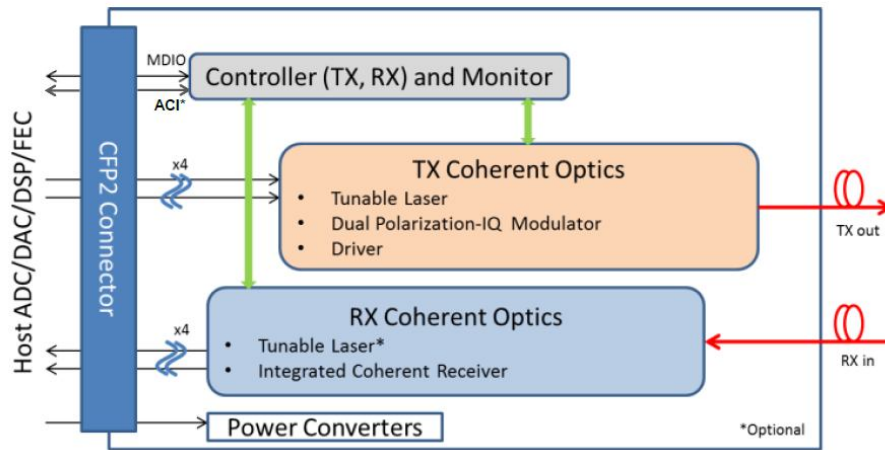


Mini MEMS Tunable Filter with VOA

The Optoplex mini tunable filter described is specifically designed for 100G tunable transceiver analog coherent optics (CFP2-ACO) application. The main purpose of this tunable filter is to suppress the noise to improve the sensitivity and OSNR performance.

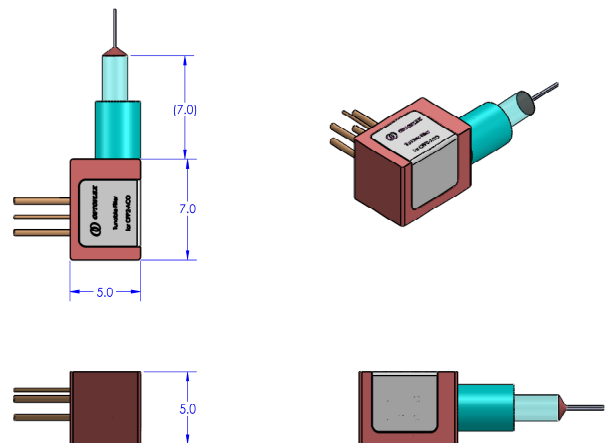
A VOA is integrated in the tunable filter to provide a max attenuation larger than 30dB.



The integrated TF-VOA features a compact size, **5x5x7mm**, and the use of tight-bend ZBL fibers, is specifically suited for the communication SFP transceiver package. A 2-dimensional MEMS is used here as the active tuning element so that the tuning time for both TF and VOA is as short as 50 msec.

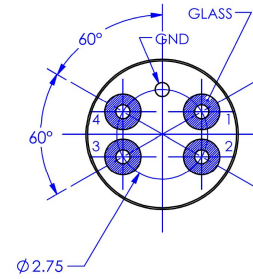
Mechanical Specifications

Parameter	Specification
Fiber Type	9/125 Corning ZBL
Fiber Jacket	250 um bare fiber
Fiber Length	1000 ± 100 mm (input and output fibers)
Connector Type	LC/UPC (with fusion sleeves)
Connector Type	5.4dia x 15 mm



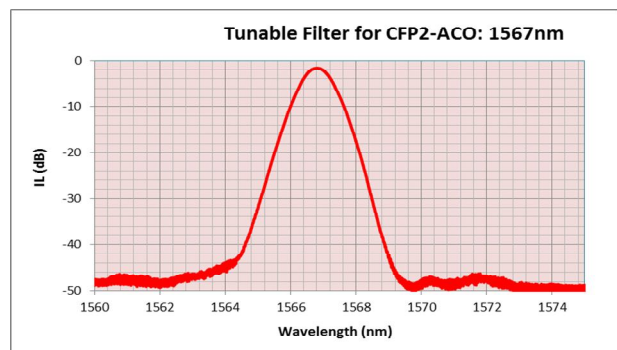
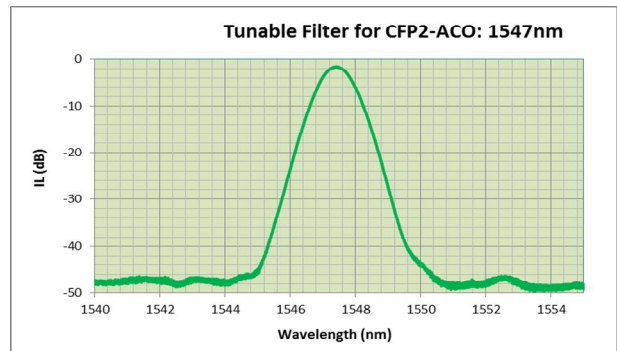
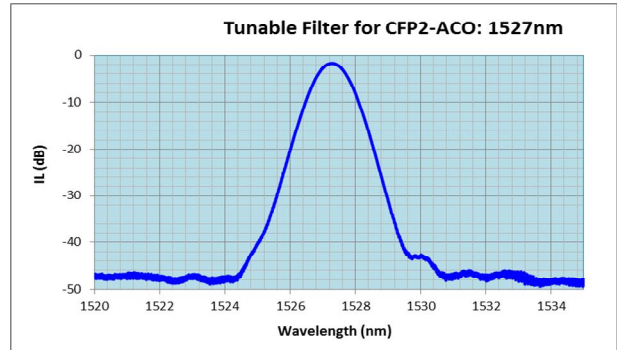
Electrical Pin Assignment (4+1 TO-46 header)

Pin#	Function
1	tune to shorter wavelength on voltage
2	attenuation (voltage on or voltage off)
3	Tune to longer wavelength on voltage
4	attenuation (voltage on or voltage off)



Performance of the Mini TF-VOA

	Parameter	Unit	
1	FWHM	GHz	125 ~ 175
2	20dB BW	GHz	325 ~ 455
3	Max IL	dB	< 3.5
4	Tuning Speed	ms	< 50
5	VOA Attenuation Range	dB	> 30
6	VOA Response Time	ms	< 50
7	TF Driving Voltage	V	< 30
8	VOA Driving Voltage	V	< 15



Environmental Specifications

Parameter	Unit	Specification
Operating Temperature	°C	-5 ~ 75
Storage Temperature	°C	-40 ~ 85
Operating Relative Humidity	%	5 ~ 85
Storage Relative Humidity	%	5 ~ 95 @ RT

