: 175mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating voltage: 5.0V Typ.
- Package: ϕ5.6mm
- Single transverse mode
- TE mode oscillation
- Monitor PD selectable (HL40161MG type)

Application

- Bio & Medical
- Measurement
- 3D Printer

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	210	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage (*1)	$V_{R(PD)}$	15	V
Operating Temperature	Topr	-5 ~ +85	°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	-	35	(55)	mA	-
Operating current	Iop	-	150	(200)	mA	Po=175mW
Operating voltage	Vop	-	5.0	(6.5)	V	Po=175mW
Beam divergence Parallel to the junction	θ//	(6)	9	(12)	o	Po=175mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	(15)	20	(25)	o	Po=175mW, FWHM
Lasing Wavelength	λp	400	405	410	nm	Po=175mW
Monitor Current (*1)	Is	-	T.B.D	-	mA	Po=175mW $V_{R(PD)}$=5V

*1 for only initial checking and for only HL40161MG type

Cautions

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1.The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2.This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.

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