XFA – Highly Selective Tunable Filter

Fixed Bandwidth & Automatic Wavelength Selection

YENISTA offers a flat-top tunable filter with adjustable bandwidth. Wavelength tuning ranges over 1450 nm to 1650 nm.

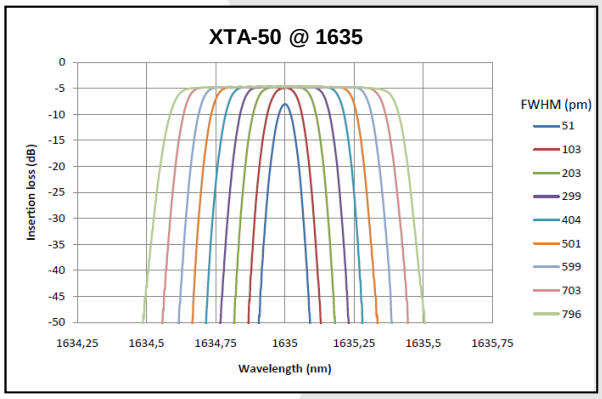
The bandwidth can be selected at purchase between 50 pm (6.25 GHz) to 800 pm (100 GHz) with respect to the center wavelength. Wavelength tuning is done with highly accurate translation stage.

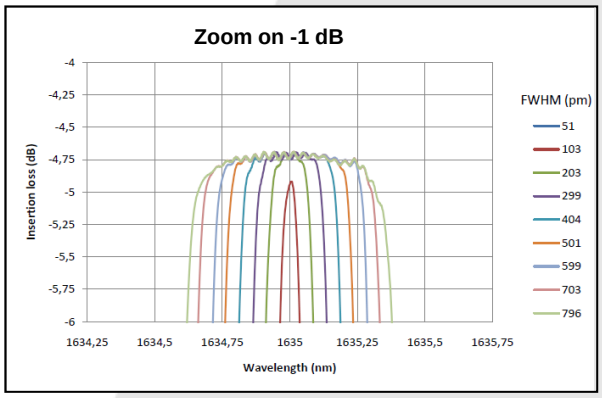
Optical filtering of the XFA is based on proven diffraction grating technology. The extremely sharp edges ensure a clean cut between the signal and the adjacent channels or noise, while the flat-top square shape ensures data integrity. Signal propagation through the filter does not affect its integrity, because temporal effects such as chromatic dispersion and PMD are negligible.

Applications: channel selection for bit error rate testing, analysis of sub-band of complex modulation formats, spectral analysis, etc.

The filter is an ideal tool for laboratories that are looking for state-of-the-art optical specifications.

Measured Filter Curves





Filter Shape: Highest Selectivity

- **200 nm Wavelength Range to Adapt to any Set-up**

XFA operates from 1450 to 1650 nm in one single instrument.

- **High Accuracy and Repeatability**

The translation stages used in XFA to tune wavelength ensures a perfect accuracy and repeatability over time. This avoids additionally control of settings and makes it perfect for manufacturing environment and most demanding laboratory applications.

- **High Rejection Ratio: 60dB typical**
- **Steep Edges: roll-off 500 dB/nm**

The signal part is perfectly extracted minimizing ASE noise. BERT measurement have never been so good!

- **Flat-top Design: 0.2 dB flatness**

Flatness of the filter curves are inspected & guaranteed.

Additional Key Parameters

- **Low insertion loss: 4 dB typical**
- **Small Polarization Dependent Loss < ±0.2 dB**
- **Bi-directional usage**

Yenista OPTICS

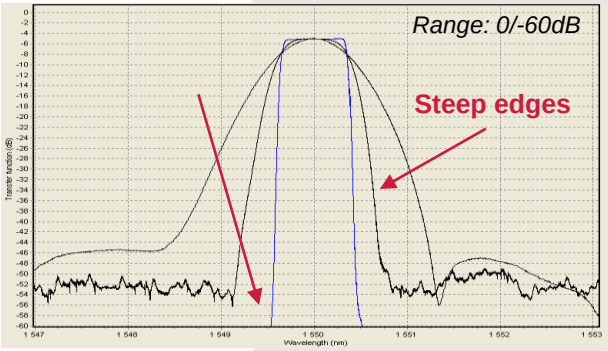
July 2012

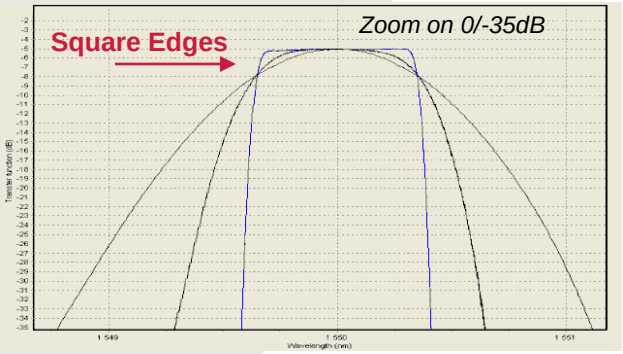
XFA Filter Specifications *1

Optical Specifications	Wavelength range	1450-1650 nm
	Wavelength Resolution	1 pm
	Wavelength Accuracy	±30 pm
	Insertion loss *2	<5 dB (4.5 dB typ.)
	Polarization dependent loss *3	±0.2 dB
	Wavelength Tuning speed	1 s
Optical bandwidth Specifications (FWHM) (to be selcted at time of order)	Minimum	50 pm (6.25 GHz)
	Maximum	800 pm (100 Ghz)
	FWHM accuracy	±10 pm
Optical Bandwidth Shape	Flatness *4	0.2 dB
	Out-band suppression (Crosstalk) *4	40 dB (60 dB typ.)
	Slope edges between -3 and -40 dB	500 dB/nm (typ.)
Interface	Optical connector	FC/APC or FC/PC on SMF28 fiber Easy access to connectors for cleaning.
	Display	7 inch, color TFT-LCD, Touch Screen
	Remote Interfaces	Standard: USB, Ethernet RJ-45, RS232 Optionnal: GPIB (via RS232 port and optional adaptor)
	Other interfaces	USB VGA
General Specifications	Operating temperature range	+15° to +35°C +60° to +85°F
	Maximum Input Power	+23 dBm total input power +15 dBm per single channel
	Power Supply	100 to 240 V (50 to 60 Hz)
	Dimensions (W x H x D)	405x 160 x 290 mm³
	Weight	7 kg

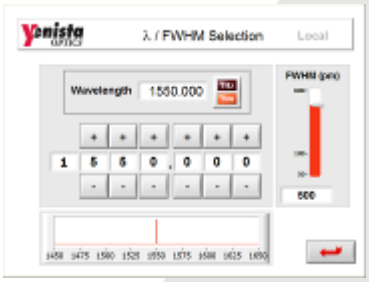
*1: At 21° ±3° C.
*2: From 1500 to 1600 nm, FWHM > 100 pm.
*3: At 1500, 1550 and 1600 nm, FWHM > 100 pm..
*4: On a centered bandwidth BW = FWHM-150 pm, and for 150 pm<FWHM<650 pm.
*5: Measured 60 pm away from the -3 dB points.

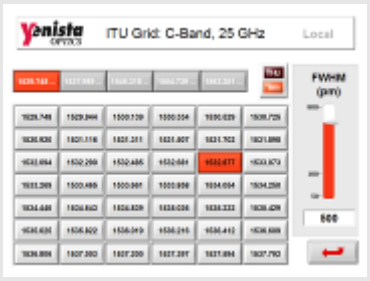
Comparison of XFA (blue curve) with Gaussian and standard flat-top filter with FWHM = 700pm

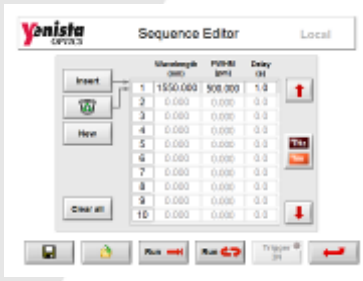




Intuitive software







Easy access to optical connectors to ensure low-loss over time

All information and specifications are subject to change without notice

YENISTA OPTICS
4 rue Louis de Broglie
22300 Lannion, France
Phone: +33 296 483 716
Fax: + 33 296 487 304
www.yenista.com

YENISTA OPTICS Inc.
475 Wall Street
Princeton, NJ 08540, USA
Phone: +1 609 423 0890

July 2012