

Single Mode 1x2 CWDM Filter



Description

A Single Mode 1×2 CWDM Filter is a three-port coarse wavelength division multiplexing device designed for single-mode fiber systems. Typically based on thin-film filter (TFF) technology, it separates or combines optical signals according to wavelength rather than optical power ratio. When multiple wavelengths enter the common (COM) port, the designated CWDM channel is transmitted through the PASS port, while the remaining wavelengths are directed to the REFLECT port. It can also operate in reverse to combine different wavelengths into a single fiber. Featuring low insertion loss, high channel isolation, and high return loss, it is widely used in CWDM networks, metropolitan area networks, CATV systems, fiber-optic communications, and network capacity expansion.

Features

- Low Insertion Loss
- Wide Pass Band
- High Channel Isolation
- High Stability and Reliability

Applications

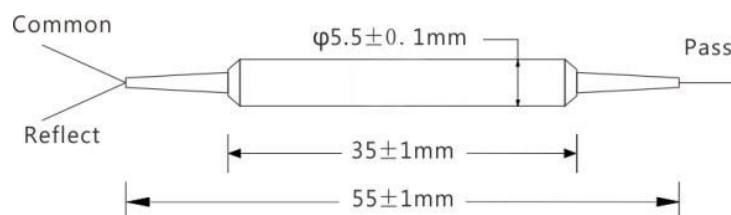
- Line Monitoring
- WDM Network
- Telecommunication
- Cellular Application

Specifications

Parameter	Unit	Value
Common Channel Wavelength	nm	ITU Grid
Pass Channel Wavelength	nm	1270, 1290..., 1610 etc.
Wavelength Accuracy	nm	± 0.05
Channel Spacing	nm	20
Channel Passband	nm	≥ 13 (@-0.5dB)
Pass Channel Insertion Loss	dB	≤ 0.6
Pass Channel Isolation	dB	≥ 30
Reflect Channel Insertion Loss	dB	≤ 0.4
Reflect Channel Isolation	dB	≥ 13
Polarization Dependent Loss	dB	≤ 0.1
Directivity	dB	≥ 50
Return Loss	dB	≥ 45
Max Optical Power (CW)	W	0.3
Fiber Type	-	SMF-28e
Package Dimensions	mm	$\Phi 5.5 \times L35$
Operating Temperature	$^{\circ}\text{C}$	-5 to +70
Storage Temperature	$^{\circ}\text{C}$	-20 to +85

Notes: Tested at 25 $^{\circ}\text{C}$. Data exclude connectors. Adding connectors will increase insertion loss by approximately 0.3 dB, reduce return loss by 5 dB.

Product Dimensions



Ordering Information

 nm	 nm	 W		 m	 μm	
Channel Spacing	Pass Channel Wavelength	Max Optical Power (CW)	Fiber Type	Pigtail Length	Pigtail Diameter	Connector
20nm	1270nm	0.3W	SMF-28e	0.5m	250μm Bare Fiber	None
	1290nm			1.0m	900μm Loose Tube	LC/UPC
	1310nm			1.5m		LC/APC
	Custom			2.0m		SC/UPC
						SC/APC
						FC/UPC
						FC/APC
						ST/UPC
						ST/APC