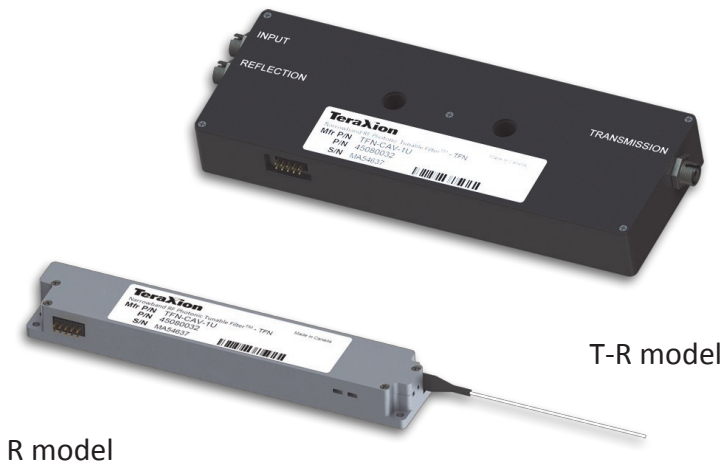


# TFN– ULTRA NARROWBAND TUNABLE OPTICAL FILTER

Unmatched narrowband filtering with bandwidth down to 50 MHz



## Features

- Bandwidth from 50 MHz to 50 GHz
- Small form factor
- I<sup>2</sup>C interface
- Model with transmission and reflection
- Over 40 GHz of tuning range

## Applications

- Photonic RF sideband isolation
- Channelized receiver
- Brillouin filtering

TeraXion has combined its narrowband FBG filter capabilities with its compact and reliable tunable platform enabling ultra-narrowband dynamic filtering of RF-over-fiber signals.

The resulting narrowband optical filter plays a key role in achieving filtering functions for analog RF photonics over a wide span of modulation frequencies. TFN products can also be used in advanced fiber optic sensing systems.

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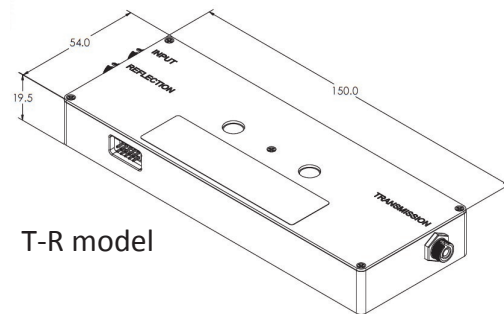
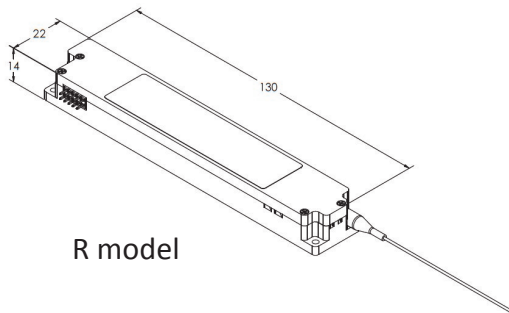
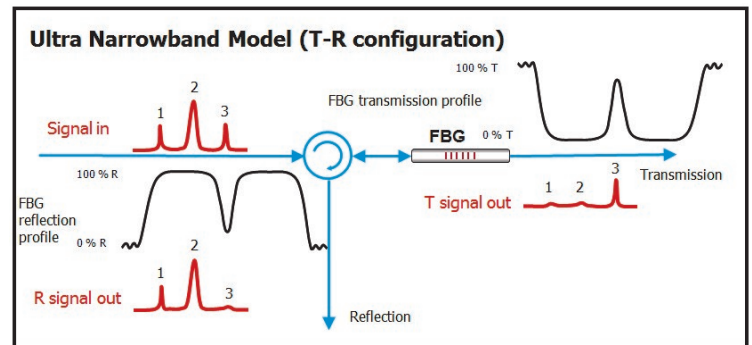
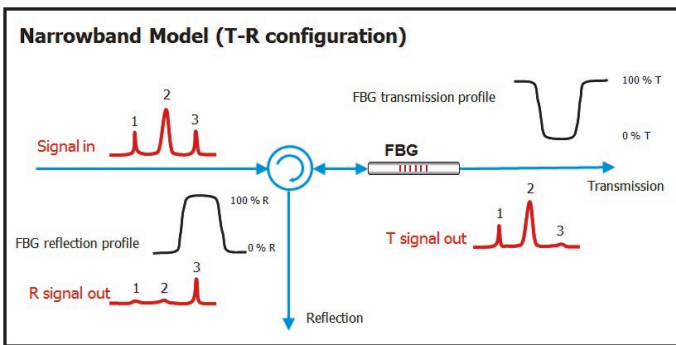
Optical Parameters*				
	Narrowband	Ultra narrowband**	Unit	
Center Wavelength Range @25°C (referenced to vacuum)	1525-1565	1525-1565	nm	
Center Wavelength Accuracy	±1	±1	GHz	
Reflection Bandwidth	2-50	0.05-0.5	GHz	
Tuning Range	±20	±20	GHz	
Tuning Resolution	0.25	0.25	GHz	
Insertion Loss	R Model			
	<0.5	<3	dB	
	T-R Model Transmission Port	<2.5	<4	dB
	T-R Model Reflection Port	<3	<3	dB
Polarisation Extinction Ratio **	>20	>20	dB	
SMSR	>20	N/A	dB	
Power Handling	Up to 500	Up to 10	mW	

\* 1064 to 2000 nm available as an option

\*\*PM fiber only

Mechanical Parameters	
Fiber Type	PM or Non-PM fiber
Operating Temperature	-5°C to +65°C
Storage Temperature	-40°C to +85°C

Electrical Parameters	
Control Interface	I <sup>2</sup> C
Voltage	5V
Power Consumption	Typ: 3W



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