1064 nm Single-Mode Fiber Laser

A semiconductor laser tube, also known as a Laser Diode (LD), is currently one of the most widely used types of lasers. This product adopts TO packaging, which is typically used for low-power LD lasers. To optimize the quality of the output spot of the LD laser, all products in this series feature an integrated single-mode fiber-coupled output design. The attached gradient-index (GRIN) lens ensures high efficiency when coupling the LD laser into the single-mode fiber, and the LD laser output from the fiber conforms to the Gaussian spot intensity distribution to the greatest extent possible. The end of the pigtail is equipped with the common FC/APC or FC/PC fiber connector, which is compatible with most fiber flange connectors, fiber collimating lenses, fiber focusing lenses, etc., facilitating subsequent supporting use by users.

LD laser tubes in this series usually need to be powered by a current-source type power supply. When in use, please clearly identify the positive (+) and negative (-) pins of the LD and strictly ensure that the current does not exceed the rated value. After use, short-circuit the positive (+) and negative (-) pins to prevent damage caused by electrostatic breakdown in the environment.

Technical Specifications

Product Model	Product Model	Lasence-IR1064-SMF-20				
Typical Technical Specifications (25℃)		Symbol	Unit	Min	Typ	Max
Optical Parameters	Center Wavelength	λc	nm	1065	1070	1075
	Continuous Output Power	Po	mW	–	20	–
	Spectral Width	△λ	nm	–	2.0	–
	Wavelength Temperature Coefficient	–	nm/℃	–	0.3	–

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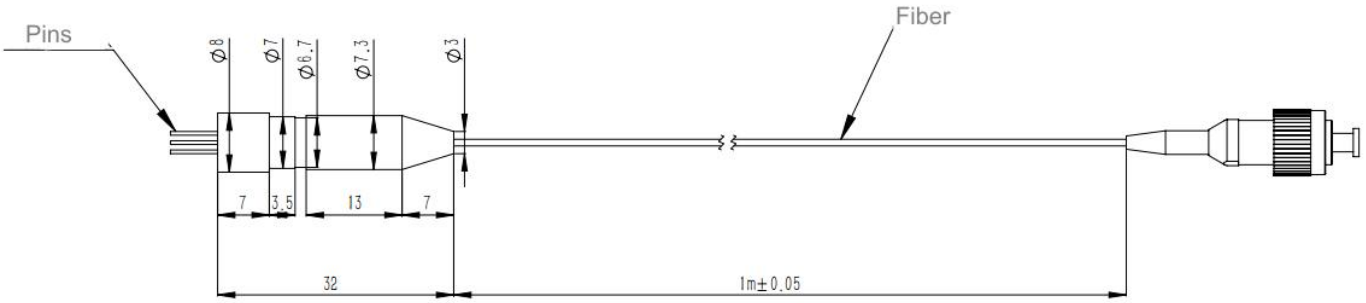
Fiber Parameters	Fiber Core Diameter	Dc	μm	5.5	5.5	5.5
	Numerical Aperture (NA)	–	–	0.13	0.13	0.13
	Fiber Length	–	cm	≥1m	≥1m	≥1m
	Fiber Type	Single-Mode Fiber				
	Connector	FC/SMA905/ST/2.5 Ferrule (Optional)				
Electrical Parameters	Operating Voltage	Vop	V	–	1.8	2.0
	Threshold Current	Ith	mA	–	15	18
	Operating Current	Iop	mA	–	120	135
Other Parameters	Packaging Type	Coaxial				

Packaging Dimensions

Unit: mm



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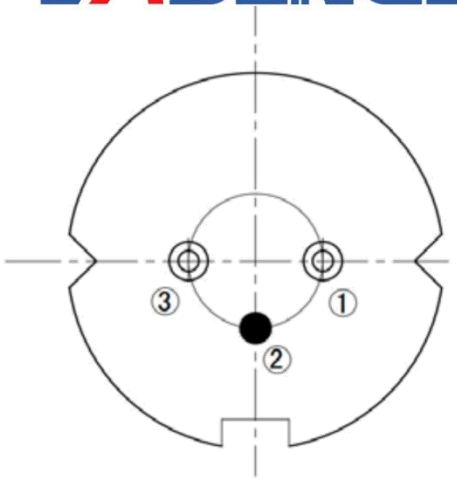

Pin Number	Definition
1	LD-
2	LD+
3	NC (No Connection)

Precautions

1. The laser should be used within the rated current and rated power. Excessively high output power will accelerate the aging of components.
2. Lasers are electrostatically sensitive devices. Anti-static measures must be taken during transportation, storage, and use.
3. The laser should be stored or operated in a dry and well-ventilated environment to prevent damage caused by condensation.
4. The light-emitting surface (cavity surface) is one of the key parts of the laser. Avoid any operation that may damage the cavity surface. During the use of the device, ensure that the die is not contaminated and prevent mechanical damage.
5. The fiber must not be bent at a large angle, and the bending diameter should be more than 300 times the fiber diameter.

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