

# 2 $\mu\text{m}$ Filter Wavelength Division Multiplexer



polarization independent and polarization maintain

DATASHEET

[Return to the Webpage](#)



## Features

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

## Applications

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

The 2  $\mu\text{m}$  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 <sup>[1]</sup>		0.8		dB
Isolation <sup>[2]</sup>		25		dB
Extinction Ratio <sup>[2]</sup>		20		dB
PDL <sup>[3]</sup>		0.2		dB
Reflection Band	1560		1580	nm
Insertion Loss <sup>[4]</sup>		0.8		dB
Isolation <sup>[1]</sup>		12		dB
Thermal Stability		$\leq 0.005$		dB/°C
Return Loss		55		dB
Directivity		55		dB
Average Optical Power Handling <sup>[5]</sup>		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.

**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](#):

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 02/10/25

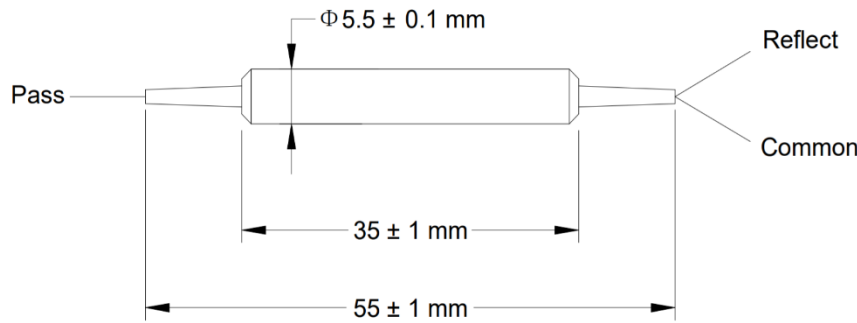
# 2 μm Filter Wavelength Division Multiplexer



polarization independent and polarization maintain

## DATASHEET

### Mechanical Dimensions



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

### Ordering Information

Prefix	Wavelength	Input Fiber	Output Fiber	Fiber Type	Fiber Length	Connector
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

### 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 handling by expanding the core side at the fiber ends.