

Single Cavity Filters

Product Description:

Single Cavity (SC) Filters are a special type of solid etalon in which the cavity is formed by a deposited layer of coating material on a glass substrate. The cavity is sandwiched between two reflective coatings. In general, single cavity filters can be manufactured for any wavelength in the 350 to 2500 nm range with Full-Width Half Maximum (FWHM) from 0.5 to 10 nm.

Comparing to traditional air-spaced or solid etalons, the tuning range of SC filters are much bigger. The peak transmission can be tuned down up to 100nm by changing the incident angle because of a thinner cavity. However, the peak transmission of s and p polarizations would shift from each other when the angle of incidence is increased. Combined with a beam splitter and combiner, it can be used to select a certain wavelength and block other wavelengths at both sides

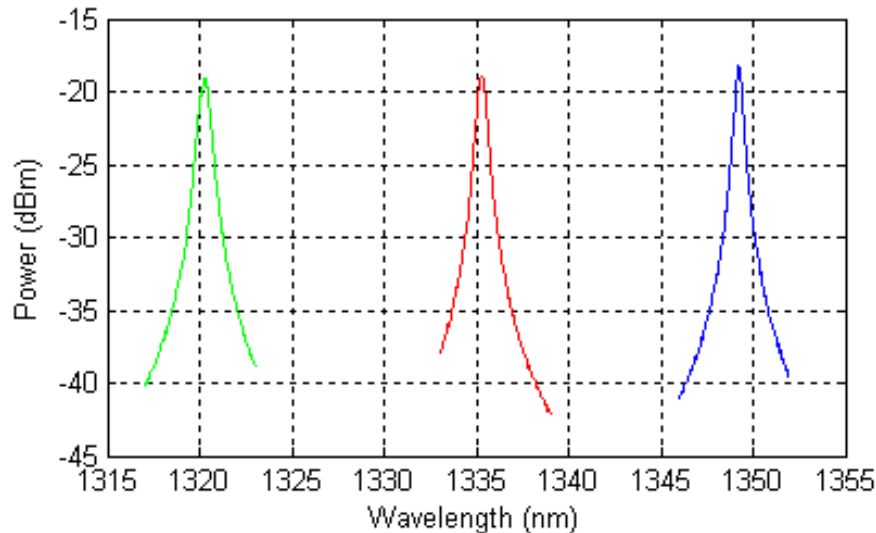


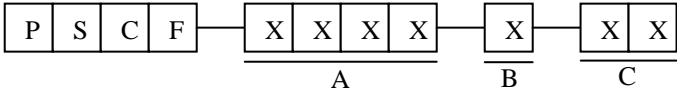
Figure 1: The p polarization peak transmission of a single cavity filter at three different incident angles

Specifications:

Dimensional Tolerance	$\pm 0.1\text{mm}$
3dB bandwidth	0.9nm (Typical)
Parallelism	<20 arc minutes
IL (AOI=0)	<0.8dB
Surface Quality	40~20
Wavefront Distortion	$\lambda / 4$ @ 632.8nm

AR Coating on Back Surface	R<0.3%
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Ordering Information:



A	Wavelength	1550=1550nm
		980=0980nm
		XXXX= Your Application Wavelength
B	Substrate Material	1=BK7
		0=Special
C	Dimensions	00=Custom Dimensions