1570/2000nm WDM

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The 2 μm Filter Wavelength Division Multiplexer series is based on environmentally stable thin-film filter technology. The devices combine or separate light at different wavelength in a wide wavelength range. They offer very low insertion loss, low polarization dependence, high isolation and excellent environmental stability. High power handling capability can be achieved through unique pigtail processing and high quality AR coating.

Specifications

Parameter	Min	Typical	Max	Unit
Pass Band	1950		2050	nm
Insertion Loss [1]		0.8		dB
Isolation [2]		25		dB
Extinction Ratio [2]		20		dB
PDL [3]		0.2		dB
Reflection Band	1560		1580	nm
Insertion Loss [4]		0.8		dB
Isolation [1]		12		dB
Thermal Stability		≤ 0.005		dB/°C
Return Loss		55		dB
Directivity		55		dB
Average Optical Power Handling [5]		300		mW
Fiber Type	SMF-28 / SM 1950 / PM 1550 /PM 1950			
Operating temperature	-5		70	°C
Storage temperature	-40		85	°C

Notes:

[1]. Measured without connectors at center wavelength and 23°C

[2]. PM version only

[3]. SM version only

[4]. Depends on fiber type, 1950 series fiber may have higher loss up to 1.3 db.

[5]. Continuous operation.

Features

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

Applications

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

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link]:

RoHS COMPLIANT

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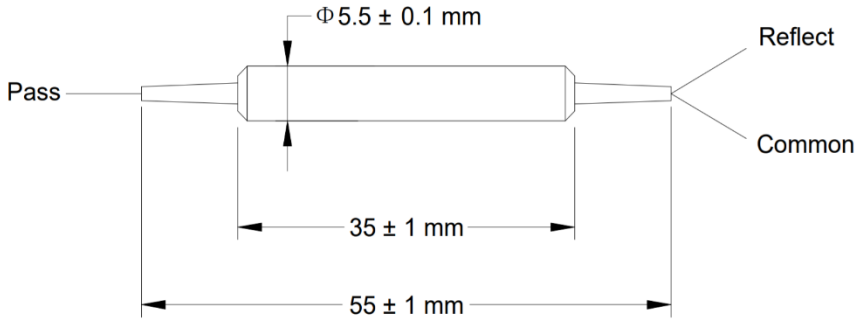
Mechanical Dimensions



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

Ordering Information (Part Number)

	A2	☐☐	☐	☐	☐	☐	☐
Prefix		**Wavelength**	**Input Fiber**	**Output Fiber**	**Fiber Type**	**Fiber Length**	**Connector [1]**
WDMF-		1570/2000nm = 12 Special = 00	SMF-28e = 1 PM1550 = 2 SM1950 = 3 PM1950 = 4 Special = 0	SMF-28e = 1 PM1550 = 2 SM1950 = 3 PM1950 = 4 Special = 0	Bare fiber = 1 900um tube = 2 Special = 0	1.0 m = 1 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Special = 0

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

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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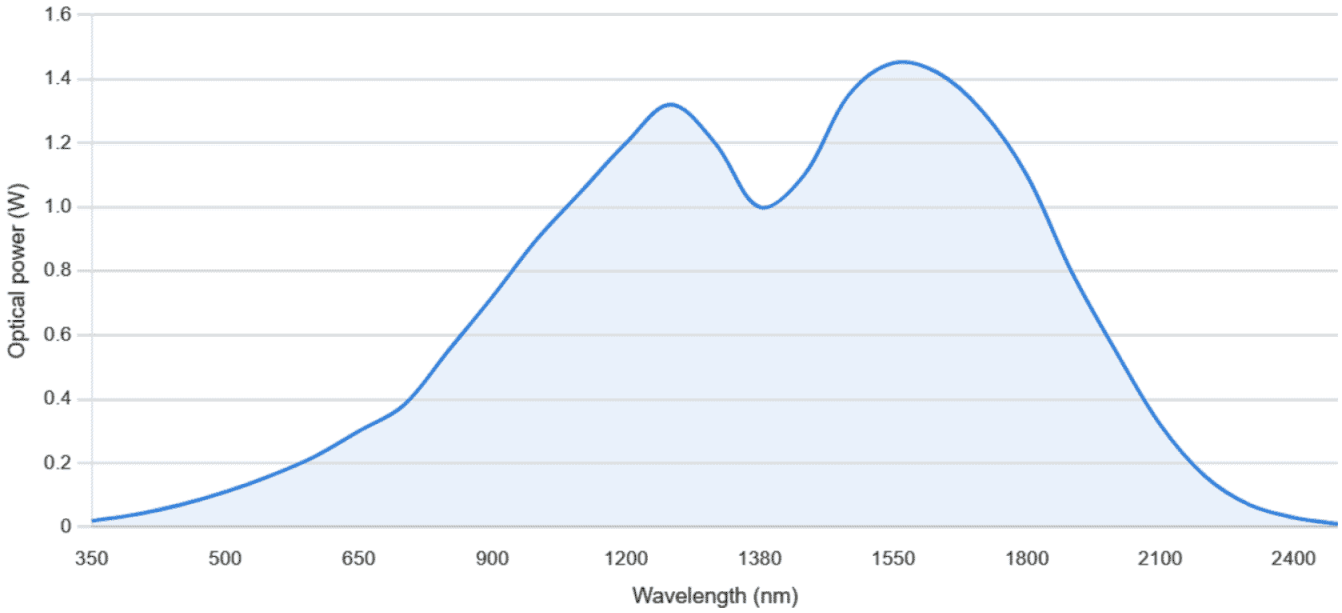
Regular Single Mode / Polarization Maintaining Fiber Optical Power Handing vs Wavelength



Single mode fiber optical power is limited by nonlinear effects in addition to absorption that increase loss and generate heat. The curve shows the approximate safe CW power envelope for standard single-mode fiber. Actual limits depend on fiber design, core size, length, and laser characteristics. Specialty fibers can significantly increase the power limit.

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