

RETARDATION PLATES

Features

- 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 polarization ($\lambda/2$) or convert linear into circular polarization or vice versa ($\lambda/4$).

ZERO ORDER OPTICALLY CONTACTED WAVEPLATES

Features

- 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.



Specifications

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Nominal thickness of waveplate	1.5–2.5 mm
Wavefront distortion	$\lambda/10$ @ 633 nm
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Retardation tolerance	$< \lambda/300$ over wavelength range
Parallelism	< 10 arcsec
AR coating	R < 0.4%
Laser damage threshold	$> 0.5 \text{ J/cm}^2$, 10 nsec pulse, 1064 nm typical

Most of the Retardation Plates are available for fast off-the-shelf delivery. Check the availability at www.eksmaoptics.com



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

Wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1550	460-4201D12	165	460-4401D12	165
1064	460-4205D12	165	460-4405D12	165
1030	460-4208D12	165	460-4408D12	165
852	460-4213D12	165	460-4413D12	165
800	460-4215D12	165	460-4415D12	165
780	460-4220D12	165	460-4420D12	165
633	460-4225D12	165	460-4425D12	165
532	460-4230D12	165	460-4430D12	165
515	460-4232D12	165	460-4432D12	165
488	460-4233D12	165	460-4433D12	165
400	460-4235D12	165	460-4435D12	165
355	460-4240D12	175	460-4440D12	175
343	460-4241D12	175	460-4441D12	175
266	460-4245D12	185	460-4445D12	185
257	460-4246D12	185	460-4446D12	185

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

Housing accessories

Adjustable Polarizer Holder of Side Drive 840-0195

Find more at EksmaOptics.com



Polarizer Holders 840-0180

Find more at EksmaOptics.com



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

Wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1550	460-4201	245	460-4401	245
1064	460-4205	245	460-4405	245
1053	460-4206	245	460-4406	245
1030	460-4208	245	460-4408	245
950	460-4210	245	460-4410	245
852	460-4213	245	460-4413	245
800	460-4215	245	460-4415	245
780	460-4220	245	460-4420	245
770	460-4221	245	460-4421	245
633	460-4225	245	460-4425	245
589	460-4228	245	460-4428	245
532	460-4230	245	460-4430	245
527	460-4231	245	460-4431	245
515	460-4232	245	460-4432	245
488	460-4233	245	460-4433	245
400	460-4235	245	460-4435	245
355	460-4240	270	460-4440	270
343	460-4241	270	460-4441	270
266	460-4245	280	460-4445	280
257	460-4246	280	460-4446	280
244	460-4248	280	460-4448	280

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

ZERO ORDER AIR-SPACED WAVEPLATES

Features

- For high power laser application



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Housing accessories

Polarizer Holders 840-0180

Find more at EksmaOptics.com



Specifications

Material	Single crystal quartz
Optical axis	Normal to facet on circumference of retarder
Wavefront distortion	$\lambda/10$ @ 633 nm
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Retardation tolerance	$< \lambda/300$ over wavelength range
Parallelism	< 10 arcsec
AR coating	R $< 0.5\%$
Laser damage threshold	10 J/cm ² , 10 nsec pulse, 1064 nm

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

Center wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue nr.	Price, EUR	Catalogue nr.	Price, EUR
1550	464-4201	310	464-4404	310
1064	464-4205	310	464-4405	310
1030	464-4208	310	464-4408	310
800	464-4215	310	464-4415	310
780	464-4220	310	464-4420	310
532	464-4230	310	464-4430	310
515	464-4232	310	464-4432	310
400	464-4235	310	464-4435	310
355	464-4240	335	464-4440	335
343	464-4241	335	464-4441	335
266	464-4245	345	464-4445	345
257	464-4246	345	464-4446	345

Ø20 mm waveplates. Clear aperture Ø40 mm, mounted into Ø50.8 mm ring holder.

Center wavelength, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
	Catalogue nr.	Price, EUR	Catalogue nr.	Price, EUR
800	464-4215D50	950	464-4415D50	950