2 µm 20W Fiber to Free Space Isolator

(polarization independent and polarization maintain, 5W, 20W)

DATASHEET

BUY NOW

This 2µm Fiber to Free Space High Power Isolator is characterized with low insertion loss, high isolation high power handling, high return loss, excellent environmental stability and reliability. It is ideal for fiber laser and instrumentation applications.

Features

- High Power Handling
- Low IL
- High Isolation
- High Reliability & Stability
- Cost Effective

Applications

- Laser Pump Source
- Optical Fiber Amplifier
- Laser Manufacturing
- Test and Measurement

Specifications

Parameter	Min	Typical	Max	Unit
Operating Wavelength		2000 ± 30		nm
Insertion Loss [1]		0.5		dB
Isolation [1]		35		dB
Extinction Ratio (PM only)		20		dB
Output Beam Diameter		4.9 ± 0.5		Mm
Return Loss		45		dB
Optical Power Handling [2]		5, 20		W
Peak Power for ns Pulse		10		kW
Fiber Type		SMF-28e / PM1550		
Operating temperature	+10		+60	°C
Storage temperature	-40		+85	°C

Notes:

[1]. Measured without connectors at center wavelength and 25°C

[2]. Continuous operation

Note: For a polarized input light version, the isolation is optimized to block the light reflection of the same polarization. Although lights of other polarizations may also be blocked, the extinction may be poor. PM isolators can be specially made to block backward propagating lights of all polarizations. PM isolators can also be made with a light polarizing function.

Rev 04/02/24

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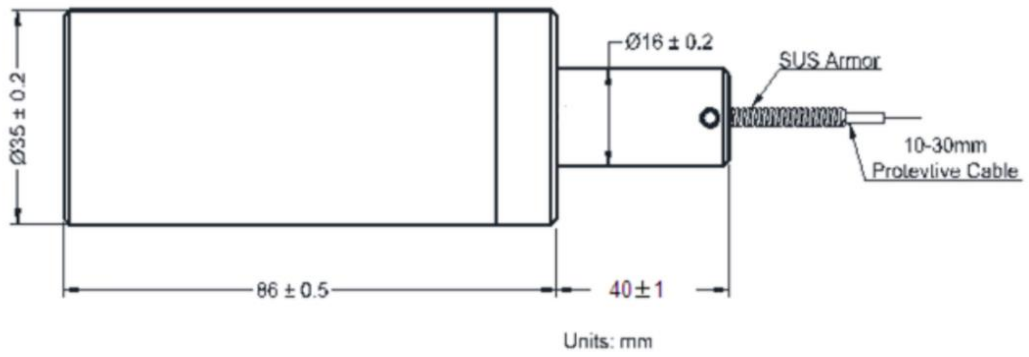
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

	A	☐☐	☐☐	☐	☐	☐	☐
Prefix		**Wavelength**	**Power Handling**	**Fiber Type**	**Fiber Cover**	**Fiber Length**	**Connector**
HPFI-		2000 = 20 Special = 00	5W = 05 20W = 20	SMF-28e = 1 PM 1550 = 2 Special = 0	Bare fiber = 1 900um loose tube = 2 3mm steel cable = 3 6mm steel cable = 6 Special = 0	0.75m = 1 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0

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Application Notes

Fiber Core Alignment
Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness
Fibers with smaller core diameters (<5 µm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power
Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.

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