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WDM Filter

WDM Filter for 5G

Materion Precision Coatings has developed a wavelength-division multiplexing (WDM) filters for optical multiplexer module utilized in modern telecommunication equipment. Integrated into the optical multiplexer module, the filters are designed to provide you the high steepness of transmittance slopes in the transition zones between passband and stopband for near infrared wavelength. Our WDM filters are increasing overall transmission as well minimizing the temperature shift. It is flexible for spectrum design for various infrared wavelengths.

Benefits

- High transmission and low insertion loss
- Optimized spectral performance
- Steep cut-on/cut-off slopes
- Low temperature shift
- Excellent environment stability
- Compact size
- Cost effective solution for telecom optical module
- Customized designs possible

Applications

WDM filters provide high transmission for various infrared laser beam signal. Filters can be:

- Integrated in optical multiplexer module
- Placed in the optical path in WDM-Transceivers

Technical Data

Spectral specifications It can be customized according to the incident angle, bandwidth and insertion loss specified by the requirements. Generally, the insertion loss of passband can be less than 0.25dB at 0° incidence

Central Wavelength (λc): 1271nm,1291nm,1311nm, 1331nm,1351nm,1371nm

Wavelength range: 1250 - 1620nm or other wavelength

Pass band: Bandwidth between -0.3dB ≥ 14nm or other requirements

Stop band: Bandwidth between -30dB ≤ 26nm or other requirements

Thermal Wavelength Drift: ≤4 pm/°C

Operating Temperature: -40°C ~ 85°C

Substrate: WMS-15 or equivalent

Size: 1.0x1.0x1.0mm or other size

Materion Precision Optics (Shanghai) Ltd.
33# Building, No. 76 Fu Te Dong San Road
WGQ Free Trade Zone, Pudong
Shanghai 200131, P.R.C.

Shanghai
T + 021 60574646
info.mbo@materion.com
www.materion.com/balzersoptics

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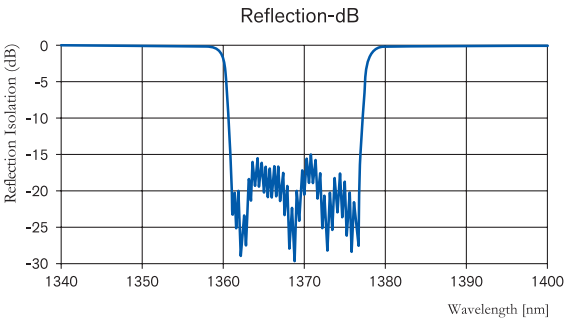

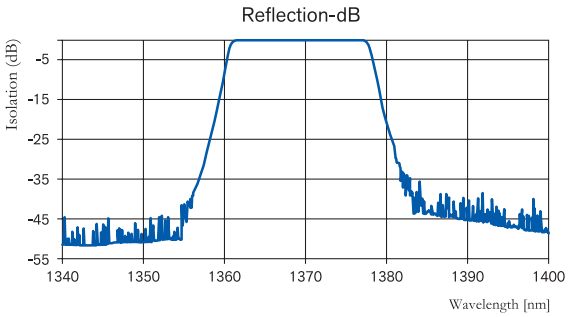

Central wavelength(λc)	1271nm,1291nm,1311nm,1331nm,1351nm,1371nm
Bandwidth @-0.3dB (=93.3%)	≥ 15nm
Bandwidth @-30dB (=0.1%)	≤ 25nm
Pass Band width @-0.3dB	(λc-7) – (λc+7)
Stop Band Width @-30dB	1260-(λc-3) & (λc+13)-1460
Max IL within Pass Band	≤ 0.25dB (=94.4%)
Max Reflection IL within Stop Band	≤ 0.2dB
Ripple within stop Band	≤ 0.1dB
Ripple within Pass Band	≤ 0.25dB (=94.4%)
Reflection Isolation	≥ 13dB (=5%)
Polarization Dependent Loss within	≤ 0.05dB
Thermal Wavelength Drift	≤ 5 pm/°C
Operating Temperature	-20°C ~ 85°C
AOI	1.8°

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