

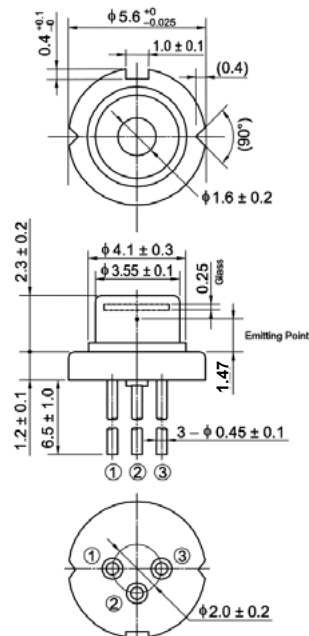
USHIO *Applying Light to Life*

Preliminary Data Sheet

HL78002MG

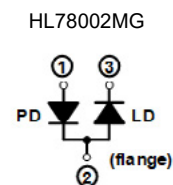
785nm/210mW Laser Diode

Outline



(Unit: mm)

Internal Circuit



Features

- Infrared light output: 785nm Typ.
- High optical output power: 210mW (CW)
- Operating current: 230mA Typ. at 200mW
- High operating temperature: $-10 \sim +60^\circ\text{C}$
- Single transverse mode
- TE mode oscillation

Application

- Raman Spectroscopy
- Life Science
- Particle Counter
- Quantum Technology
- Laser module

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Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	210	mW
LD reverse voltage	VR(LD)	2	V
PD reverse voltage	VR(PD)	30	V
Operating temperature	Topr	-10 ~ +60	°C
Storage temperature	Tstg	-40 ~ +85	°C

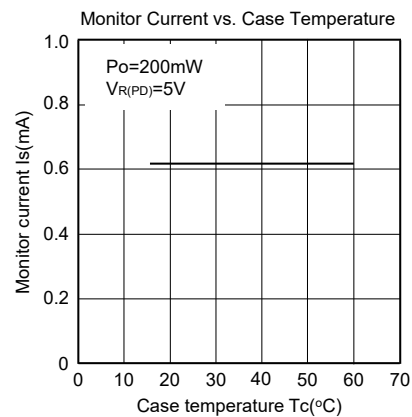
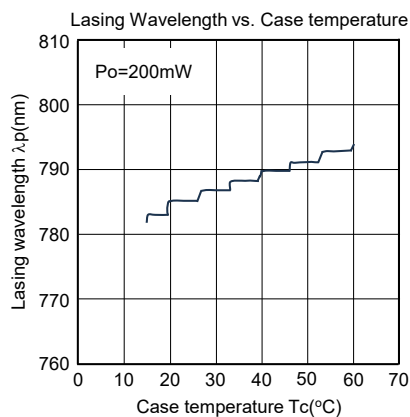
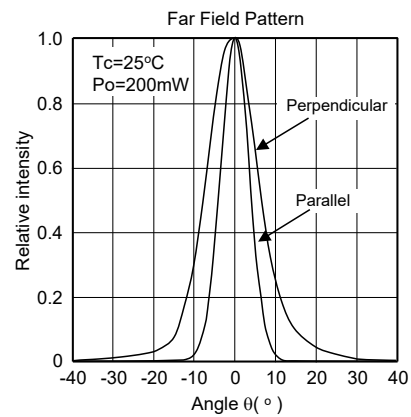
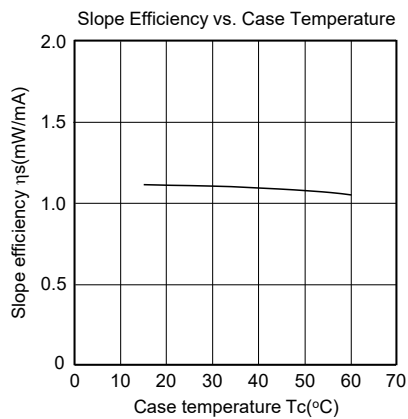
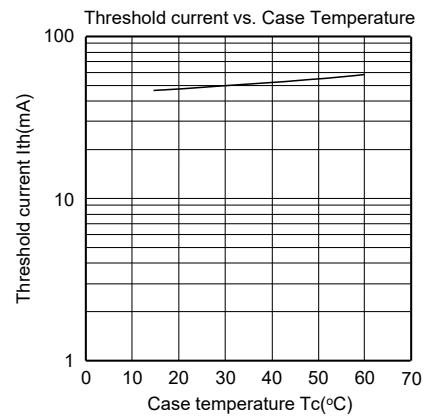
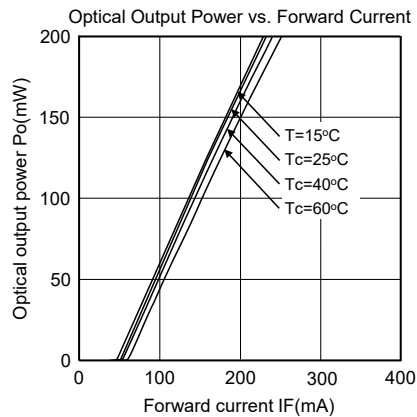
Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	50	80	mA	-
Operating current	Iop	-	235	275	mA	Po=200mW
Operating voltage	Vop	-	2.8	3.3	V	Po=200mW
Beam divergence Parallel to the junction	θ//	5	8	11	°	Po=200mW, FWHM
Beam divergence Perpendicular to the junction	θ⊥	11	15	19	°	Po=200mW, FWHM
Lasing Wavelength	λp	775	785	795	nm	Po=200mW
Monitor current	Is	0.2	0.65	1.6	mA	Po=200mW, VR(PD)=5V

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Typical Characteristic Curves



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