650nm 5mW 50 Degree 5.6mm TO-Can

N-Type Laser Diode

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9025-02-029

OVERVIEW

The 9025-02-029 is a MOCVD grown 650nm band InGaAs laser diode with quantum well structure. It's an attractive Light source, with a typical Light output power of 5mW. The diode is a single mode, single frequency laser packaged in an ultra-compact, 5.6mm TO-can footprint.

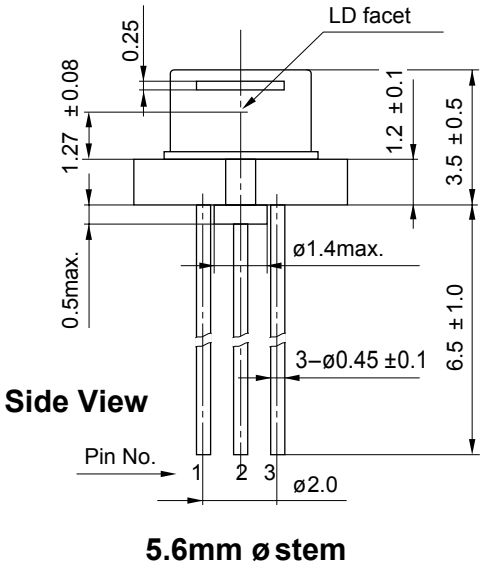
APPLICATIONS

- Laser Levels
- Laser Pointer
- Industrial Laser Module
- Bar Code Reader

FEATURES

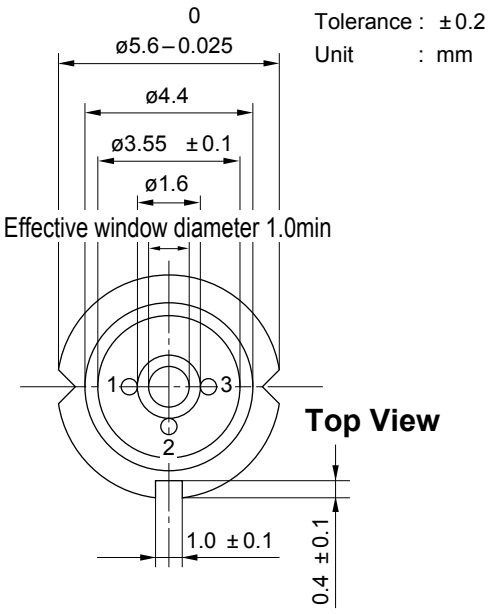
- Visible Light Output: 650nm Typ
- Optical Power Output: 5mW
- Package Type: TO-18 (5.6mm Ø)
- Built-in Photo Diode for Monitoring Laser Diode

ELECTRICAL CONNECTIONS



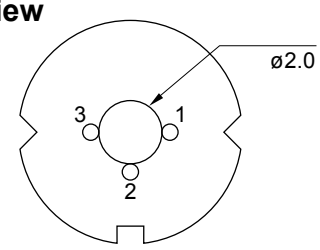
Side View

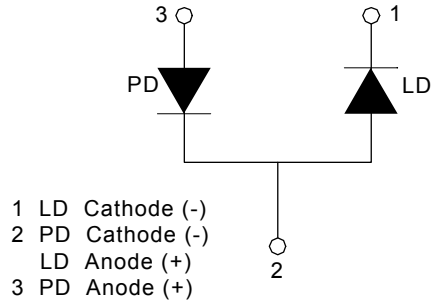
5.6mm ø stem



Top View

Bottom View





1 LD Cathode (-)
2 PD Cathode (-)
LD Anode (+)
3 PD Anode (+)

Absolute Maximum Ratings @ Tc = 25°C

ITEMS	SYMBOLS	VALUES	UNITS
Optical Output Power	P	7	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

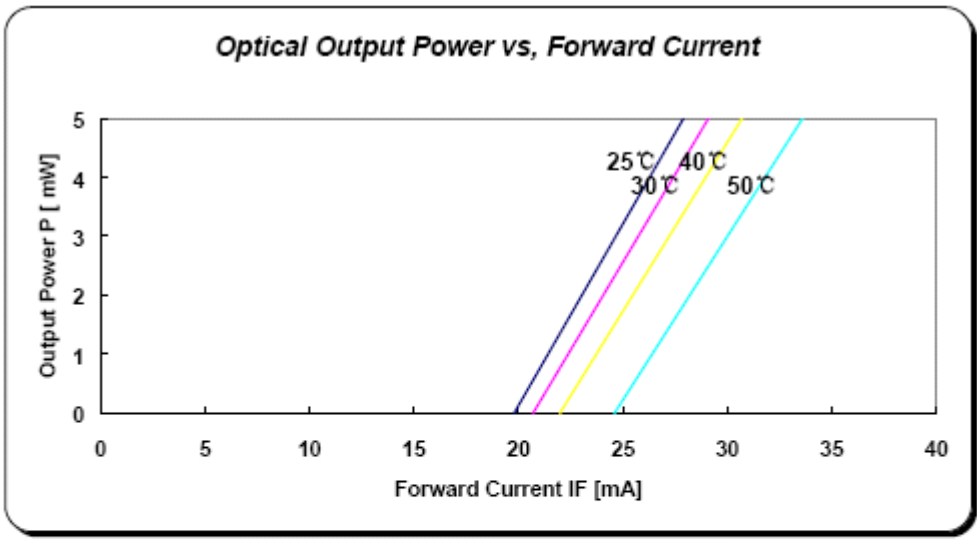
Electrical & Optical Characteristics @ Tc = 25°C

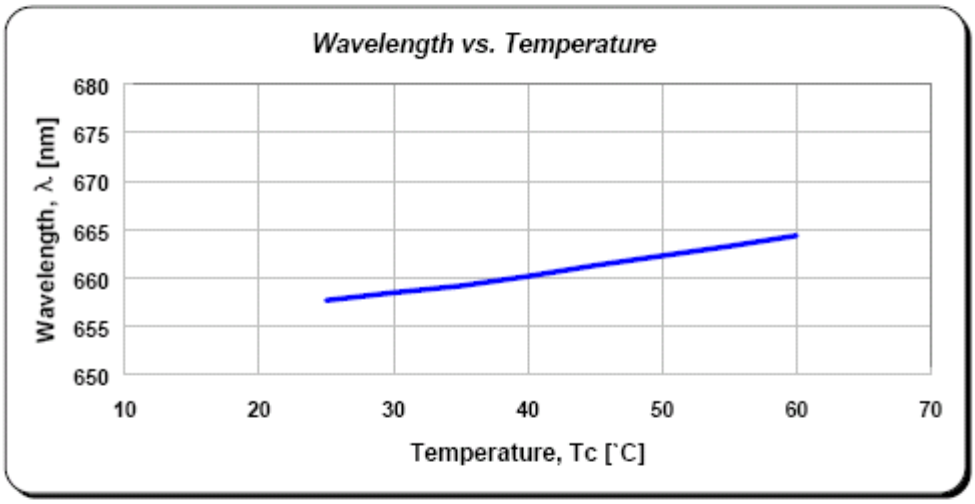
ITEMS	SYMBOLS	MIN	TYP	MAX	VALUES	UNITS
Optical Output Power	Po	-	5	-	V	-
Threshold Current	Ith	-	21	30	mA	-
Operating Current	Iop	-	28	35	mA	Po=10mW
Operating Voltage	Vop	-	2.2	2.6	V	Po=10mW
Lasing Wavelength	λp	650	655	660	nm	Po=10mW
Beam Divergence (Note 1)	Θ | |	6	8	12	deg	Po=10mW
		22	32	38	deg	Po=10mW
Beam Angle	ΔΘ | |	-	-	±3.0	deg	Po=10mW
	ΔΘ	-	-	±3.0	deg	Po=10mW
Monitor Current	Im	0.1	0.2	0.5	mA	Po=10mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	-

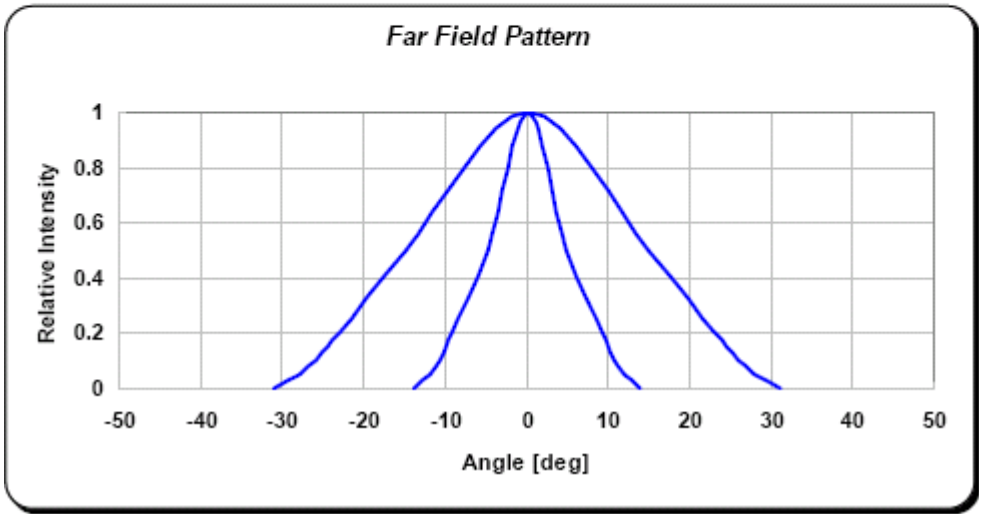
NOTES

Note 1: Measure at FWHM

Example of Representative Characteristics







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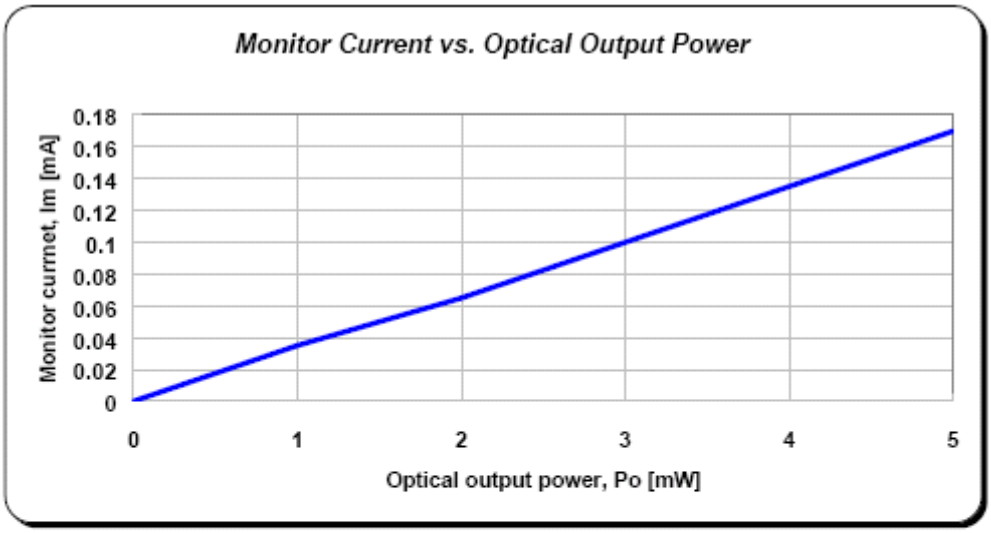

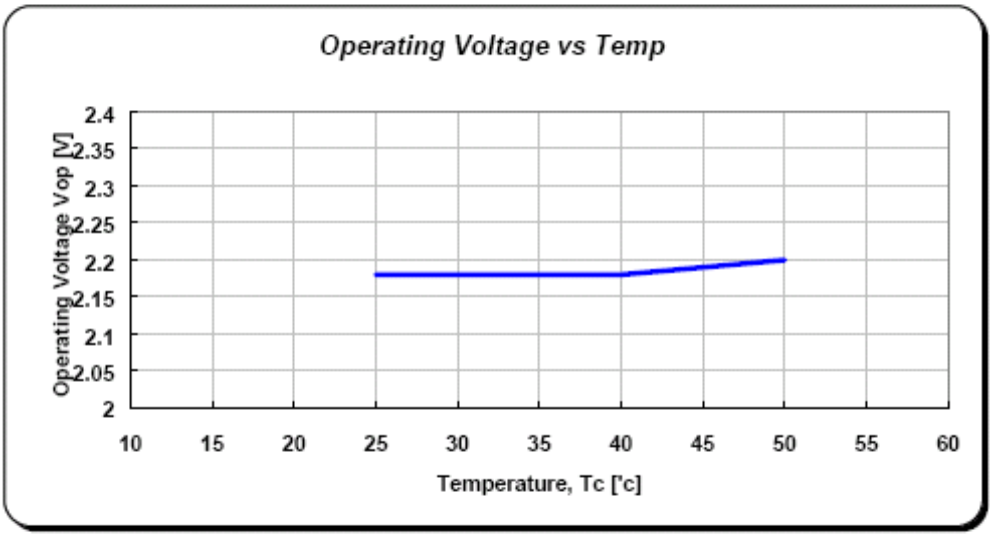

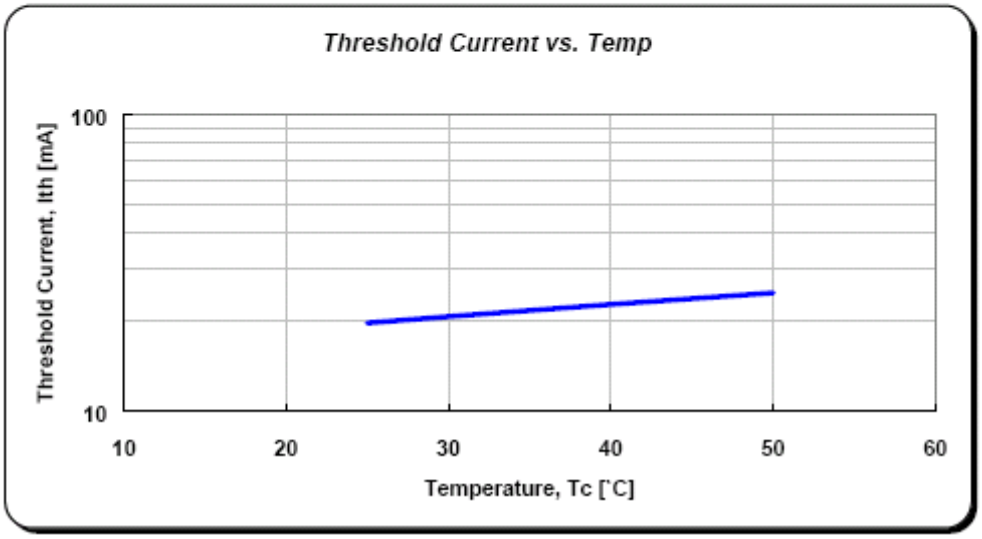

Precautions

QUALITY ASSURANCE

Do not operate the device above it maximum rating. Doing so may cause unexpected and permanent damage to the device. Take precautions to avoid electrostatic discharge and /or momentary power spikes. A change in the characteristics of the laser or premature failure may result. Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

The information provided by Global Laser, including but not limited to technical specifications, recommendations, and application notes relating to laser chip or laser diode TO-CAN (LD) is believed to be reliable and accurate and is subject to change without notice. Global Laser reserves the right to change its assembly, test, design, form, specification, control, or function without notice.

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