

QUARTZ RETARDATION WAVEPLATES

Quartz Retardation Plates are made of material enabling linear birefringence. These plates are made of high quality optical grade crystalline quartz, featuring high damage threshold. Retardation

plates rotate polarization's direction ($\lambda/2$) or convert linear into circular polarization or vice versa ($\lambda/4$). Quartz retardation plates are supplied mounted and AR coated.

ZERO ORDER OPTICALLY CONTACTED WAVEPLATES

Features

- Easily aligned
- Temperature insensitive
- Moderately insensitive to wavelength



Zero order plates are comprised of two different plates cut parallel to their optical axis. This construction makes plates less dependent on temperature. The plates are polished to different thicknesses enabling one to achieve required retardation difference. These component plates have orthogonal optic axis directions, so that the roles of the ordinary and extraordinary rays are interchanged in passing from one plate to another. The thickness of the plate determines the phase shift between the ordinary and extraordinary beams for any specific wavelength.

Specifications

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	$\lambda/10$ @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.5%
Laser damage threshold	> 10 mJ/cm ² , 50 fsec pulse, 800 nm typical

Ø12.7 mm waveplates. Clear aperture Ø11 mm, unmounted

Center wavelength, nm	AR coating range, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
		Catalogue number	Price, EUR	Catalogue number	Price, EUR
1030	1000-1060	460-4208D12	165	460-4408D12	165
800	760-840	460-4215D12	165	460-4415D12	165
780	740-820	460-4220D12	165	460-4420D12	165
515	500-530	460-4232D12	165	460-4432D12	165
400	380-420	460-4235D12	165	460-4435D12	165
343	333-353	460-4241D12	175	460-4441D12	175
266	257-275	460-4245D12	185	460-4445D12	185
257	250-265	460-4246D12	185	460-4446D12	185

Related Products

Achromatic Air-Spaced Waveplates

See page 1.67

Polarizer Holder 840-0180

Find more at EksmaOptics.com



High Precision Rotation Polarizer, Waveplate Mount 840-0186

Find more at EksmaOptics.com



Ø20 mm waveplates. Clear aperture Ø17 mm, mounted into Ø25.4 mm ring holder

Center wavelength, nm	AR coating range, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
		Catalogue number	Price, EUR	Catalogue number	Price, EUR
1030	1000-1060	460-4208	245	460-4408	245
800	760-840	460-4215	245	460-4415	245
780	740-820	460-4220	245	460-4420	245
515	500-530	460-4232	245	460-4432	245
400	380-420	460-4235	245	460-4435	245
343	333-353	460-4241	270	460-4441	270
266	257-275	460-4245	280	460-4445	280
257	250-265	460-4246	280	460-4446	280