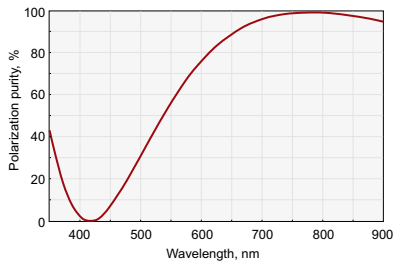
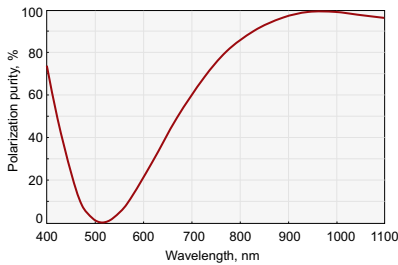


ZERO ORDER DUAL WAVELENGTH WAVEPLATES

When optical axis is turned by 45 degrees to input polarization, the waveplate rotates polarization of Ti:Sapphire laser fundamental (800 nm) by 90 degrees and the polarization of Ti:Sapphire second harmonic (400 nm) remains the same.



Polarization purity of zero order dual waveplate.
 $\lambda/2@800\text{ nm} + \lambda/400\text{ nm}$



Polarization purity of zero order dual waveplate.
 $\lambda/2@1030\text{ nm} + \lambda/515\text{ nm}$

Specifications

Material	Single crystal quartz	
Optical axis	normal to facet on circumference of retarder	
Clear aperture	Ø17 mm	
Ring mount outer diameter	25.4 +0.0 / -0.12 mm	
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)	
Retardation tolerance	< $\lambda/100$ over wavelength range	
Wavefront distortion	$\lambda/10$ @ 633 nm	
Parallelism	<10 arcsec	
AR coating	R<0.5%	
Laser damage threshold:		
Optically contacted (465-4211, 465-4212)	>10 mJ/cm ² , 50 fsec pulse, 800 nm typical	
Air-spaced (466-4211, 466-4212)	100 mJ/cm ² , 50 fsec pulse, 800 nm typical	

Description	AR coated	Catalogue number	Price, EUR
Optically contacted; $\lambda/2@800\text{ nm} + \lambda@400\text{ nm}$	800+400 nm	465-4211	345
Optically contacted; $\lambda/2@1030\text{ nm} + \lambda@515\text{ nm}$	1030+515 nm	465-4212	345
Air-spaced; $\lambda/2@800\text{ nm} + \lambda@400\text{ nm}$	800+400 nm	466-4211	410
Air-spaced; $\lambda/2@1030\text{ nm} + \lambda@515\text{ nm}$	1030+515 nm	466-4212	410

Housing accessories

Polarizer Holders 840-0180
Find more at EksmaOptics.com



LOW ORDER WAVEPLATES

Features

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

Specifications

Material	Single crystal quartz			
Optical axis	normal to facet on circumference of retarder			
Nominal thickness of waveplate	0.15–0.35 mm			
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)			
Retardation tolerance	< $\lambda/300$ over wavelength range			
Wavefront distortion	$\lambda/10$ @ 633 nm			
Parallelism	< 10 arcsec			
AR coating	R < 0.4%			
Laser damage threshold	10 J/cm ² , 10 nsec pulse, 1064 nm typical			

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	461-4201D12	105	461-4401D12	105
1064	461-4205D12	105	461-4405D12	105
1053	461-4206D12	105	461-4406D12	105
1030	461-4208D12	105	461-4408D12	105
800	461-4215D12	105	461-4415D12	105
780	461-4220D12	105	461-4420D12	105
633	461-4225D12	105	461-4425D12	105
532	461-4230D12	105	461-4430D12	105
515	461-4232D12	105	461-4432D12	105
355	461-4240D12	115	461-4440D12	115

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

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	461-4201	160	461-4401	160
1064	461-4205	160	461-4405	160
1053	461-4206	160	461-4406	160
1030	461-4208	160	461-4408	160
950	461-4210	160	461-4410	160
852	461-4213	160	461-4413	160
800	461-4215	160	461-4415	160
780	461-4220	160	461-4420	160
770	461-4221	160	461-4421	160
633	461-4225	160	461-4425	160
589	461-4228	160	461-4428	160
532	461-4230	160	461-4430	160
527	461-4231	160	461-4431	160
515	461-4232	160	461-4432	160
488	461-4233	160	461-4433	160
400	461-4235	160	461-4435	160
355	461-4240	192	461-4440	192
343	461-4241	192	461-4441	192

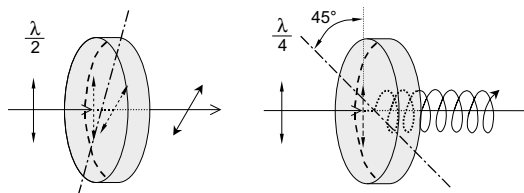
Please contact us for other wavelength, size or precision requirements.

MULTIPLE ORDER WAVEPLATES

Features

- 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.



Specifications

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Nominal thickness of waveplate	1–1.5 mm
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Retardation tolerance	$< \lambda/300$ over wavelength range
Wavefront distortion	$\lambda/10$ @ 633 nm
Parallelism	< 10 arcsec
AR coating	$R < 0.4\%$
Laser damage threshold	10 J/cm ² , 10 nsec pulse, 1064 nm typical

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	462-4201D12	90	462-4401D12	90
1064	462-4205D12	90	462-4405D12	90
1053	462-4206D12	90	462-4406D12	90
1030	462-4208D12	90	462-4408D12	90
800	462-4215D12	90	462-4415D12	90
780	462-4220D12	90	462-4420D12	90
633	462-4225D12	90	462-4425D12	90
532	462-4230D12	90	462-4430D12	90
515	462-4232D12	90	462-4432D12	90
355	462-4240D12	95	462-4440D12	95

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

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	462-4201	138	462-4401	138
1064	462-4205	138	462-4405	138
1053	462-4206	138	462-4406	138
1030	462-4208	138	462-4408	138
950	462-4210	138	462-4410	138
852	462-4213	138	462-4413	138
800	462-4215	138	462-4415	138
780	462-4220	138	462-4420	138
770	462-4221	138	462-4421	138
633	462-4225	138	462-4425	138
589	462-4228	138	462-4428	138
532	462-4230	138	462-4430	138
527	462-4231	138	462-4431	138
515	462-4232	138	462-4432	138
448	462-4233	138	462-4433	138
400	462-4235	138	462-4435	138
355	462-4240	143	462-4440	143
343	462-4241	143	462-4441	143
266	462-4245	153	462-4445	153
257	462-4246	153	462-4446	153

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

Housing accessories

High Precision
Rotation Polarizer,
Waveplate Mount
840-0186

Find more at
EksmaOptics.com



Polarizer Holders 840-0180

Find more at
EksmaOptics.com



MULTIPLE ORDER DUAL WAVELENGTH WAVEPLATES

Features

- Operate at both first and second Nd:YAG laser harmonics
- Retardation tolerance $< \lambda/300$

Specifications

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Wavefront distortion	$\lambda/10$ @ 633 nm
Clear aperture	Ø17 mm
Ring mount outer diameter	25.4 +0.0 / -0.12 mm
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Retardation tolerance	$< \lambda/200$ over wavelength range
Parallelism	< 10 arcsec
AR coating	R $< 0.5\%$
Nominal thickness of waveplate	0.2-1.2 mm
Laser damage threshold	5 J/cm ² , 10 nsec pulse, 1064 nm typical

Housing accessories

High Precision
Rotation Polarizer,
Waveplate Mount
840-0186

Find more at
EksmaOptics.com



Polarizer Holders
840-0180

Find more at
EksmaOptics.com



Retardation and Wavelength	Catalogue number	Price, EUR
λ @ 1064nm + $\lambda/2$ @ 532 nm	463-4120	215
λ @ 1064nm + $\lambda/4$ @ 532 nm	463-4140	215
$\lambda/2$ @ 1064nm + λ @ 532 nm	463-4210	215
$\lambda/2$ @ 1064nm + $\lambda/2$ @ 532 nm	463-4220	215
$\lambda/2$ @ 1064nm + $\lambda/4$ @ 532 nm	463-4240	215
$\lambda/4$ @ 1064nm + λ @ 532 nm	463-4410	215
$\lambda/4$ @ 1064nm + $\lambda/2$ @ 532 nm	463-4420	215
$\lambda/4$ @ 1064nm + $\lambda/4$ @ 532 nm	463-4440	215
λ @ 800nm + $\lambda/2$ @ 400nm	463-4121	215
λ @ 800nm + $\lambda/4$ @ 400nm	463-4141	215
$\lambda/2$ @ 800nm + λ @ 400nm	463-4211	215
$\lambda/2$ @ 800nm + $\lambda/2$ @ 400nm	463-4221	215
$\lambda/2$ @ 800nm + $\lambda/4$ @ 400nm	463-4241	215
$\lambda/4$ @ 800nm + λ @ 400nm	463-4411	215
$\lambda/4$ @ 800nm + $\lambda/2$ @ 400nm	463-4421	215
$\lambda/4$ @ 800nm + $\lambda/4$ @ 400nm	463-4441	215