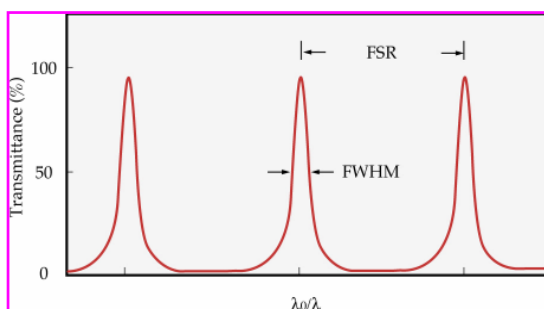


Air-Spaced UV Etalons

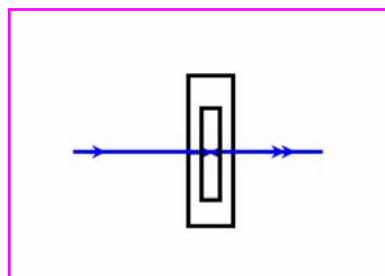


These Fabry-Perot air-spaced etalons are made from two polished plates of UV synthetic fused silica optically contacted using precision polished spacers. The air gap is precisely controlled so that reflections from opposite faces are in phase, and therefore reinforced, at the wavelength of interest.



They are used for the selection of laser line output and the elimination of unwanted nearby lines. Air-spaced etalons are designed for a particular free spectral range (FSR) which represents the distance between adjacent peak transmittance wavelengths λ_0/λ . FSR is normally specified as a frequency interval in GHz. The finesse (FSR/FWHM) of an etalon is controlled by the reflectance of the surfaces with higher reflectance providing a better finesse but accordingly reduced transmittance. Air-spaced etalons can be produced with an air gap ranging from 25 μm to 1 mm corresponding to FSR from 6000 GHz down to 150 GHz. Coatings are applied to the surfaces of the etalon to produce controlled reflectance from 30% to 97%,

thereby providing finesse values ranging from 2.5 to 100.



Excimer lasers benefit from the use of etalons. FSR is independent of wavelength but the reflective

coatings are wavelength dependent. Several different laser wavelengths in the UV can be accommodated including: 193, 248 and 308 nm.

Usual dimensions are 25.4 mm diameter with a clear aperture of 22mm but other sizes can be supplied on request. These air-spaced etalons are normally supplied mounted in a metal ring of 38.1mm outside diameter.

Typical Specifications	
Substrate Material:	UV Fused Silica
Surface flatness:	$\lambda/10$ @ 633 nm
Surface quality:	10/5
Parallelism:	< 1 arcsec
Diameter:	25.4 +0.0/-0.2 mm
Mount Diameter:	38.1 mm
Mount Thickness:	6.35 mm
Clear aperture:	> 22 mm
Damage Threshold:	> 5J/cm ² , 10 ns

To request a quote or to order, please specify:

Quantity — Aperture — Wavelength — FSR — Finesse

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For a quotation — please phone, fax or email us with details of your requirements.