



# TF-WDM

## FBG DENSE WAVELENGTH DIVISION MULTIPLEXING FILTERS

### HIGHER-PERFORMANCE FILTER RESPONSES

TeraXion's TF-WDM filter is an FBG-based narrowband reflective filter with remarkable reflective and transmissive properties used for channel selection in DWDM systems. The filter is designed and tested to guarantee spectral efficiency and dispersion characteristics in addition to other optical parameters. It is easily tailored for 50 GHz or greater channel spacing for today's and tomorrow's 10 and 40 Gb/s optical systems. The TF-WDM can be customized to meet critical chromatic dispersion requirements.

### FEATURES

- \_ 50/100 GHz ITU channel spacing
- \_ Low insertion loss
- \_ Steep spectral roll-off with excellent channel isolation
- \_ Minimized group delay variation and chromatic dispersion
- \_ Performance guaranteed over wide temperature range (-5 to +70°C)
- \_ Polarization insensitive
- \_ Full Telcordia™ I221 qualification ensuring reliable operations

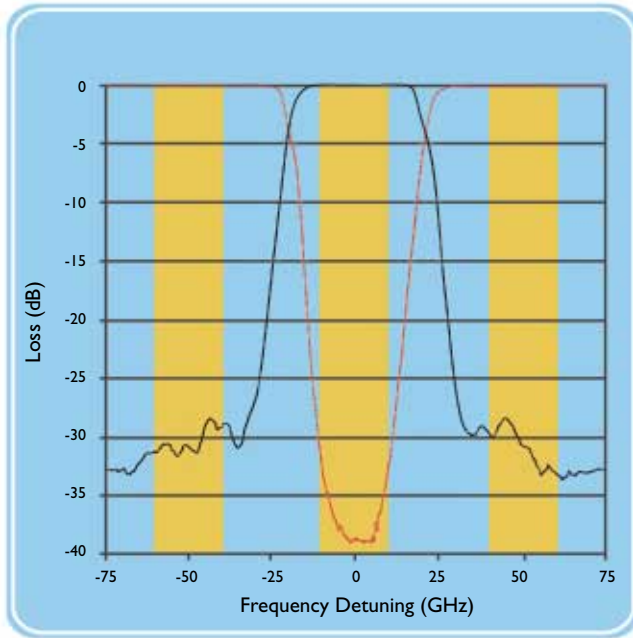
### APPLICATIONS

- \_ Technology of choice for 50 GHz optical wavelength add/drop filtering
- \_ 10 and 40 Gb/s systems
- \_ Stop band filter for wavelength blocking and band pass for wavelength routing
- \_ Low channel-count interleaver

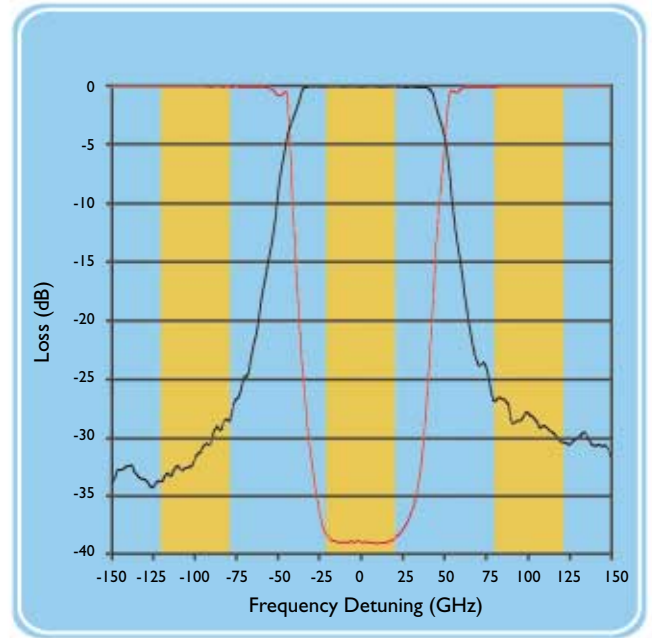
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Reach out for  
high performance

## 50 GHz FILTER SPECTRA



## 100 GHz FILTER SPECTRA



## SPECIFICATIONS

<b>Optical Parameters<sup>1</sup></b>		
Channel spacing	<b>50 GHz</b>	<b>100 GHz</b>
Operating wavelength range	C- and L- band	C- and L- band
Reflection Bandwidth @ -0.5 dB	>20 GHz	>40 GHz
Reflected Insertion loss (in-band)	<0.2 dB	<0.2 dB
Reflected adjacent channel isolation ( <i>min</i> )	23 dB	25 dB
Reflected non- adjacent channel isolation ( <i>min</i> )	30 dB	30 dB
Transmission Channel Rejection Bandwidth @ -25 dB	>20 GHz	>40 GHz
Passband Insertion Loss <sup>2</sup>	<0.3 dB	<0.3 dB
Insertion Loss Ripple	<0.2 dB	<0.25 dB
Polarization dependent loss	<0.1 dB	<0.1 dB
Polarization mode dispersion	<0.2 ps	<0.2 ps
Splice loss (matched to SMF-28™)	<0.1 dB	<0.1 dB

<b>Mechanical Parameters</b>	
Fiber pigtail length	1 meter standard or custom
Operating temperature	-5 to +70°C
Storage temperature	-40 to +85°C
Package dimensions <sup>3</sup>	4.8 mm (D) x 55 mm (L)

1. Over the entire operating temperature range, including wavelength inaccuracies.
2. Including cladding mode losses
3. Using our epoxy-free proprietary athermal package

### Ordering Information

For orders, questions, specific requirements, or to learn more about TeraXion products, contact us at [sales@teraxion.com](mailto:sales@teraxion.com).

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