

Achromatic Waveplates

Product Description:

An achromatic waveplate, similar to a zero-order waveplate, is made from two birefringent materials such as quartz crystal and magnesium fluoride. By proper matching of the birefringent changes in one material with those of the second, retardation changes are minimized as the wavelength changes. Hence, the phase retardation variation is very small over several hundred wavelength range.

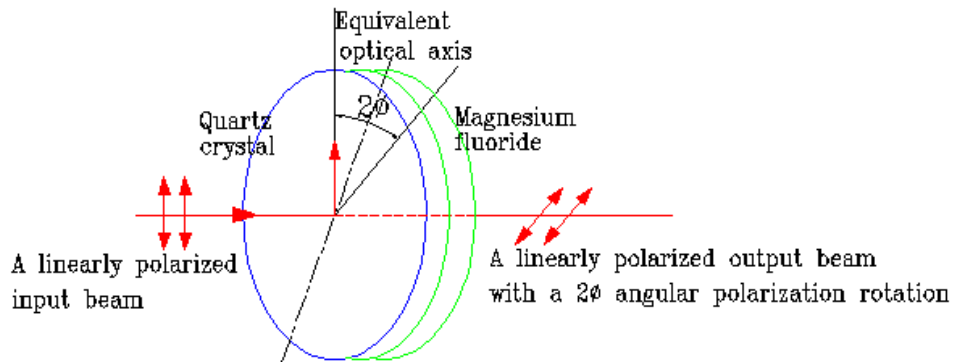


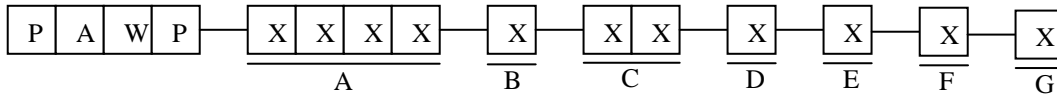
Figure 1: A $\lambda/2$ phase retardation cemented achromatic waveplate rotates the polarization of a linearly polarized beam by 2ϕ

You may check this link (http://www.pmoptics.com/quartz_crystal.html and http://www.pmoptics.com/magnesium_fluoride.html) for crystal quartz and magnesium fluoride properties.

Specifications:

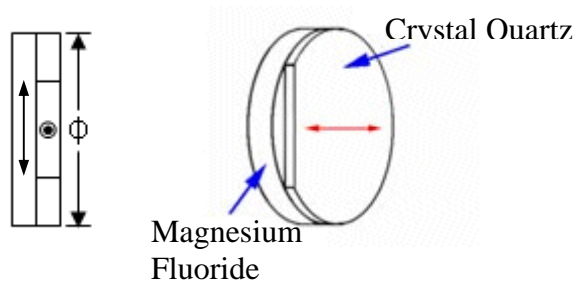
Material	Crystal Quartz and magnesium fluoride
Dimensional Tolerance	$\pm 0.1\text{mm}$
Retardation Tolerance	$< \lambda/100$
Parallelism	< 10 arc second
Flatness	$\lambda/4$ @ 632.8nm
Surface Quality	20~10
Wavefront Distortion	$\lambda/4$ @ 632.8nm
AR coating	Specified by customer

Ordering Information:



A	Standard Wavelength	0530=465~610nm (VIS)
		0850=700~1000nm (NIR)
		1425=1200~1650nm (NIR)
		0000=Special
B	Material	1=Crystal Quartz and Magnesium Fluoride
		0=Special
C	Dimensions	01=12.7mm
		Check Standard Size Table Below
		00=Custom Dimensions
D	Phase Retardation	1=$\lambda/8$
		2=$\lambda/4$
		3=$\lambda/2$
		4=λ
		0=no
E	Version	1=Air-spaced
		2=Cemented
F	AR Coating	1=Yes
		0=No
G	Mount	1=Yes
		0=No

Standard Size Table:



Dimensions P/N	ϕ (mm)
02	12.7