

QUARTZ RETARDATION PLATES

- Made from high quality optical grade crystalline quartz
- Quarter wave and half wave retardation versions available
- Multiple-order, low-order or zero-order plates
- Suitable for high and low power laser applications

They rotate the direction of polarisation ($\lambda/2$) or convert linear into circular polarisation or vice versa ($\lambda/4$).

ZERO ORDER PLATES

- Easily aligned
- Temperature insensitive
- Moderately insensitive to wavelength

These are formed from two thin sections which are polished to different thicknesses to have a retardation difference exactly equal to the required. 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 the other. Retardation error versus wavelength is reduced, therefore they are suitable for fs lasers or laser diode applications.

Retardation plates are supplied mounted and have a multilayer dielectric anti-reflection coating on both sides maximising transmission.



SPECIFICATIONS

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Clear aperture	17 mm for 20 mm diameter (other dimensions on request)
Ring mount outer diameter	25.4 (or 25.0) +0.0 -0.12 mm
Nominal thickness of waveplate	1.5–2.5 mm
Wavefront distortion	$\lambda/10$ @ 633 nm
Parallelism	< 10 arcsec
AR Coating	R < 0.4%

Wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1550	460-4201	305	460-4401	305
950	460-4210	305	460-4410	305
852	460-4213	305	460-4413	305
800	460-4215	305	460-4415	305
780	460-4220	305	460-4420	305
633	460-4225	305	460-4425	305
488	460-4233	305	460-4433	305
400	460-4235	305	460-4435	305

Please contact us for other wavelength, size or precision requirements.

Nd:YAG LaserLine

- For Nd:YAG laser applications we offer Zero Order Plates
See page 3.14

HOUSING ACCESSORIES

- Adjustable Polariser Holder of Side Drive 840-0195
See page 5.78



LOW ORDER PLATES

- Thinner than multiple order
- Less than 8 order
- Less temperature and wavelength dependent than multiple order

Retardation plates are supplied mounted and have a multilayer dielectric anti-reflection coating on both sides maximising transmission.

Nd:YAG LaserLine

- For Nd:YAG laser applications we offer Low Order Plates
- See page 3.14

SPECIFICATIONS

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Clear aperture	17 mm for 20 mm diameter
Ring mount outer diameter	25.4 (or 25.0) +0.0 -0.12 mm
Nominal thickness of waveplate	0.15–0.35 mm
Wavefront distortion	$\lambda/10$ @ 633 nm
Parallelism	< 10 arcsec
AR Coating	R < 0.4%

Wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1550	461-4201	225	461-4401	225
950	461-4210	225	461-4410	225
852	461-4213	225	461-4413	225
800	461-4215	225	461-4415	225
780	461-4220	230	461-4420	225
633	461-4225	225	461-4425	225
488	461-4233	225	461-4433	225
400	461-4235	225	461-4435	225

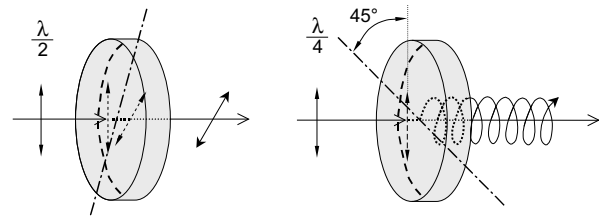
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MULTIPLE ORDER PLATES

- Made from a single crystalline plate
- Polished to 1–1.5 mm thickness

Their retardation is only slightly more temperature dependent compared with the zero order ones.

Retardation plates are supplied mounted and have a multilayer dielectric anti-reflection coating on both sides maximising transmission.



SPECIFICATIONS

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Clear aperture	17 mm for 20 mm diameter
Ring mount outer diameter	25.4 (or 25.0) +0.0 -0.12 mm
Nominal thickness of waveplate	1–1.5 mm
Wavefront distortion	$\lambda/10$ @ 633 nm
Parallelism	< 10 arcsec
AR Coating	R < 0.4%

Wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1550	462-4201	165	462-4401	165
950	462-4210	165	462-4410	165
852	462-4213	165	462-4413	165
800	462-4215	165	462-4415	165
780	462-4220	165	462-4420	165
633	462-4225	165	462-4425	165
488	462-4233	165	462-4433	165
400	462-4235	165	462-4435	165

Please contact us for other wavelength, size or precision requirements.

Nd:YAG LaserLine

- For Nd:YAG laser applications we offer Multiple Order Plates
- See page 3.14