

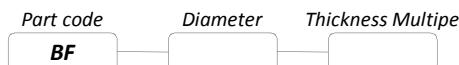
General Specifications

Material	: Optical grade crystal quartz
Surface quality	: 10-5 scratch-dig
Parallelism	: <0.5 arc seconds
Diameter tolerance	: +0.0, -0.25mm
Orientation tolerance	: +/- 5 min.
Transmitted waveform distortion	: $\lambda/10$ @ 632.8nm
Clear aperture	: Central 90%

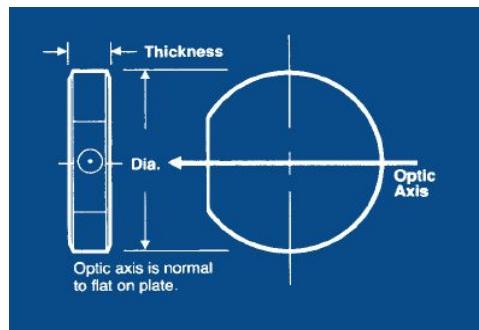
The birefringent filter plate is a linear retarder used intracavity to selectively tune a desired wavelength and create reflection losses at other wavelengths. In use, it is placed at Brewster's angle, and then rotated around its axis to achieve full wave retardation at the wavelength of interest. The selected wavelength will contain only a p polarization component, and thus experience no reflection loss. Other wavelengths will undergo a different retardation, and thus have some amount of s polarization, leading to reflection losses.

To order a birefringent filter plate, construct a part number using the codes for the desired part diameter and thickness multiple listed in the tables below. In addition to these standard parts, we can produce a wide variety of custom products.

Order/Product Nomenclature



Ordering example : BF-254-2T
: BF-500-20T

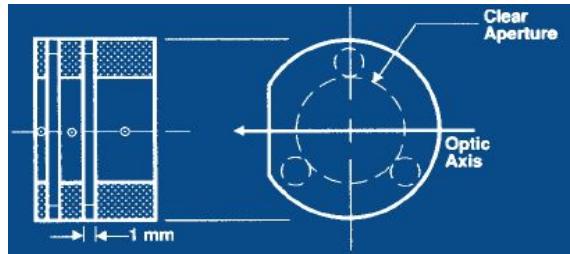


Diameter		Diameter
mm	inches	code
25.4	1.000	254
30.0	1.181	300
50.0	1.969	500

Plate Thickness Multiple ($T \approx 0.5\text{mm}$)		
1T	5T	12T
2T	6T	15T
3T	8T	20T
4T	10T	

Mounted Birefringent Filter Plate

Birefringent filter units are an air-spaced stack of two to four birefringent filter plates which produce an extremely narrowband, wavelength-tunable filter. This combination offers the free spectral range of the thinnest plate with the resolution of the thickest plate. The part numbers below are for the mount only. To order, specify both the mount and the individual birefringent filter plate part numbers as separate items.



Spacing between the plates will be approximately 1mm. The birefringent plates are optically contacted to their spacers and housed in an aluminum cell.

Unit Assembly	Cell Diameter	*Plate dia.	C.A.	2 plates	3 plates	4 plates
	31.75mm (1.250")	25.4mm	12.7mm (0.500")	BFU318-2	BFU318-3	BFU318-4
	38.1mm (1.500")	30.0mm	19.1mm (0.750")	BFU381-2	BFU381-3	BFU381-4

* Plate must be ordered separately