Eksma Optics

Nd:YAG Laser Line Components

Laser mirrors

Polarizing optics

Optical assemblies

Nonlinear & laser crystals

Eksma Optics

EKSMA Optics is a manufacturer of precision laser components, used in high power lasers, laser systems and various other photonic devices and optical instruments. Rooted in laser community and with more than 40 years of experience in lasers and photonic components EKSMA Optics is your partner for enabling photonics innovations, offering fast delivery components tailored to customer applications.

This optical components catalog contains products dedicated to lasers and laser systems manufacturers, integrators, innovators, and scientists. The standard catalog components are available for fast off-the-shelf delivery. We also develop and customize our optical components tailoring the parameters of the particular laser and its applications.

All components provided by EKSMA Optics are subject to performance and quality testing and certification in Quality Control laboratory. Through stringent inspection procedures, quality control assessments and commitment to new advanced technologies, we are continuously improving and delivering exceptional quality. EKSMA Optics is an ISO 9001:2015 & ISO 14001:2015 certified company.

Your Partner in Photonics Innovations!

2022

Establishment of a department for **optical systems assembling.**

2021

Opening and moving to **new** 7300 square meters EKSMA Optics **building** in Vilnius.

2015

Establishment of a CNC-based **spherical and aspherical** lens production.
Commenced production of **pulse picking systems.**

2014

Establishment of a department **dielectric coatings deposition** on **laser optics** and **crystals**.

2010

Commenced production of **Pockels cells** and **Femtokits**.

2007

Investment into and expansion of flat **optics production** and **nonlinear crystals polishing**.

2006

Establishment of EKSMA's daughter company, **EKSMA Optics,** for laser optics business activities.

1992

State-owned company privatization and **EKSMA UAB** joint-stock company establishment.

1987

First-time participation at Munich Laser Fair. **EKSMA shows picosecond Nd:YAG laser.**

1983

Establishment of experimental optics and opto-mechanics company **EKSMA,** a spin-off from the Physics Institute.

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Nd:YAG Laserline Components

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Eksma Optics

Nd:YAG Laser Optics

LASER MIRRORS

Our Nd:YAG laser mirrors are suitable for fundamental Nd:YAG laser 1064 nm, frequency-doubled 532 nm, frequency-tripled 355 nm and frequency quadrupled 266 nm wavelength application. Two kinds of substrate material are available. Laser line mirrors are designed for 45° angle of incidence. Featuring high polishing quality, low scattering and high damage threshold, our dielectric reflectors enables perfect beam steering for Nd:YAG lasers.

Substrate

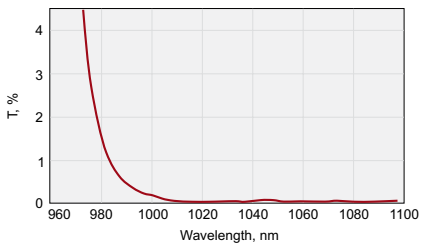
Material	UV grade Fused Silica or BK7 glass
S1 surface flatness	λ/10 at 633 nm
S1 surface quality	20–10 scratch & dig (MIL-PRF-13830B)
S2 surface quality	Commercial polish
Diameter tolerance	+0.00 mm -0.12 mm
Thickness tolerance	±0.25 mm
Wedge	< 3 min
Chamfer	0.3 mm at 45° typical

Coating

Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Damage threshold:	
BK7 laser line mirrors	5 J/cm², 8 nsec pulse, 1064 nm typical
UV FS laser line mirrors	8 J/cm², 8 nsec pulse, 1064 nm typical
BK7 dual line mirrors	1 J/cm², 8 nsec pulse, 1064 nm typical
UV FS dual line mirrors	2 J/cm², 8 nsec pulse, 1064 nm typical
Coated surface flatness	λ/10 at 633 nm over clear aperture
Angle of incidence	0 or 45°

LASER LINE MIRRORS

Substrate material: **BK7 grade A**

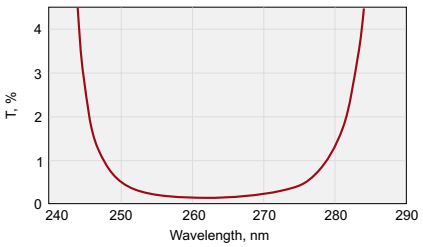


HR 1064 nm, AOI = 45°

Wavelength, nm	AOI=0°			AOI=45°		
	R, % (s+p)/2	Catalogue number	Price, EUR	R, % (s+p)/2	Catalogue number	Price, EUR
Size – Ø12.7 × 3 mm						
351–361	99.7	**031-0350-i0**	65	99.5	**031-0350**	65
527–532	99.7	**031-0530-i0**	62	99.5	**031-0530**	62
1047–1064	99.7	**031-1060-i0**	63	99.5	**031-1060**	63
Size – Ø12.7 × 6 mm						
351–361	99.7	**031-0350T6-i0**	65	99.5	**031-0350T6**	65
527–532	99.7	**031-0530T6-i0**	62	99.5	**031-0530T6**	62
1047–1064	99.7	**031-1060T6-i0**	63	99.5	**031-1060T6**	63
Size – Ø25.4 × 6 mm						
351–361	99.7	**032-0350-i0**	99	99.5	**032-0350**	99
527–532	99.7	**032-0530-i0**	81	99.5	**032-0530**	81
1047–1064	99.7	**032-1060-i0**	83	99.5	**032-1060**	83
Size – Ø50.8 × 8 mm						
351–361	99.7	**035-0350-i0**	141	99.5	**035-0350**	141
527–532	99.7	**035-0530-i0**	121	99.5	**035-0530**	121
1047–1064	99.7	**035-1060-i0**	121	99.5	**035-1060**	121
Size – Ø76.2 × 12.7 mm						
527–532	99.7	**037-0530-i0**	204	99.5	**037-0530**	204
1047–1064	99.7	**037-1060-i0**	204	99.5	**037-1060**	204

LASER LINE MIRRORS

Substrate material: **UV grade Fused Silica**

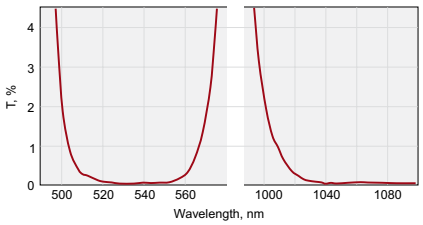


HR 266 nm, AOI = 45°

Wavelength, nm	AOI=0°			AOI=45°		
	R, % (s+p)/2	Catalogue number	Price, EUR	R, % (s+p)/2	Catalogue number	Price, EUR
Size – Ø12.7 × 3 mm						
262–266	99	**041-0260-i0**	78	99	**041-0260**	78
351–361	99.7	**041-0350-i0**	74	99.5	**041-0350**	74
527–532	99.7	**041-0530-i0**	68	99.5	**041-0530**	68
1047–1064	99.7	**041-1060-i0**	68	99.5	**041-1060**	68
Size – Ø12.7 × 6 mm						
262–266	99	**041-0260T6-i0**	78	99	**041-0260T6**	78
351–361	99.7	**041-0350T6-i0**	74	99.5	**041-0350T6**	74
527–532	99.7	**041-0530T6-i0**	68	99.5	**041-0530T6**	68
1047–1064	99.7	**041-1060T6-i0**	68	99.5	**041-1060T6**	68
Size – Ø25.4 × 6 mm						
262–266	99	**042-0260-i0**	109	99	**042-0260**	109
351–361	99.7	**042-0350-i0**	105	99.5	**042-0350**	105
527–532	99.7	**042-0530-i0**	99	99.5	**042-0530**	99
1047–1064	99.7	**042-1060-i0**	99	99.5	**042-1060**	99
Size – Ø50.8 × 8 mm						
262–266	99	**045-0260-i0**	228	99	**045-0260**	228
351–361	99.7	**045-0350-i0**	206	99.5	**045-0350**	206
527–532	99.7	**045-0530-i0**	186	99.5	**045-0530**	186
1047–1064	99.7	**045-1060-i0**	186	99.5	**045-1060**	186
Size – Ø76.2 × 12.7 mm						
351–361	99.7	**047-0350-i0**	380	99.5	**047-0350**	380
527–532	99.7	**047-0530-i0**	380	99.5	**047-0530**	380
1047–1064	99.7	**047-1060-i0**	380	99.5	**047-1060**	380

DUAL BAND MIRRORS

Substrate material: **BK7 grade A**



HR 532+1064 nm, AOI = 45°

Wavelength, nm	AOI=0°			AOI=45°		
	R, % (s+p)/2	Catalogue number	Price, EUR	R, % (s+p)/2	Catalogue number	Price, EUR
Size – Ø12.7 × 3 mm						
532+1064	99.7	**051-5306-i0**	94	99.5	**051-5306**	94
633+1064	99.7	**051-6306-i0**	94	99.5	**051-6306**	94
Size – Ø12.7 × 6 mm						
532+1064	99.7	**051-5306T6-i0**	94	99.5	**051-5306T6**	94
633+1064	99.7	**051-6306T6-i0**	94	99.5	**051-6306T6**	94
Size – Ø25.4 × 6 mm						
532+1064	99.7	**052-5306-i0**	113	99.5	**052-5306**	113
633+1064	99.7	**052-6306-i0**	113	99.5	**052-6306**	113
Size – Ø50.8 × 8 mm						
532+1064	99.7	**055-5306-i0**	166	99.5	**055-5306**	166
633+1064	99.7	**055-6306-i0**	166	99.5	**055-6306**	166
Size – Ø76.2 × 12.7 mm						
532+1064	99.7	**057-5306-i0**	250	99.5	**057-5306**	250
633+1064	99.7	**057-6306-i0**	250	99.5	**057-6306**	250

Related Products

Kinematic Mirror/Beamsplitter Mounts 840-0056

Find more at EksmaOptics.com

DUAL BAND MIRRORS

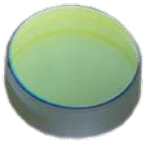
Substrate material: **UV grade Fused Silica**

Wavelength, nm	AOI=0°			AOI=45°		
	R, % (s+p)/2	Catalogue number	Price, EUR	R, % (s+p)/2	Catalogue number	Price, EUR
Size – Ø12.7 × 3 mm						
532+1064	99.7	**061-5306-i0**	120	99.5	**061-5306**	120
633+1064	99.7	**061-6306-i0**	120	99.5	**061-6306**	120
355+532	99.7	**061-3553-i0**	127	99.5	**061-3553**	127
Size – Ø12.7 × 6 mm						
532+1064	99.7	**061-5306T6-i0**	120	99.5	**061-5306T6**	120
633+1064	99.7	**061-6306T6-i0**	120	99.5	**061-6306T6**	120
355+532	99.7	**061-3553T6-i0**	127	99.5	**061-3553T6**	127
Size – Ø25.4 × 6 mm						
532+1064	99.7	**062-5306-i0**	147	99.5	**062-5306**	147
633+1064	99.7	**062-6306-i0**	147	99.5	**062-6306**	147
355+532	99.7	**062-3553-i0**	153	99.5	**062-3553**	153
Size – Ø50.8 × 8 mm						
532+1064	99.7	**065-5306-i0**	230	99.5	**065-5306**	230
633+1064	99.7	**065-6306-i0**	230	99.5	**065-6306**	230
355+532	99.7	**065-3553-i0**	237	99.5	**065-3553**	237
Size – Ø76.2 × 12.7 mm						
532+1064	99.7	**067-5306-i0**	395	99.5	**067-5306**	395
633+1064	99.7	**067-6306-i0**	395	99.5	**067-6306**	395
355+532	99.7	**067-3553-i0**	395	99.5	**067-3553**	395

Related Products

Laser Line and Dual Laser Line Mirrors of other wavelengths

Find more at EksmaOptics.com



Metal Coated Mirrors

Find more at EksmaOptics.com

HIGH POWER IBS COATED LASER MIRRORS

Substrate

Material	UV grade fused silica
S1 surface flatness	λ/10 at 633 nm
S1 surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
S2 surface quality	Commercial polish
Diameter tolerance	+0.00 mm / -0.12 mm
Thickness tolerance	±0.25 mm
Wedge	< 3 min
Chamfer	0.3 mm at 45° typical

Coating

Technology	Ion Beam Sputtering (IBS)
Adhesion and durability	Per MIL-C-675A, Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Coated surface flatness	λ/8 at 633 nm over 80% of diameter

Design wavelength – 266 nm. LIDT > 6 J/cm², 10 ns pulse, 100 Hz, 266 nm typical

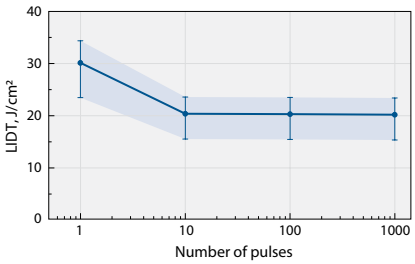
Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
266	45	99.5	**041-0260HHR**	160	**042-0260HHR**	209	**045-0260HHR**	645
266	0	99.5	**041-0260HHR-i0**	160	**042-0260HHR-i0**	209	**045-0260HHR-i0**	645

Design wavelength – 355 nm. LIDT > 10 J/cm², 10 ns pulse, 100 Hz, 355 nm typical

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
355	45	99.8	**041-0350T6UHHR**	149	**042-0350UHHR**	198	**045-0350UHHR**	460
355	0	99.8	**041-0350T6UHHR-i0**	149	**042-0350UHHR-i0**	198	**045-0350UHHR-i0**	460

Design wavelength – 532 nm. LIDT >10 J/cm², 10 ns pulse, 100 Hz, 532 nm typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
532	45	99.9	**041-0530T6HHR**	83	**042-0530HHR**	116	**045-0530T12HHR**	410
532	0	99.95	**041-0530T6HHR-i0**	83	**042-0530HHR-i0**	116	**045-0530T12HHR-i0**	410
532	0-45	99.9	**041-0530T6HHR-i0-45**	99	**042-0530HHR-i0-45**	132	**045-0530T12HHR-i0-45**	470



LIDT of High Power Laser Mirrors @ 532 nm

Test conditions:

Wavelength	532 nm
Pulse duration	(5.4 ± 0.3) ns
Repetition rate	100 Hz
AOI	45°
Polarization	linear P
Beam diameter (1/e²)	(206.0 ± 6.7) µm

Design wavelength – 532 nm. LIDT >20 J/cm², 10 ns pulse, 100 Hz, 532 nm typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
532	45	99.9	041-0530T6UHHR	121	042-0530UHHR	171	045-0530T12UHHR	530
532	0	99.95	041-0530T6UHHR-i0	121	042-0530UHHR-i0	171	045-0530T12UHHR-i0	530

Design wavelength – 800 nm. LIDT >30 J/cm², 10 ns pulse, 100 Hz, 800 nm typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
800	45	99.9	041-0800NT6UHHR	127	042-0800NUHHR	182	045-0800NT12UHHR	550
800	0	99.95	041-0800NT6UHHR-i0	127	042-0800NUHHR-i0	182	045-0800NT12UHHR-i0	550

Design wavelength – 1064 nm. LIDT >20 J/cm², 10 ns pulse, 100 Hz, 1064 nm typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	45	99.9	**041-1060T6HHR**	83	**042-1060HHR**	105	**045-1060T12HHR**	410
1064	0	99.95	**041-1060T6HHR-i0**	83	**042-1060HHR-i0**	105	**045-1060T12HHR-i0**	410
1064	0-45	99.9	**041-1060T6HHR-i0-45**	99	**042-1060HHR-i0-45**	120	**045-1060T12HHR-i0-45**	470

Design wavelength – 1064 nm. LIDT >40 J/cm², 10 ns pulse, 100 Hz, 1064 nm typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	45	99.9	041-1060NT6UHHR	127	042-1060NUHHR	182	045-1060NT12UHHR	550
1064	0	99.95	041-1060NT6UHHR-i0	127	042-1060NUHHR-i0	182	045-1060NT12UHHR-i0	550

Design wavelength – 532+1064 nm. LIDT >15 J/cm² at 1064 nm and LIDT >5 J/cm² at 532 nm, 10 ns pulse, 10 Hz typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
532+1064	45	99.5	061-5306HHR	149	062-5306HHR	198	065-5306HHR	750
532+1064	0	99.5	061-5306HHR-i0	149	062-5306HHR-i0	198	065-5306HHR-i0	750

Design wavelength – 532+1064 nm. LIDT >30 J/cm² at 1064 nm and LIDT >10 J/cm² at 532 nm, 10 ns pulse, 10 Hz typical.

Wavelength, nm	AOI, deg	R, % (s+p)/2	Ø 12.7 × 6 mm		Ø 25.4 × 6 mm		Ø 50.8 × 12 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR
532+1064	45	99.5	061-5306UHHR	191	062-5306UHHR	270	065-5306UHHR	790
532+1064	0	99.5	061-5306UHHR-i0	191	062-5306UHHR-i0	270	065-5306UHHR-i0	790

LASER HARMONIC SEPARATORS

Features

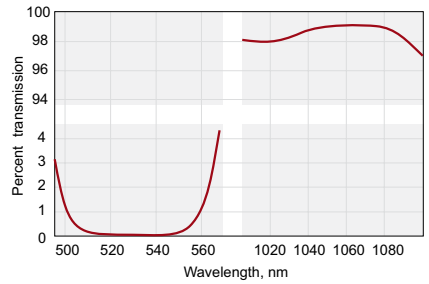
- Offered on Ø 0.5 or 1 inch substrates of BK7 or UV FS with surface flatness λ/10

Harmonic separators are dichroic beamsplitters that reflect one wavelength and transmit the others. Reflectance is higher than 99.5% for the wavelength of interest and transmittance is at least 90% for the rejected wavelengths. The rear surface of harmonic separators is antireflection coated.

Substrate

Material	UV grade Fused Silica or BK7 glass
S1 surface flatness	λ/10 typical at 633 nm
S1 surface quality	20–10 scratch & dig (MIL-PRF-13830B)
S2 surface flatness	λ/10 typical at 633 nm
S2 surface quality	20–10 scratch & dig (MIL-PRF-13830B)
Diameter tolerance	+0.00 mm -0.12 mm
Thickness tolerance	±0.25 mm
Parallelism	< 30 arcsec
Chamfer	0.3 mm at 45° typical

LASER HARMONIC SEPARATORS WITH HIGH TRANSMISSION



041-5105HT. HR > 99.9% @ 532 nm, HT > 99% @ 1064 nm, AOI = 45°

Coating

Technology	Ion Beam Sputtering (IBS)
Clear Aperture	Exceeds central 85% of diameter
Coated Surface Flatness	λ/8 over 80% of diameter
Transmitted Wavefront Distortion (TWD)	λ/10 over clear aperture
Damage Threshold	>10 J/cm², 8 nsec pulse, 1064 nm typical
Back side anti-reflection coated	AOI 45°, R<0.5% AOI 0°, R<0.1%

Reflected wavelength, nm	Reflection	Transmission	AOI, deg	Ø12.7×3 mm		Ø25.4×6 mm	
				Catalogue number	Price, EUR	Catalogue number	Price, EUR
266	R_{sp}>99.0%	T_{sp}>98% @ 532 + 1064 nm	0	**041-2510HT**	215	**042-2510HT**	270
266	R_{sp}>99.0%	T_{sp}>98% @ 532 + 1064 nm	45	**041-2515HT**	215	**042-2515HT**	270
355	R_{sp}>99.5%	T_{sp}>98% @ 532 nm + T_{sp}>99% @ 1064 nm	0	**041-3510HT**	205	**042-3510HT**	260
355	R_{sp}>99.5%	T_{sp}>98% @ 532 nm + T_{sp}>99% @ 1064 nm	45	**041-3515HT**	205	**042-3515HT**	260
532	R_{sp}>99.9%	T_{sp}>99% @ 1064 nm	0	**041-5100HT**	176	**042-5100HT**	226
532	R_{sp}>99.9%	T_{sp}>99% @ 1064 nm	45	**041-5105HT**	176	**042-5105HT**	226
1064	R_{sp}>99.5%	T_{sp}>98% @ 532 nm	0	**041-6500HT**	182	**042-6500HT**	231
1064	R_{sp}>99.5%	T_{sp}>98% @ 532 nm	45	**041-6505HT**	182	**042-6505HT**	231

STANDARD LASER HARMONIC SEPARATORS

Coating

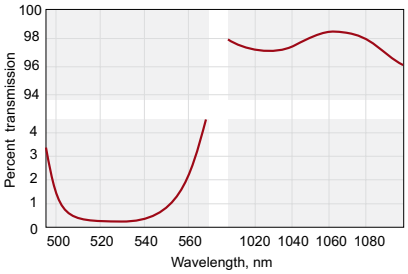
Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Damage threshold	
BK7	>2 J/cm², 8 nsec pulse, 1064 nm typical
UV FS	>5 J/cm², 8 nsec pulse, 1064 nm typical
Clear aperture	Exceeds central 85% of diameter
Coated surface flatness	λ/10 at 633 nm over 80% of diameter
Back side antireflection coated	AOI 45°, R<0.5%; AOI 0°, R<0.2%

Reflected wavelength, nm, R > 99.5%	Transmitted wavelength, nm	Transmission, %	AOI, deg	Substrate material	Ø12.7×3 mm		Ø25.4×6 mm	
					Catalogue number	Price, EUR	Catalogue number	Price, EUR
266	355+532+1064	>90	0	UVFS	**041-2310**	178	**042-2310**	213
266	355+532+1064	>90	45	UVFS	**041-2315**	178	**042-2315**	213
266	532	>95	0	UVFS	**041-2500**	155	**042-2500**	190
266	532	>95	45	UVFS	**041-2505**	155	**042-2505**	190
355	1064	>95	0	UVFS	**041-3100**	132	**042-3100**	167
355	1064	>95	45	UVFS	**041-3105**	132	**042-3105**	167
355	532	>95	0	UVFS	**041-3500**	132	**042-3500**	167
355	532	>95	45	UVFS	**041-3505**	132	**042-3505**	167
355	532+1064	>95	0	UVFS	**041-3510**	144	**042-3510**	178
355	532+1064	>95	45	UVFS	**041-3515**	144	**042-3515**	178
532	1064	>95	0	BK7	**031-5100**	104	**032-5100**	132
532	1064	>95	45	BK7	**031-5105**	104	**032-5105**	132
532	1064	>95	0	UVFS	**041-5100**	132	**042-5100**	167
532	1064	>95	45	UVFS	**041-5105**	132	**042-5105**	167
532+1064	355	>85	0	UVFS	**041-5140**	236	**042-5140**	265
532+1064	355	>85	45	UVFS	**041-5145**	236	**042-5145**	265
1064	532	>93	0	BK7	**031-6500**	109	**032-6500**	138
1064	532	>93	45	BK7	**031-6505**	109	**032-6505**	138
1064	532	>93	0	UVFS	**041-6500**	138	**042-6500**	173
1064	532	>93	45	UVFS	**041-6505**	138	**042-6505**	173

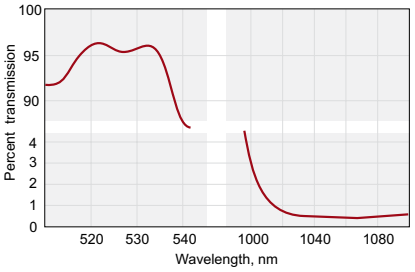
Housing accessories

Adapter for Beamsplitter at 45° 840-0116
Find more at EksmaOptics.com

Kinematic Mirror and Beamsplitter Mount 840-0032, 840-0033
Find more at EksmaOptics.com



031-5105. HR > 99.5% @ 532 nm, HT > 95% @ 1064 nm, AOI = 45°



031-6500. HR > 99.5% @ 1064 nm, HT > 93% @ 532 nm, AOI = 0°

LASER OUTPUT COUPLERS

An output coupler is a partially reflecting dielectric mirror used in a laser cavity. It transmits a part of the circulating intracavity power for generating a useful output from the laser.

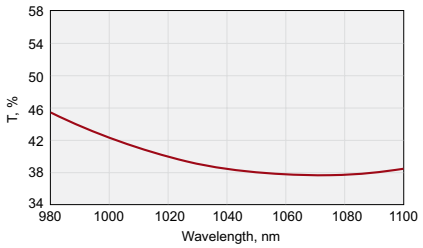
A low transmission output coupler leads to a low laser threshold, but also possibly to poor laser efficiency if the losses due to output coupling do not dominate over other parasitic losses in the laser cavity. The output coupler transmission is often chosen to maximize the achieved output power, although its optimum value may be lower or higher if there are other design purposes (minimizing the intracavity intensities or suppressing Q-switching instabilities in a passively mode-locked laser).

Substrate

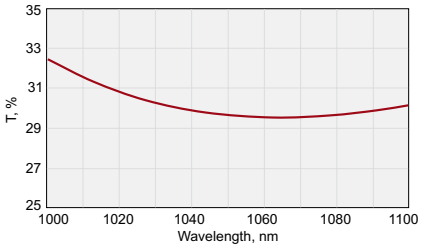
Material	UV grade Fused Silica or BK7 glass
S1 surface flatness	λ/10 typical at 633 nm
S1 surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
S2 surface flatness	λ/10 typical at 633 nm
S2 surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
Diameter tolerance	+0.00 mm; -0.12 mm
Thickness tolerance	±0.25 mm
Parallelism	30 arcsec
Chamfer	0.3 mm at 45° typical

Coating

Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Damage threshold:	
BK7	>3 J/cm², 8 nsec pulse, 1064 nm typical
UV FS	>6 J/cm², 8 nsec pulse, 1064 nm typical
Coated surface flatness	λ/10 at 633 nm over clear aperture
Angle of incidence	0 – 8° (normal)
Back side antireflection coated	R < 0.2%



R = 60±2% @ 1064 nm, AOI=0°



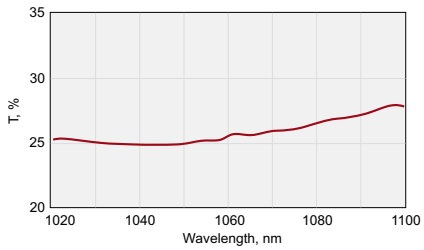
R = 70±2% @ 1064 nm, AOI=0°

Size – Ø12.7 × 3 mm

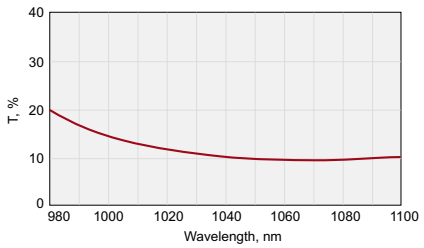
Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	15±3	85±3	BK7	**031-0015**	86
1064	20±3	80±3	BK7	**031-0020**	86
1064	25±3	75±3	BK7	**031-0025**	86
1064	30±3	70±3	BK7	**031-0030**	86
1064	40±3	60±3	BK7	**031-0040**	86
1064	50±3	50±3	BK7	**031-0050**	86
1064	60±3	40±3	BK7	**031-0060**	86
1064	65±3	35±3	BK7	**031-0065**	86
1064	70±3	30±3	BK7	**031-0070**	86
1064	75±3	25±3	BK7	**031-0075**	86
1064	80±3	20±3	BK7	**031-0080**	86
1064	85±3	15±3	BK7	**031-0085**	86
1064	90±2	10±2	BK7	**031-0090**	94
1064	95±2	5±2	BK7	**031-0095**	98
1064	97±1	3±1	BK7	**031-0097**	102
1064	98±1	2±1	BK7	**031-0098**	102
1064	99.0±0.5	1.0±0.5	BK7	**031-0099**	110

Size – Ø12.7 × 3 mm

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	20±3	80±3	UV FS	**041-0020**	109
1064	30±3	70±3	UV FS	**041-0030**	109
1064	40±3	60±3	UV FS	**041-0040**	109
1064	50±3	50±3	UV FS	**041-0050**	109
1064	60±3	40±3	UV FS	**041-0060**	109
1064	65±3	35±3	UV FS	**041-0065**	109
1064	70±3	30±3	UV FS	**041-0070**	109
1064	75±3	25±3	UV FS	**041-0075**	109
1064	80±3	20±3	UV FS	**041-0080**	109
1064	85±3	15±3	UV FS	**041-0085**	109
1064	90±2	10±2	UV FS	**041-0090**	117
1064	95±2	5±2	UV FS	**041-0095**	117
1064	97±1	3±1	UV FS	**041-0097**	125
1064	98±1	2±1	UV FS	**041-0098**	125
1064	99.0±0.5	1.0±0.5	UV FS	**041-0099**	133



R = 75±3% @ 1064 nm, AOI=0°



R = 90±2% @ 1064 nm, AOI=0°

Size – Ø25.4 × 6 mm

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	15±3	85±3	BK7	**032-0015**	109
1064	20±3	80±3	BK7	**032-0020**	109
1064	25±3	75±3	BK7	**032-0025**	109
1064	30±3	70±3	BK7	**032-0030**	109
1064	40±3	60±3	BK7	**032-0040**	109
1064	50±3	50±3	BK7	**032-0050**	109
1064	60±3	40±3	BK7	**032-0060**	109
1064	65±3	35±3	BK7	**032-0065**	109
1064	70±3	30±3	BK7	**032-0070**	109
1064	75±3	25±3	BK7	**032-0075**	109
1064	80±3	20±3	BK7	**032-0080**	109
1064	85±3	15±3	BK7	**032-0085**	109
1064	90±2	10±2	BK7	**032-0090**	117
1064	95±2	5±2	BK7	**032-0095**	117
1064	97±1	3±1	BK7	**032-0097**	125
1064	98±1	2±1	BK7	**032-0098**	125
1064	99.0±0.5	1.0±0.5	BK7	**032-0099**	133
1064	15±3	85±3	UV FS	**042-0015**	132
1064	20±3	80±3	UV FS	**042-0020**	132
1064	25±3	75±3	UV FS	**042-0025**	132
1064	30±3	70±3	UV FS	**042-0030**	132
1064	40±3	60±3	UV FS	**042-0040**	132
1064	50±3	50±3	UV FS	**042-0050**	132
1064	60±3	40±3	UV FS	**042-0060**	132
1064	65±3	35±3	UV FS	**042-0065**	132
1064	70±3	30±3	UV FS	**042-0070**	132
1064	75±3	25±3	UV FS	**042-0075**	132
1064	80±3	20±3	UV FS	**042-0080**	132
1064	85±3	15±3	UV FS	**042-0085**	132
1064	90±2	10±2	UV FS	**042-0090**	140
1064	95±2	5±2	UV FS	**042-0095**	140
1064	97±1	3±1	UV FS	**042-0097**	148
1064	98±1	2±1	UV FS	**042-0098**	148
1064	99.0±0.5	1.0±0.5	UV FS	**042-0099**	156

Related Products

Kinematic Mirror Mount 840-0032, 840-0033

Find more at EksmaOptics.com

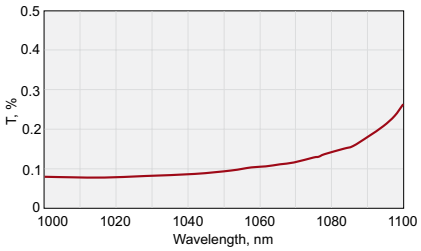
LASER REAR MIRRORS

Substrate

Material	UV grade Fused Silica or BK7 glass
S1 surface flatness	λ/10 at 633 nm
S1 surface quality	20–10 scratch & dig (MIL-PRF-13830B)
S2 surface quality	Commercial polish
Diameter tolerance	+0.00 mm; -0.12 mm
Thickness tolerance	±0.25
Chamfer	0.3 mm at 45° typical

Coating

Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Damage threshold:	
BK7	>2 J/cm², 8 nsec pulse, 1064 nm
UV FS	>5 J/cm², 8 nsec pulse, 1064 nm
Angle of incidence	0 – 8° (normal)
Reflectivity	R > 99.7%



R > 99.8% @ 1064 nm

Size – Ø25.4 × 6 mm

Wavelength, nm	Substrate type	Radius, mm	Substrate material	Catalogue number	Price, EUR
1047–1064	Plano	∞	BK7	**032-1060-i0**	86
1064	Plano-concave	-50	BK7	**032-8005**	102
1064	Plano-concave	-100	BK7	**032-8010**	102
1064	Plano-concave	-150	BK7	**032-8015**	102
1064	Plano-concave	-200	BK7	**032-8020**	102
1064	Plano-concave	-250	BK7	**032-8025**	102
1064	Plano-concave	-500	BK7	**032-8050**	102
1064	Plano-concave	-1000	BK7	**032-8100**	102
1064	Plano-concave	-2000	BK7	**032-8200**	102
1064	Plano-concave	-2500	BK7	**032-8250**	102
1064	Plano-concave	-4000	BK7	**032-8400**	102
1064	Plano-concave	-5000	BK7	**032-8500**	102
1047–1064	Plano	∞	UV FS	**042-1060-i0**	104
1064	Plano-concave	-50	UV FS	**042-8005**	125
1064	Plano-concave	-100	UV FS	**042-8010**	125
1064	Plano-concave	-150	UV FS	**042-8015**	125
1064	Plano-concave	-200	UV FS	**042-8020**	125
1064	Plano-concave	-250	UV FS	**042-8025**	125
1064	Plano-concave	-500	UV FS	**042-8050**	125
1064	Plano-concave	-1000	UV FS	**042-8100**	125
1064	Plano-concave	-2000	UV FS	**042-8200**	125
1064	Plano-concave	-2500	UV FS	**042-8250**	125
1064	Plano-concave	-4000	UV FS	**042-8400**	125
1064	Plano-concave	-5000	UV FS	**042-8500**	125
1064	Plano-convex	+100	BK7	**032-9010**	107
1064	Plano-convex	+200	BK7	**032-9020**	107
1064	Plano-convex	+300	BK7	**032-9030**	107
1064	Plano-convex	+500	BK7	**032-9050**	107
1064	Plano-convex	+1000	BK7	**032-9100**	107
1064	Plano-convex	+2000	BK7	**032-9200**	107
1064	Plano-convex	+3000	BK7	**032-9300**	107
1064	Plano-convex	+4000	BK7	**032-9400**	107
1064	Plano-convex	+100	UV FS	**042-9010**	130
1064	Plano-convex	+200	UV FS	**042-9020**	130
1064	Plano-convex	+300	UV FS	**042-9030**	130
1064	Plano-convex	+500	UV FS	**042-9050**	130
1064	Plano-convex	+1000	UV FS	**042-9100**	130
1064	Plano-convex	+2000	UV FS	**042-9200**	130
1064	Plano-convex	+3000	UV FS	**042-9300**	130
1064	Plano-convex	+4000	UV FS	**042-9400**	130

Related Products

Kinematic Mirror Mount 840-0010

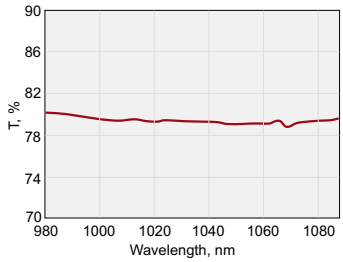
Find more at EksmaOptics.com

LASER BEAMSPLITTERS

Features

– Designed for average polarization:
$R=(R_s+R_p)/2$ and $T=(T_s+T_p)/2$

Beamsplitter splits average polarized laser beam into two beams separated by 90° from each other.



042-7120A.
R = 20±3%, T = 80±3% @ 1064 nm

Substrate

Material	UV grade Fused Silica or BK7 glass
S1 surface flatness	λ/10 typical at 633 nm
S1 surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
S2 surface flatness	λ/10 typical at 633 nm
S2 surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
Diameter tolerance	+0.00 mm; -0.12 mm
Thickness tolerance	±0.25 mm
Parallelism	30 arcsec
Chamfer	0.3 mm at 45° typical

Coating

Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Damage threshold:	
BK7	>5 J/cm², 8 nsec pulse, 1064 nm typical
UV FS	>5 J/cm², 8 nsec pulse, 1064 nm typical
Angle of incidence	45±3 degrees
Back side antireflection coated	R < 0.5%

Designed for average polarization. R=(Rs+Rp)/2 and T=(Ts+Tp)/2

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Ø12.7×3 mm		Ø25.4×6 mm	
				Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	20±3	80±3	BK7	**031-7120A**	75	**032-7120A**	109
1064	30±3	70±3	BK7	**031-7130A**	75	**032-7130A**	109
1064	50±3	50±3	BK7	**031-7150A**	75	**032-7150A**	109
1064	70±3	30±3	BK7	**031-7170A**	75	**032-7170A**	109
1064	75±3	25±3	BK7	**031-7175A**	75	**032-7175A**	109
1064	80±3	20±3	BK7	**031-7180A**	75	**032-7180A**	109
1064	90±3	10±3	BK7	**031-7190A**	75	**032-7190A**	109
532	20±3	80±3	BK7	**031-7220A**	73	**032-7220A**	107
532	30±3	70±3	BK7	**031-7230A**	73	**032-7230A**	107
532	50±3	50±3	BK7	**031-7250A**	73	**032-7250A**	107
532	70±3	30±3	BK7	**031-7270A**	73	**032-7270A**	107
532	80±3	20±3	BK7	**031-7280A**	73	**032-7280A**	107
1064	20±3	80±3	UV FS	**041-7120A**	95	**042-7120A**	132
1064	30±3	70±3	UV FS	**041-7130A**	95	**042-7130A**	132
1064	50±3	50±3	UV FS	**041-7150A**	95	**042-7150A**	132
1064	70±3	30±3	UV FS	**041-7170A**	95	**042-7170A**	132
1064	75±3	25±3	UV FS	**041-7175A**	95	**042-7175A**	132
1064	80±3	20±3	UV FS	**041-7180A**	95	**042-7180A**	132
1064	90±3	10±3	UV FS	**041-7190A**	95	**042-7190A**	132
532	20±3	80±3	UV FS	**041-7220A**	93	**042-7220A**	130
532	30±3	70±3	UV FS	**041-7230A**	93	**042-7230A**	130
532	50±3	50±3	UV FS	**041-7250A**	93	**042-7250A**	130
532	70±3	30±3	UV FS	**041-7270A**	93	**042-7270A**	130
532	80±3	20±3	UV FS	**041-7280A**	93	**042-7280A**	130
355	20±3	80±3	UV FS	**041-7320A**	105	**042-7320A**	155
355	30±3	70±3	UV FS	**041-7330A**	105	**042-7330A**	155
355	50±3	50±3	UV FS	**041-7350A**	105	**042-7350A**	155
355	70±3	30±3	UV FS	**041-7370A**	105	**042-7370A**	155
355	80±3	20±3	UV FS	**041-7380A**	105	**042-7380A**	155
266	20±3	80±3	UV FS	**041-7920A**	115	**042-7920A**	167
266	30±3	70±3	UV FS	**041-7930A**	115	**042-7930A**	167
266	50±3	50±3	UV FS	**041-7950A**	115	**042-7950A**	167
266	70±3	30±3	UV FS	**041-7970A**	115	**042-7970A**	167
266	80±3	20±3	UV FS	**041-7980A**	115	**042-7980A**	167

Housing accessories

Kinematic Mirror and Beamsplitter Mount 840-0056

Adapter for Beamsplitter at 45° 840-0116

Flipping Mirror/ Beamsplitter Mount 840-0155

Find more at EksmaOptics.com

Designed for S- polarization

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Ø12.7×3 mm		Ø25.4×6 mm	
				Catalogue no.	Price, EUR	Catalogue no.	Price, EUR
1064	20±3	80±3	BK7	**031-7120S**	75	**032-7120S**	109
1064	30±3	70±3	BK7	**031-7130S**	75	**032-7130S**	109
1064	50±3	50±3	BK7	**031-7150S**	75	**032-7150S**	109
1064	70±3	30±3	BK7	**031-7170S**	75	**032-7170S**	109
1064	80±3	20±3	BK7	**031-7180S**	75	**032-7180S**	109
532	20±3	80±3	BK7	**031-7220S**	73	**032-7220S**	107
532	30±3	70±3	BK7	**031-7230S**	73	**032-7230S**	107
532	50±3	50±3	BK7	**031-7250S**	73	**032-7250S**	107
532	70±3	30±3	BK7	**031-7270S**	73	**032-7270S**	107
532	80±3	20±3	BK7	**031-7280S**	73	**032-7280S**	107
1064	20±3	80±3	UV FS	**041-7120S**	95	**042-7120S**	132
1064	30±3	70±3	UV FS	**041-7130S**	95	**042-7130S**	132
1064	50±3	50±3	UV FS	**041-7150S**	95	**042-7150S**	132
1064	70±3	30±3	UV FS	**041-7170S**	95	**042-7170S**	132
1064	80±3	20±3	UV FS	**041-7180S**	95	**042-7180S**	132
532	20±3	80±3	UV FS	**041-7220S**	93	**042-7220S**	130
532	30±3	70±3	UV FS	**041-7230S**	93	**042-7230S**	130
532	50±3	50±3	UV FS	**041-7250S**	93	**042-7250S**	130
532	70±3	30±3	UV FS	**041-7270S**	93	**042-7270S**	130
532	80±3	20±3	UV FS	**041-7280S**	93	**042-7280S**	130
355	20±3	80±3	UV FS	**041-7320S**	105	**042-7320S**	155
355	30±3	70±3	UV FS	**041-7330S**	105	**042-7330S**	155
355	50±3	50±3	UV FS	**041-7350S**	105	**042-7350S**	155
355	70±3	30±3	UV FS	**041-7370S**	105	**042-7370S**	155
355	80±3	20±3	UV FS	**041-7380S**	105	**042-7380S**	155
266	20±3	80±3	UV FS	**041-7920S**	115	**042-7920S**	167
266	30±3	70±3	UV FS	**041-7930S**	115	**042-7930S**	167
266	50±3	50±3	UV FS	**041-7950S**	115	**042-7950S**	167
266	70±3	30±3	UV FS	**041-7970S**	115	**042-7970S**	167
266	80±3	20±3	UV FS	**041-7980S**	115	**042-7980S**	167

Designed for P- polarization

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Ø12.7×3 mm		Ø25.4×6 mm	
				Catalogue no.	Price, EUR	Catalogue no.	Price, EUR
1064	20±3	80±3	BK7	**031-7120P**	75	**032-7120P**	109
1064	30±3	70±3	BK7	**031-7130P**	75	**032-7130P**	109
1064	50±3	50±3	BK7	**031-7150P**	75	**032-7150P**	109
1064	70±3	30±3	BK7	**031-7170P**	75	**032-7170P**	109
1064	80±3	20±3	BK7	**031-7180P**	75	**032-7180P**	109
532	20±3	80±3	BK7	**031-7220P**	73	**032-7220P**	107
532	30±3	70±3	BK7	**031-7230P**	73	**032-7230P**	107
532	50±3	50±3	BK7	**031-7250P**	73	**032-7250P**	107
532	70±3	30±3	BK7	**031-7270P**	73	**032-7270P**	107
532	80±3	20±3	BK7	**031-7280P**	73	**032-7280P**	107
1064	20±3	80±3	UV FS	**041-7120P**	95	**042-7120P**	132
1064	30±3	70±3	UV FS	**041-7130P**	95	**042-7130P**	132
1064	50±3	50±3	UV FS	**041-7150P**	95	**042-7150P**	132
1064	70±3	30±3	UV FS	**041-7170P**	95	**042-7170P**	132
1064	80±3	20±3	UV FS	**041-7180P**	95	**042-7180P**	132
532	20±3	80±3	UV FS	**041-7220P**	93	**042-7220P**	130
532	30±3	70±3	UV FS	**041-7230P**	93	**042-7230P**	130
532	50±3	50±3	UV FS	**041-7250P**	93	**042-7250P**	130
532	70±3	30±3	UV FS	**041-7270P**	93	**042-7270P**	130
532	80±3	20±3	UV FS	**041-7280P**	93	**042-7280P**	130
355	20±3	80±3	UV FS	**041-7320P**	105	**042-7320P**	155
355	30±3	70±3	UV FS	**041-7330P**	105	**042-7330P**	155
355	50±3	50±3	UV FS	**041-7350P**	105	**042-7350P**	155
355	70±3	30±3	UV FS	**041-7370P**	105	**042-7370P**	155
355	80±3	20±3	UV FS	**041-7380P**	105	**042-7380P**	155
266	20±3	80±3	UV FS	**041-7920P**	115	**042-7920P**	167
266	30±3	70±3	UV FS	**041-7930P**	115	**042-7930P**	167
266	50±3	50±3	UV FS	**041-7950P**	115	**042-7950P**	167
266	70±3	30±3	UV FS	**041-7970P**	115	**042-7970P**	167
266	80±3	20±3	UV FS	**041-7980P**	115	**042-7980P**	167

LASER LINE ANTI-REFLECTION COATED PRECISION WINDOWS

Features

- Made of premium quality UV FS and BK7
- AR coated at 266 nm, 355 nm, 532 nm, 1064 nm

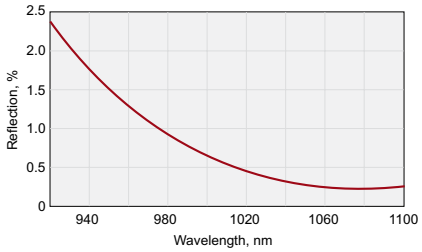
Precision windows are mostly used in laser systems. High quality AR multilayer coatings are applied on windows for fundamental Nd:YAG laser 1064 nm, frequency-doubled 532 nm, frequency-tripled 355 nm and frequency-quadrupled 266 nm applications. Featuring high optical transmission with little distortion of the transmitted signal, precision windows are a good solution for applications that require protective windows.

Specifications

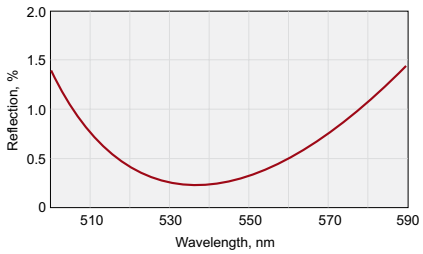
Material	BK7, UV FS
Surface quality	20–10 scratch & dig (MIL-PRF-13830B)
Clear aperture	90% of the diameter
Diameter tolerance	+0.00; -0.12 mm
Thickness tolerance	±0.2 mm
Surface flatness	λ/10 @ 633 nm
Parallelism	30 arcsec or 3 arcsec

Coating

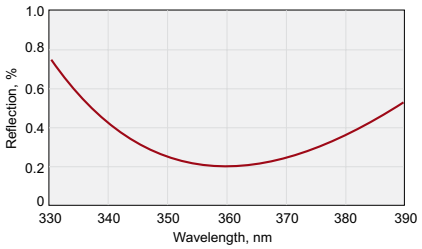
Technology	Electron beam multilayer dielectric
Adhesion and durability	Per MIL-C-675A. Insoluble in lab solvents
Clear aperture	Exceeds central 85% of diameter
Damage threshold:	
BK7	>5 J/cm², 8 nsec pulse, 1064 nm
UV FS	>10 J/cm², 8 nsec pulse, 1064 nm
Angle of incidence	0 degrees
Coated surface flatness	λ/10 at 633 nm over clear aperture



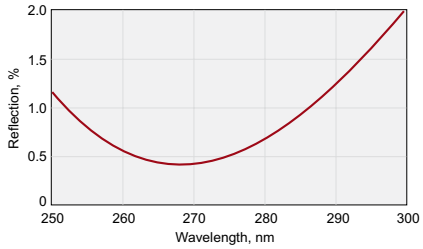
R<0.25%@1064 nm AOI=0°



R<0.25%@532 nm AOI=0°



R<0.25%@355 nm, AOI=0°



R<0.4%@266 nm, AOI=0°

PARALLELISM 30 arcsec

Wavelength, nm	Diameter D, mm	Thickness T, mm	BK7		UV FS	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR
266	12.7	3.0	–		**224-1101E**	79
355	12.7	3.0	–		**223-1101E**	65
532	12.7	3.0	**222-0101E**	51	**222-1101E**	65
1064	12.7	3.0	**221-0101E**	51	**221-1101E**	65
266	25.4	6.0	–		**224-1201E**	85
355	25.4	6.0	–		**223-1201E**	70
532	25.4	6.0	**222-0201E**	61	**222-1201E**	70
1064	25.4	6.0	**221-0201E**	61	**221-1201E**	70
266	38.1	8.0	–		**224-1402E**	131
355	38.1	8.0	–		**223-1402E**	126
532	38.1	8.0	**222-0402E**	86	**222-1402E**	126
1064	38.1	8.0	**221-0402E**	86	**221-1402E**	126
266	50.8	10.0	–		**224-1502E**	181
355	50.8	10.0	–		**223-1502E**	176
532	50.8	10.0	**222-0502E**	99	**222-1502E**	176
1064	50.8	10.0	**221-0502E**	99	**221-1502E**	176

PARALLELISM
3 arcsec

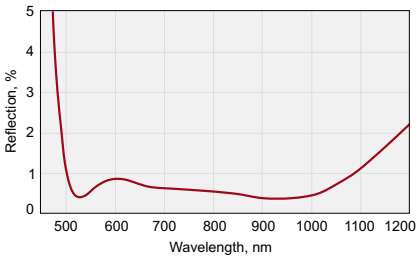
Wavelength, nm	Diameter D, mm	Thickness T, mm	BK7		UV FS	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR
266	12.7	3.0	–		**224-1103E**	96
355	12.7	3.0	–		**223-1103E**	82
532	12.7	3.0	**222-0103E**	66	**222-1103E**	82
1064	12.7	3.0	**221-0103E**	66	**221-1103E**	82
266	25.4	6.0	–		**224-1203E**	125
355	25.4	6.0	–		**223-1203E**	111
532	25.4	6.0	**222-0203E**	88	**222-1203E**	111
1064	25.4	6.0	**221-0203E**	88	**221-1203E**	111
266	38.1	10.0	–		**224-1403E**	176
355	38.1	10.0	–		**223-1403E**	170
532	38.1	10.0	**222-0403E**	121	**222-1403E**	170
1064	38.1	10.0	**221-0403E**	121	**221-1403E**	170
266	50.8	12.0	–		**224-1503E**	217
355	50.8	12.0	–		**223-1503E**	212
532	50.8	12.0	**222-0503E**	148	**222-1503E**	212
1064	50.8	12.0	**221-0503E**	148	**221-1503E**	212

AR COATED LENS KITS

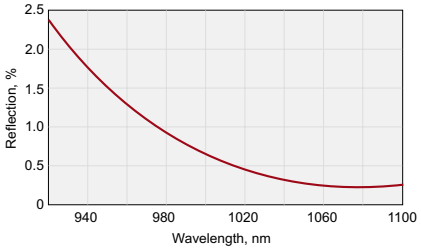
Lens kits contain different types of spherical (plano-convex, biconvex, plano-concave, biconcave) or cylindrical (plano-convex, plano-concave) lenses with various focal lengths. Kits are packed into foam lined plastic boxes for safe handling and storage. Kits are available with laser line and broadband multilayer anti-reflection coatings.

Spherical lens kits consist of 40 (large kit) or 15 (small kit) O25.4 mm lenses made of UVFS or N-BK7.

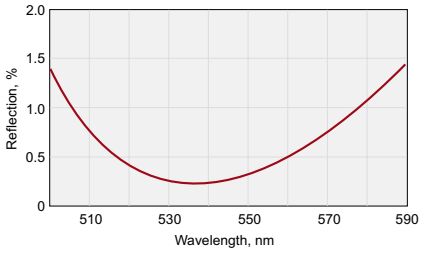
Cylindrical lens kits consist of 12 rectangular lenses (25.4 × 50.8 mm) made of UVFS or N-BK7.



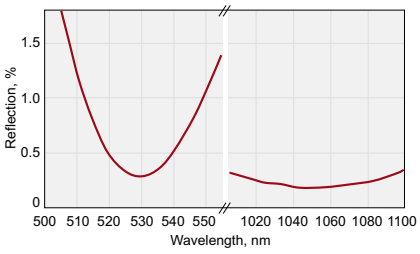
R<1.5% @ 500-1100 nm, AOI=0°



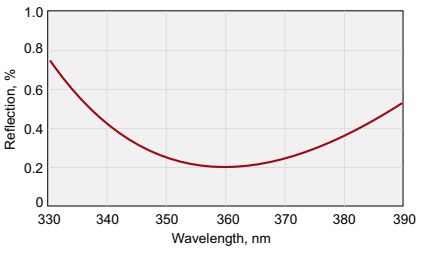
R<0.25% @ 1064 nm AOI=0°



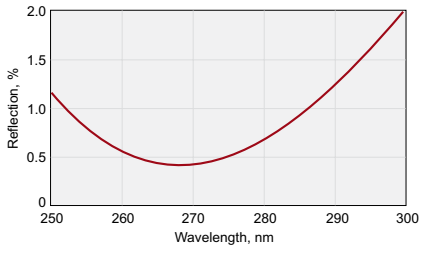
R<0.25% @ 532 nm AOI=0°



R<0.5% @ 532 nm+1064 nm, AOI=0°



R<0.25% @ 355 nm, AOI=0°



R<0.4% @ 266 nm, AOI=0°

BK7 LENS KITS

Large N-BK7 Spherical Lens Kit (40 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 400 – 700 nm, R<0.9%	**140-0240-AR400-700**	2002
BBAR @ 650 – 1100, R<1.0%	**140-0240-AR650-1100**	2123
AR @ 532 + 1064 nm, R<0.5%	**140-0240-AR532+1064**	1925
AR @ 1064 nm, R<0.25%	**140-0240-AR1064**	1705
AR @ 532 nm, R<0.25%	**140-0240-AR532**	1705

Large Lens Kit

Large BK7 Lens Kit

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	30	**110-0205E**
pl/cx	25.4	40	**110-0207E**
pl/cx	25.4	50	**110-0209E**
pl/cx	25.4	60	**110-0211E**
pl/cx	25.4	75	**110-0215E**
pl/cx	25.4	100	**110-0219E**
pl/cx	25.4	125	**110-0223E**
pl/cx	25.4	150	**110-0227E**
pl/cx	25.4	200	**110-0231E**
pl/cx	25.4	250	**110-0235E**
pl/cx	25.4	300	**110-0239E**
pl/cx	25.4	350	**110-0241E**
pl/cx	25.4	400	**110-0243E**
pl/cx	25.4	500	**110-0247E**

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	700	**110-0251E**
pl/cx	25.4	1000	**110-0259E**
bi/cx	25.4	25	**111-0204E**
bi/cx	25.4	30	**111-0206E**
bi/cx	25.4	40	**111-0208E**
bi/cx	25.4	50	**111-0210E**
bi/cx	25.4	60	**111-0214E**
bi/cx	25.4	75	**111-0216E**
bi/cx	25.4	100	**111-0218E**
bi/cx	25.4	150	**111-0222E**
bi/cx	25.4	200	**111-0226E**
bi/cx	25.4	250	**111-0228E**
bi/cx	25.4	500	**111-0234E**
bi/cx	25.4	1000	**111-0250E**

Type	Dia, mm	F, mm	Catalogue number
pl/cv	25.4	-40	**112-0207E**
pl/cv	25.4	-50	**112-0209E**
pl/cv	25.4	-75	**112-0215E**
pl/cv	25.4	-100	**112-0219E**
pl/cv	25.4	-150	**112-0227E**
pl/cv	25.4	-200	**112-0231E**
bi/cv	25.4	-25	**114-0204E**
bi/cv	25.4	-50	**114-0208E**
bi/cv	25.4	-75	**114-0212E**
bi/cv	25.4	-100	**114-0214E**
bi/cv	25.4	-150	**114-0220E**
bi/cv	25.4	-200	**114-0224E**

Small N-BK7 Spherical Lens Kit (15 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 400 – 700 nm, R<0.9%	**140-0215-AR400-700**	1089
BBAR @ 650 – 1100 nm, R<1.0%	**140-0215-AR650-1100**	1155
AR @ 532 + 1064 nm, R<0.5%	**140-0215-AR532+1064**	847
AR @ 1064 nm, R<0.25%	**140-0215-AR1064**	770
AR @ 532 nm, R<0.25%	**140-0215-AR532**	770

Small Lens Kit

Small BK7 Lens Kit

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	30	**110-0205E**
pl/cx	25.4	40	**110-0207E**
pl/cx	25.4	50	**110-0209E**
pl/cx	25.4	60	**110-0211E**
pl/cx	25.4	75	**110-0215E**

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	100	**110-0219E**
pl/cx	25.4	150	**110-0227E**
pl/cx	25.4	200	**110-0231E**
pl/cx	25.4	500	**110-0247E**
pl/cx	25.4	1000	**110-0259E**

Type	Dia, mm	F, mm	Catalogue number
pl/cv	25.4	-40	**112-0207E**
pl/cv	25.4	-50	**112-0209E**
pl/cv	25.4	-75	**112-0215E**
pl/cv	25.4	-100	**112-0219E**
pl/cv	25.4	-150	**112-0227E**

N-BK7 Cylindrical Lens Kit (12 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 400-700 nm, R<0.9%	**140-0212-AR400-700**	1925
BBAR @ 650-1100 nm, R<0.7%	**140-0212-AR650-1100**	1997
AR @ 532+1064 nm, R<0.5%	**140-0212-ARD1064**	1782
AR @ 1064 nm, R<0.25%	**140-0212-AR1064**	1705

N-BK7 Cylindrical Lens Kit

Type	Size, mm	F, mm	Catalogue number
pl/cx	25.4 × 50.8	50	**120-0205E**
pl/cx	25.4 × 50.8	75	**120-0210E**
pl/cx	25.4 × 50.8	100	**120-0215E**
pl/cx	25.4 × 50.8	150	**120-0220E**

Type	Size, mm	F, mm	Catalogue number
pl/cx	25.4 × 50.8	200	**120-0225E**
pl/cx	25.4 × 50.8	300	**120-0230E**
pl/cx	25.4 × 50.8	500	**120-0235E**
pl/cx	25.4 × 50.8	1000	**120-0240E**

Type	Size, mm	F, mm	Catalogue number
pl/cv	25.4 × 50.8	-50	**122-0205E**
pl/cv	25.4 × 50.8	-75	**122-0210E**
pl/cv	25.4 × 50.8	-100	**122-0215E**
pl/cv	25.4 × 50.8	-150	**122-0220E**

UV FS LENS KITS

Large UV FS Spherical Lens Kit (40 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 210 – 400 nm, R<2%	**140-1240-AR210-400**	3839
BBAR @ 350 – 900 nm, R<1.5%	**140-1240-AR350-900**	3619
BBAR @ 650 – 1100 nm, R<1.0%	**140-1240-AR650-1100**	3641
AR @ 532 + 1064 nm, R<0.5%	**140-1240-AR532+1064**	3443
AR @ 1064 nm, R<0.25%	**140-1240-AR1064**	3223
AR @ 532 nm, R<0.25%	**140-1240-AR532**	3223
AR @ 355 nm, R<0.25%	**140-1240-AR355**	3333
AR @ 266 nm, R<0.4%	**140-1240-AR266**	3443

Large Lens Kit

Large UV FS Lens Kit

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	30	**110-1203E**
pl/cx	25.4	50	**110-1205E**
pl/cx	25.4	75	**110-1209E**
pl/cx	25.4	80	**110-1210E**
pl/cx	25.4	100	**110-1211E**
pl/cx	25.4	125	**110-1216E**
pl/cx	25.4	150	**110-1217E**
pl/cx	25.4	200	**110-1219E**
pl/cx	25.4	250	**110-1221E**
pl/cx	25.4	300	**110-1223E**
pl/cx	25.4	350	**110-1225E**
pl/cx	25.4	400	**110-1227E**
pl/cx	25.4	500	**110-1233E**
pl/cx	25.4	600	**110-1235E**

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	750	**110-1239E**
pl/cx	25.4	1000	**110-1245E**
bi/cx	25.4	25	**111-1204E**
bi/cx	25.4	40	**111-1207E**
bi/cx	25.4	50	**111-1210E**
bi/cx	25.4	75	**111-1214E**
bi/cx	25.4	100	**111-1218E**
bi/cx	25.4	150	**111-1222E**
bi/cx	25.4	200	**111-1226E**
bi/cx	25.4	250	**111-1230E**
bi/cx	25.4	300	**111-1234E**
bi/cx	25.4	400	**111-1238E**
bi/cx	25.4	500	**111-1240E**
bi/cx	25.4	1000	**111-1260E**

Type	Dia, mm	F, mm	Catalogue number
pl/cv	25.4	-50	**112-1205E**
pl/cv	25.4	-75	**112-1209E**
pl/cv	25.4	-100	**112-1211E**
pl/cv	25.4	-150	**112-1217E**
pl/cv	25.4	-200	**112-1219E**
pl/cv	25.4	-300	**112-1223E**
bi/cv	25.4	-25	**114-1204E**
bi/cv	25.4	-50	**114-1208E**
bi/cv	25.4	-75	**114-1212E**
bi/cv	25.4	-100	**114-1216E**
bi/cv	25.4	-150	**114-1220E**
bi/cv	25.4	-200	**114-1224E**

Small UV FS Spherical Lens Kit (15 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 210 – 400 nm, R<2%	**140-1215-AR210-400**	2013
BBAR @ 350 – 900 nm, R<1.5%	**140-1215-AR350-900**	1826
BBAR @ 650 – 1100 nm, R<1.0%	**140-1215-AR650-1100**	1837
AR @ 532 + 1064 nm, R<0.5%	**140-1215-AR532+1064**	1529
AR @ 1064 nm, R<0.25%	**140-1215-AR1064**	1452
AR @ 532 nm, R<0.25%	**140-1215-AR532**	1452
AR @ 355 nm, R<0.25%	**140-1215-AR355**	1485
AR @ 266 nm, R<0.4%	**140-1215-AR266**	1518

Small Lens Kit

Small UV FS Lens Kit

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	30	**110-1203E**
pl/cx	25.4	50	**110-1205E**
pl/cx	25.4	75	**110-1209E**
pl/cx	25.4	100	**110-1211E**
pl/cx	25.4	125	**110-1216E**

Type	Dia, mm	F, mm	Catalogue number
pl/cx	25.4	150	**110-1217E**
pl/cx	25.4	200	**110-1219E**
pl/cx	25.4	300	**110-1223E**
pl/cx	25.4	500	**110-1233E**
pl/cx	25.4	1000	**110-1245E**

Type	Dia, mm	F, mm	Catalogue number
pl/cv	25.4	-50	**112-1205E**
pl/cv	25.4	-75	**112-1209E**
pl/cv	25.4	-100	**112-1211E**
pl/cv	25.4	-125	**112-1215E**
pl/cv	25.4	-150	**112-1217E**

UV FS Cylindrical Lens Kit (12 pcs.)

Coating	Catalogue number	Price, EUR
BBAR @ 210-400 nm, R<2%	**140-0212-ARB300**	2992
BBAR @ 350-900 nm, R<1.5%	**140-0212-ARB625**	2893
BBAR @ 650-1100 nm, R<0.7%	**140-0212-ARB825**	2805

UV FS Cylindrical Lens Kit

Type	Size, mm	F, mm	Catalogue number
pl/cx	25.4 × 50.8	50	**120-1205E**
pl/cx	25.4 × 50.8	75	**120-1210E**
pl/cx	25.4 × 50.8	100	**120-1215E**
pl/cx	25.4 × 50.8	150	**120-1220E**

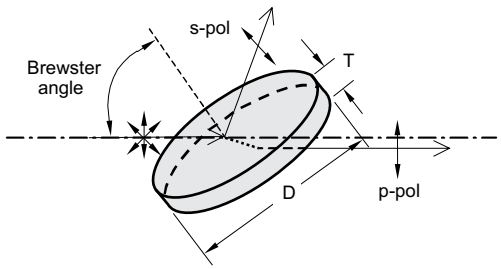
Type	Size, mm	F, mm	Catalogue number
pl/cx	25.4 × 50.8	200	**120-1225E**
pl/cx	25.4 × 50.8	300	**120-1230E**
pl/cx	25.4 × 50.8	500	**120-1235E**
pl/cx	25.4 × 50.8	1000	**120-1240E**

Type	Size, mm	F, mm	Catalogue number
pl/cv	25.4 × 50.8	-50	**122-1205E**
pl/cv	25.4 × 50.8	-75	**122-1210E**
pl/cv	25.4 × 50.8	-100	**122-1215E**
pl/cv	25.4 × 50.8	-150	**122-1220E**

THIN FILM LASER POLARIZERS (56° ANGLE OF INCIDENCE)

Thin film polarizers separate s- and p- polarization components. Due to their high laser damage threshold, thin film polarizers can be used as an alternative to Glan-Taylor laser polarizing prisms or cube polarizing beamsplitters.

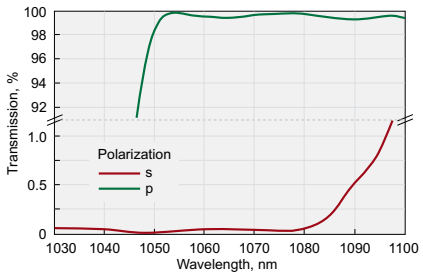
Nd:YAG Laser Line thin film polarizers are used in high energy lasers. They can be used as extracavity attenuators for Nd:YAG laser fundamental and its harmonics or intracavity Q-switch hold-off polarizers.The most efficient way to use these polarizers is at Brewster's angle – 56 ± 2°.



Specifications

Material	UV FS
Surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
Transmitted wavefront distortion	λ/10 @ 633 nm
Parallelism	<30 arcsec
Clear aperture	>85%
Angle of incidence (AOI)	56°
Angle of incidence tolerance	± 2°
Diameter tolerance	+0.0; -0.12 mm
Thickness tolerance	±0.2 mm
Laser damage threshold	6 J/cm² 10 nsec pulse at 1064 nm typical

HIGH EXTINCTION RATIO POLARIZERS



420-1258HE.
Tp > 98%, Ts < 0.1%

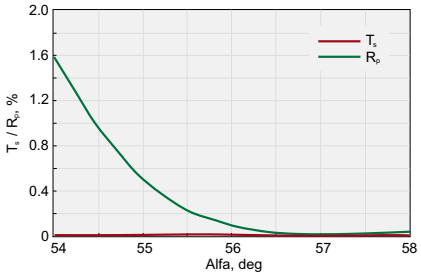
Round Polarizers
Material – UV FS; Tp > 98%, Ts < 0.1%; extinction ratio for transmitted light Tp/Ts: >1000:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
355	25.4	3	**420-1252HE**	251
532	25.4	3	**420-1254HE**	213
1064	25.4	3	**420-1258HE**	248

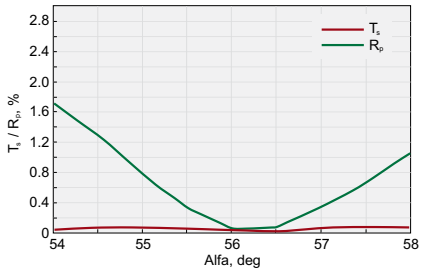
Rectangular Polarizers
Material – UV FS; Tp > 98%, Ts < 0.1%; extinction ratio for transmitted light Tp/Ts: >1000:1

Wavelength, nm	Rectangular dimensions		Thickness T, mm	Catalogue number	Price, EUR
	Length, mm	Width, mm			
532	20	15	6	**420-1484HE**	178
532	30	20	6	**420-1584HE**	242
1064	20	15	6	**420-1488HE**	190
1064	30	20	6	**420-1588HE**	253

ULTRA HIGH TRANSMISSION THIN FILM POLARIZERS



420-1254UHT.
Ultra High Transmission @ 532 nm,
Ts<0.2%, Rp<0.2%, AOI=56°

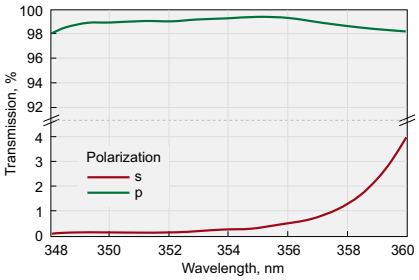


420-1258UHT.
Ultra High Transmission @ 1064 nm,
Ts<0.2%, Rp<0.2%, AOI=56°

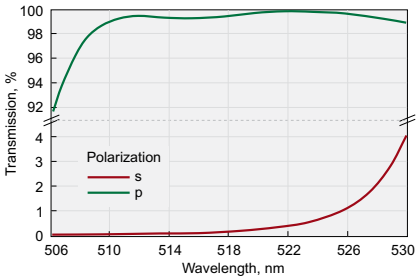
Round Polarizers.
Material – UV FS; Ts < 0.2 %, Rp < 0.2 %; extinction ratio for transmitted light Tp/Ts >500:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
532	25.4	3	**420-1254UHT**	299
1064	25.4	3	**420-1258UHT**	350

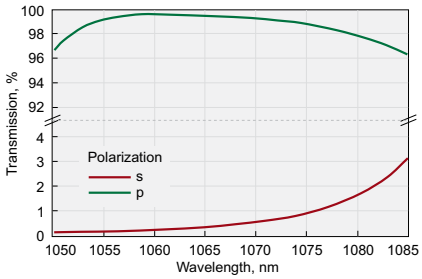
HIGH TRANSMISSION THIN FILM POLARIZERS



420-1252HT. High Transmission @ 355 nm, Rs/Tp > 99.5/99.0 %



420-1254HT. High Transmission @ 532 nm, Rs/Tp > 99.5/99.0 %



420-1258HT. High Transmission @ 1064 nm, Rs/Tp > 99.5/99.0 %

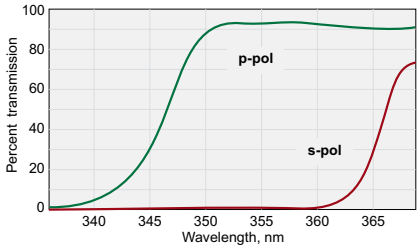
Round Polarizers. Material - UV FS. Rs / Tp > 99.5 / 99.0 %; extinction ratio for transmitted light Tp / Ts >200:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
355	25.4	3.0	**420-1252HT**	273
532	25.4	3.0	**420-1254HT**	230
1064	25.4	3.0	**420-1258HT**	269

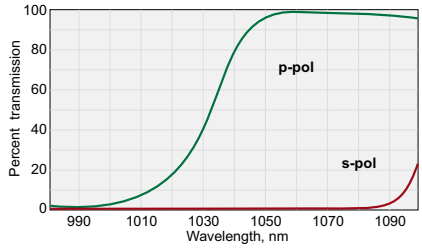
Rectangular Polarizers. Material - UV FS. Rs / Tp > 99.5 / 99.0 %; extinction ratio for transmitted light Tp / Ts >200:1

Wavelength, nm	Rectangular dimensions		Thickness T, mm	Catalogue number	Price, EUR
	Length, mm	Width, mm			
1064	28.6	14.3	3.0	**420-1288HT**	311

STANDARD THIN FILM POLARIZERS



420-1252.
Transmission @ 355 nm , Rs/Tp > 99.5/95 %



420-1258.
Transmission @ 1064 nm, Rs/Tp > 99.5/95 %

Round Polarizers. Material – UV FS; Rs / Tp > 99.5 / 95.0 %; extinction ratio for transmitted light Tp/Ts >200:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
355	12.7	3.0	**420-1122E**	189
532	12.7	3.0	**420-1124E**	151
1064	12.7	3.0	**420-1128E**	167
355	25.4	3.0	**420-1252E**	209
532	25.4	3.0	**420-1254E**	177
1064	25.4	3.0	**420-1258E**	207
355	50.8	6.0	**420-1502E**	374
532	50.8	6.0	**420-1504E**	339
1064	50.8	6.0	**420-1508E**	362

Rectangular Polarizers. Material – UV FS; Rs / Tp > 99.5 / 95.0 %; extinction ratio for transmitted light Tp/Ts >200:1

Wavelength, nm	Rectangular dimensions		Thickness T, mm	Catalogue number	Price, EUR
	Length, mm	Width, mm			
355	28.6	14.3	3.0	**420-1282**	293
532	28.6	14.3	3.0	**420-1284**	247
1064	28.6	14.3	3.0	**420-1288**	259

Related products

Thin film laser polarizers of other wavelengths
Find more at EksmaOptics.com

Glan and Wollaston prisms
Find more at EksmaOptics.com

Adapters for polarizer at 56° 840-0117, 840-0118

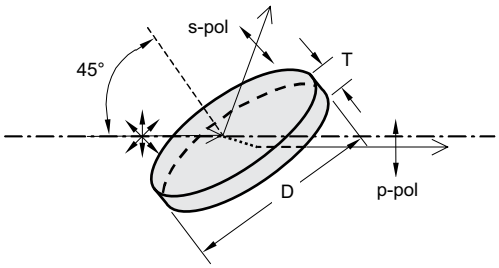
Find more at EksmaOptics.com

Variable attenuator for Nd:YAG linearly polarized laser beam 990-0070

Find more at EksmaOptics.com

THIN FILM LASER POLARIZERS (45° ANGLE OF INCIDENCE)

These thin film polarizers separate or combine the s- and p-polarization components at 45° angle of incidence. They are designed for use in high energy lasers. Polarizers are made from UV FS and feature high laser damage threshold reaching 10 J/cm² at 1064 nm.



Specifications

Substrate material	UV FS
Surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
Transmitted wavefront distortion	λ/10 @ 633 nm
Clear aperture	> 85% of diameter
Angle of incidence (AOI)	45°
Angle of incidence tolerance	± 1°
Parallelism	< 30 arcsec

THIN FILM POLARIZERS WITH HIGH EXTINCTION RATIO

Round Polarizers
Material – UV FS. Tp > 98%, Ts < 0.1%; extinction ratio for transmitted light Tp/Ts: >1000:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
355	25.4	3	**420-1252i45HE**	377
532	25.4	3	**420-1254i45HE**	339
1064	25.4	3	**420-1258i45HE**	362
355	50.8	6	**420-1502i45HE**	736
532	50.8	6	**420-1504i45HE**	638
1064	50.8	6	**420-1508i45HE**	713

STANDARD THIN FILM POLARIZERS

Round Polarizers
Material – UV FS. R_s / T_p > 99.5 / 95.0%. Extinction ratio for transmitted light T_p/T_s >200:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
355	25.4	3	**420-1252i45**	274
532	25.4	3	**420-1254i45**	230
1064	25.4	3	**420-1258i45**	259
355	50.8	6	**420-1502i45**	523
532	50.8	6	**420-1504i45**	454
1064	50.8	6	**420-1508i45**	506

QUARTZ RETARDATION PLATES

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 (λ/2) or convert linear into circular polarization or vice versa (λ/4). Quartz retardation plates are supplied mounted and AR coated.

ZERO ORDER OPTICALLY CONTACTED WAVEPLATES

Features

- Zero Order Waveplates for Nd:YAG fundamental and its harmonics
- 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 make plates less dependent on temperature. The plates are polished to different thicknesses enabling 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
Clear aperture	Ø17 mm (other dimensions on request)
Ring mount outer diameter	25.4 +0.0 / -0.12 mm
Nominal thickness of waveplate	1.5 – 2.5 mm
Surface quality	20 –10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10 @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.4%
Damage threshold	> 0.5 J/cm², 10 nsec pulse, 1064 nm typical

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**460-4205D12**	165	**460-4405D12**	165
532	**460-4230D12**	165	**460-4430D12**	165
355	**460-4240D12**	175	**460-4440D12**	175
266	**460-4245D12**	185	**460-4445D12**	185

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**460-4205**	245	**460-4405**	245
532	**460-4230**	245	**460-4430**	245
355	**460-4240**	270	**460-4440**	270
266	**460-4245**	280	**460-4445**	280

ZERO ORDER AIR-SPACED WAVEPLATES

Features

– For high power laser application

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)
Wavefront distortion	λ/10 @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.5%
Damage threshold	> 10 J/cm², 10 nsec pulse, 1064 nm typical

Wavelength, nm	AR coating range, nm	Retardation λ/2		Retardation λ/4	
		Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	1035–1095	**464-4205**	310	**464-4405**	310
532	515–545	**464-4230**	310	**464-4430**	310
355	345–365	**464-4240**	335	**464-4440**	335
266	257–275	**464-4245**	345	**464-4445**	345
213	210–216	**464-4253**	420	**464-4453**	420

Related Products

Polarizer Holder 840-0180

Find more at EksmaOptics.com

LOW ORDER WAVEPLATES

Features

– Thickness 0.15–0.35 mm
– Thinner than multiple order

Low order plates are less temperature sensitive and temperature dependent than multiple order plates. These plates are suitable for high and low power applications.

Specifications

Material	Single crystal quartz
Optical axis	Normal to facet on circumference of retarder
Clear aperture	Ø17 mm (other dimensions on request)
Ring mount outer diameter	25.4 +0.0 / -0.12 mm
Nominal thickness of waveplate	0.15 – 0.35 mm
Surface quality	20–10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10 @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.4%
Damage threshold	10 J/cm², 10 nsec pulse, 1064 nm typical

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**461-4205D12**	105	**461-4405D12**	105
532	**461-4230D12**	105	**461-4430D12**	105
355	**461-4240D12**	115	**461-4440D12**	115

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**461-4205**	160	**461-4405**	160
532	**461-4230**	160	**461-4430**	160
355	**461-4240**	192	**461-4440**	192

Related Products

High Precision Rotation Polarizer, Waveplate Mount 840-0186

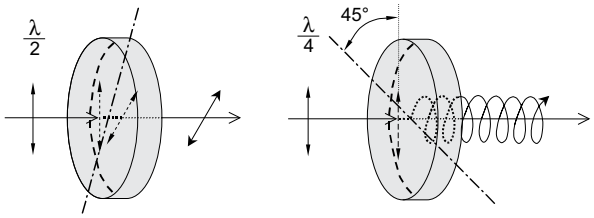
Find more at EksmaOptics.com

MULTIPLE ORDER WAVEPLATES

Features

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

Multiple order plates are more dependent on the temperature changes than zero order plates. A change of ±1% from the designed wavelength of multiple order plate can result in difficulties in retardation. Contrary, with zero order plates ±1% and even ±2% change from the designed wavelength can cause only small retardation change.



Specifications

Material	Single crystal quartz
Optical axis	Normal to facet on circumference of retarder
Clear aperture	Ø17 mm (other dimensions on request)
Ring mount outer diameter	25.4 +0.0 / -0.2 mm
Nominal thickness of waveplate	0.8 – 1.5 mm
Surface quality	20–10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10 @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.4%
Damage threshold	10 J/cm², 10 nsec pulse, 1064 nm typical

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**462-4205D12**	90	**462-4405D12**	90
532	**462-4230D12**	90	**462-4430D12**	90
355	**462-4240D12**	95	**462-4440D12**	95

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

Wavelength, nm	Retardation λ/2		Retardation λ/4	
	Catalogue number	Price, EUR	Catalogue number	Price, EUR
1064	**462-4205**	138	**462-4405**	138
532	**462-4230**	138	**462-4430**	138
355	**462-4240**	143	**462-4440**	143
266	**462-4245**	153	**462-4445**	153

Related Products

Adjustable Polarizer Holder of Side Drive 840-0195

Find more at EksmaOptics.com

MULTIPLE ORDER DUAL WAVELENGTH WAVEPLATES

Features

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

Retardation and Wavelength	Catalogue number	Price, EUR
λ @ 1064 nm + λ/2 @ 532 nm	**463-4120**	215
λ @ 1064 nm + λ/4 @ 532 nm	**463-4140**	215
λ/2 @ 1064 nm + λ @ 532 nm	**463-4210**	215
λ/2 @1064 nm + λ/2 @ 532 nm	**463-4220**	215
λ/2 @1064 nm + λ/4 @ 532 nm	**463-4240**	215
λ/4 @ 1064 nm + λ @ 532 nm	**463-4410**	215
λ/4 @ 1064 nm + λ/2 @ 532 nm	**463-4420**	215
λ/4 @ 1064 nm + λ/4 @ 532 nm	**463-4440**	215

Specifications

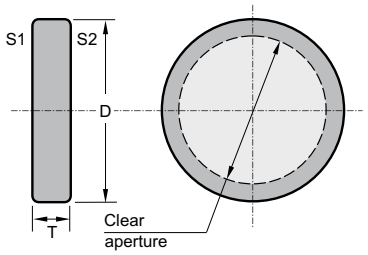
Material	Single crystal quartz
Optical axis	Normal to facet on circumference of retarder
Clear aperture	Ø17 mm
Ring mount outer diameter	25.4 +0.0 / -0.2 mm
Nominal thickness of waveplate	0.2 – 1.2 mm
Surface quality	20–10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10 @ 633 nm
Parallelism	< 10 arcsec
AR coating	R < 0.5%
Damage threshold	5 J/cm², 10 nsec pulse, 1064 nm typical

POLARIZATION PLANE ROTATORS

Features

- Made of crystalline quartz
- Intended to rotate a beam polarization plane strictly to an appropriate angle using the circular birefringent effect

Compared to a waveplate, a rotator has an intrinsic advantage, being independent of rotation around its own optical axis. It needs no adjustment, only to be installed normal to incident radiation. A polarization plane rotator is normally used for the specific wavelength. It is only slightly dependent on ambient temperature.



Polarization plane rotators for any wavelength from 200 to 2300 nm are available.

Specifications

Material	Single crystal quartz
Optical axis	Normal to faces S1, S2 of rotator
Clear aperture	17 mm for 20 mm diameter
Ring mount outer diameter	D = 25.4 +0.0 / -0.2 mm
Mount thickness	T = 6 – 20 mm (depending on wavelength and rotation angle)
Surface quality	20-10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10
Parallelism	< 10 arcsec
AR coating	R < 0.2% both sides
Damage threshold	5 J/cm², 10 nsec pulse, 1064 nm typical

Related Products

Kinematic Mirror Mount 840-0032, 840-0033

Find more at EksmaOptics.com

Kinematic Positioning Mount 840-0193

Find more at EksmaOptics.com

Wavelength, nm	Rotation angle of polarization plane, deg	Catalogue number	Price, EUR
266	45	**470-4264**	282
266	90	**470-4269**	282
355	45	**470-4354**	224
355	90	**470-4359**	224
532	45	**470-4534**	224
532	90	**470-4539**	224
1064	45	**470-4644**	247
1064	90	**470-4649**	247

Please contact us for other size or wavelengths requirements.

COMPACT VARIABLE LASER POWER ATTENUATOR – 990-0076

Features

- Attenuation range for reflected beam: 2% – 99.9%
- Attenuation range for transmitted beam: 0.1% – 98%
- Convenient 90° angle between reflected and transmitted beams
- No beam shift at exit

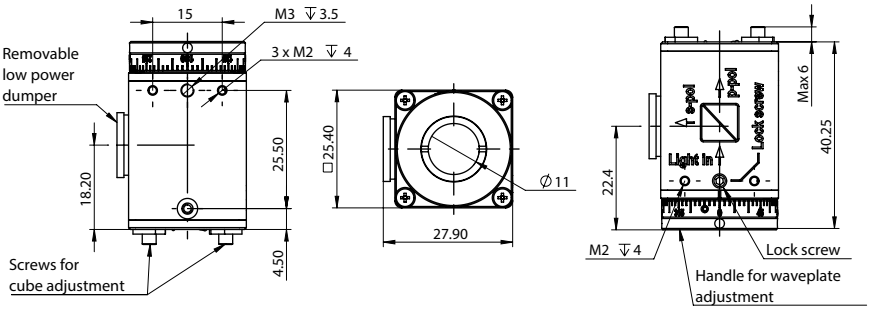
990-0076 Variable Attenuator incorporates a high-performance polarizing cube beamsplitter which reflects s-polarized light at 90° while transmitting p-polarized light. A rotatable λ/2 waveplate is placed in the incident polarized laser beam.

The intensity ratio of the two outgoing beams may be continuously varied without alteration of other beam parameters by rotating the half waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. Pure p-polarization could be selected for maximum transmission, or pure s-polarization for maximum reflection.

Specifications

Clear aperture diameter	10 mm
Polarization contrast	>1:1000
Weight	0.1 kg

Wavelength, nm	LIDT	Catalogue number	Price, EUR
343	3 J/cm² @ 343 nm, 10 Hz, 10 ns	**990-0076-343**	825
355	3 J/cm² @ 355 nm, 10 Hz, 10 ns	**990-0076-355**	825
515	6 J/cm² @ 515 nm, 10 Hz, 10 ns	**990-0076-515**	800
532	6 J/cm² @ 532 nm, 10 Hz, 10 ns	**990-0076-532**	800
1030	15 J/cm² @ 1030 nm, 10 Hz, 10 ns	**990-0076-1030**	800
1064	15 J/cm² @ 1064 nm, 10 Hz, 10 ns	**990-0076-1064**	800



COMPACT VARIABLE LASER POWER ATTENUATORS – 990-0077, 990-0078

Features

- Attenuation range for transmitted beam:
  - typical: 0.1% – 98%
  - for 257 nm and 266 nm: 1% – 94%
- Attenuation range for reflected beam
  - typical: 2% – 99.9%
  - for 257 nm and 266 nm: 4% – 99%
- Extinction ratio: >1:1000
- Clear aperture:
  - 990-0077 – Ø17 mm
  - 990-0078 – Ø22 mm

990-0077 and **990-0078** Laser Power Attenuators

This manual variable attenuator series is designed to continuously attenuate linearly polarized laser beams. They feature precision opto-mechanics and high-LIDT optical components incorporated in a compact housing to ensure stable and reliable performance.

Attenuators are based on Brewster-type thin film polarizer fixed at 56° and a quartz half waveplate. The Polarizer's angle of incidence can be manually adjusted to get the best contrast or to manipulate the direction of the reflected s-polarized beam. The waveplate is housed in a 360° continuous rotation mount, which can be manually rotated to control the output power of the transmitted and reflected beams.

The intensity of either exit beam or their intensity ratio can be controlled over a wide dynamic range without alteration of other beam parameters. Pure p-polarization could be selected for maximum transmission, or pure s-polarization for maximum reflection.

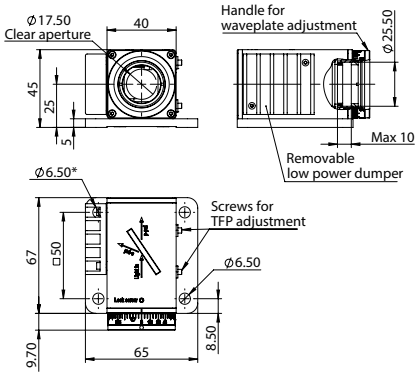
The s-polarization exit port can be blocked with a removable low-power dumper which absorbs laser power up to 5 W. External beam dumps are recommended for high-power applications.

990-0077 COMPACT VARIABLE ATTENUATORS WITH A CLEAR APERTURE OF Ø17 mm

Specifications

Clear aperture diameter	17 mm
Polarization contrast	>1:1000

Wavelength, nm	LIDT	Attenuation range (Tp)	Catalogue number	Price, EUR
257	1 J/cm² @ 257 nm, 10 Hz, 10 ns	1% – 94%	990-0077-257	1090
266	1 J/cm² @ 266 nm, 10 Hz, 10 ns	1% – 94%	990-0077-266	1090
343	3 J/cm² @ 343 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-343	1015
355	3 J/cm² @ 355 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-355	1015
515	5 J/cm² @ 515 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-515	925
532	5 J/cm² @ 532 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-532	925
1030	10 J/cm² @ 1030 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-1030	975
1064	10 J/cm² @ 1064 nm, 10 Hz, 10 ns	0.1% – 98%	990-0077-1064	975

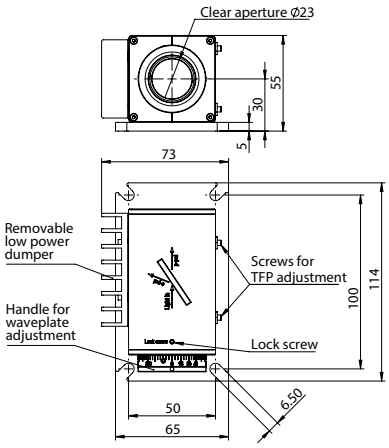


990-0078 COMPACT VARIABLE ATTENUATORS WITH A CLEAR APERTURE OF Ø22 mm

Specifications

Clear aperture diameter	22 mm
Polarization contrast	>1:1000

Wavelength, nm	LIDT	Attenuation range (Tp)	Catalogue number	Price, EUR
257	1 J/cm² @ 257 nm, 10 Hz, 10 ns	1% – 94%	990-0078-257	1790
266	1 J/cm² @ 266 nm, 10 Hz, 10 ns	1% – 94%	990-0078-266	1790
343	3 J/cm² @ 343 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-343	1650
355	3 J/cm² @ 355 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-355	1650
515	5 J/cm² @ 515 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-515	1510
532	5 J/cm² @ 532 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-532	1510
1030	10 J/cm² @ 1030 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-1030	1625
1064	10 J/cm² @ 1064 nm, 10 Hz, 10 ns	0.1% – 98%	990-0078-1064	1625



VARIABLE ATTENUATOR FOR Nd:YAG LINEARLY POLARIZED LASER BEAM **990-0070**

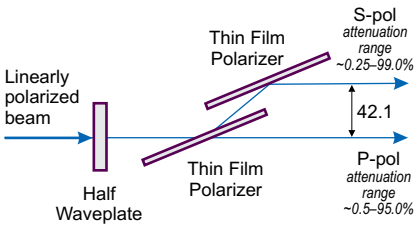
Features

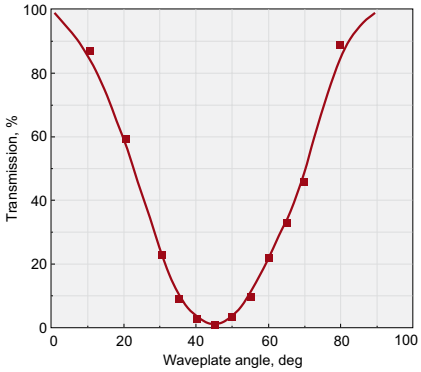
- Divides laser beam into two parallel beams of manually adjustable intensity ratio
- Large dynamic range
- Transmitted beam shift ~0.5 mm
- High Optical damage threshold

Note: Movable base **820-0090**, Rod Holder **820-0050-02** and standard rod should be ordered separately.

This variable attenuator/beamsplitter consists of special design opto-mechanical Adapter and precision opto-mechanical holder 840-0197. Two thin film brewster type polarizers, which reflect s-polarized light while transmitting p-polarized light, are housed into adapter. A quartz multiple order half waveplate is housed in rotating holder 840-0197.

The intensity ratio of those two beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. P-polarization could be selected for maximum transmission, or high-purity s-polarization could be reflected when maximum attenuation of the transmitted beam takes place. The holder 840-0197 allows to adjust angle of incidence of the Thin Film Brewster type polarizers by ±2° and to get the maximum polarization contrast.





Specifications

Aperture diameter	17 mm
Damage threshold	5 J/cm² pulsed at 1064 nm, typical
Polarization contrast (after 1st polarizer)	>1:200
Polarization contrast (after 2nd polarizer)	>1:500
Weight	0.35 kg

Wavelength, nm	Catalogue number	Price, EUR
266	**990-0070-266H** *	1050
355	**990-0070-355**	780
532	**990-0070-532**	680
1064	**990-0070-1064**	680

* With Zero Order Air-Spaced half waveplate.

Related Products

Neutral Density Filters

Find more at EksmaOptics.com

Thin Film Laser Polarizers for Nd:YAG applications

Find more at EksmaOptics.com

Motorized Variable Attenuator for Linearly Polarized Laser Beam 990-0070M

Find more at EksmaOptics.com

Beam dumps 990-0800, 990-0820

Find more at EksmaOptics.com

VARIABLE ATTENUATOR FOR Nd:YAG LINEARLY POLARIZED LASER BEAM **990-0071**

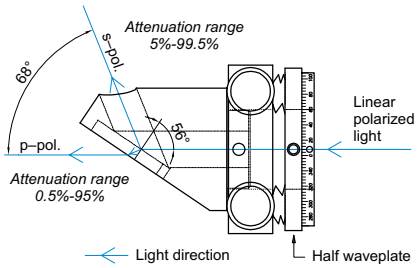
Features

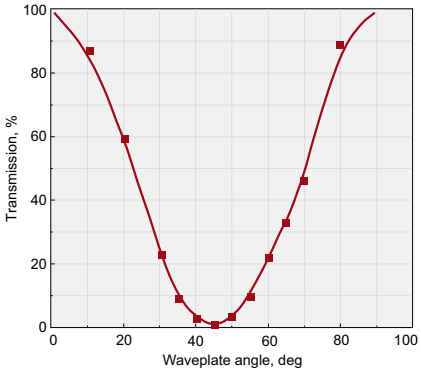
- Divides laser beam into separated by 68° angle two beams of manually adjustable intensity ratio
- Large dynamic range
- Transmitted beam shift ~0.5 mm
- High Optical damage threshold

Note: Solid Base Height Extender **820-0210** and Standard Rod **820-0020-20** should be ordered separately

This variable attenuator/beamsplitter consists of special design opto-mechanical adapter for polarizer at 56° 840-0117A or 840-0118A and precision opto-mechanical holder 840-0197. Thin Film Brewster type polarizer, which reflect s-polarized light at 56° while transmitting p-polarized light, is housed into adapter for polarizer at 56°. Quartz multiple order half waveplate is housed in rotating holder 840-0197.

The intensity ratio of those two beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. P-polarization could be selected for maximum transmission, or high-purity s-polarization could be reflected when maximum attenuation of the transmitted beam takes place. The holder 840-0197 allows to adjust Angle Of Incidence of the Thin Film Brewster type polarizer by ±2° and to get the maximum polarization contrast.





Specifications

Aperture diameter	10 mm
Damage threshold	5 J/cm² pulsed at 1064 nm, typical
Polarization contrast	>1:200
Weight	0.25 kg

Wavelength, nm	Catalogue number	Price, EUR
266	**990-0071-266H** *	720
355	**990-0071-355**	505
532	**990-0071-532**	475
1064	**990-0071-1064**	475

* With Zero Order Air-Spaced half waveplate.

Related Products

Motorized Variable Attenuator for Linearly Polarized Laser Beam 990-0071M

Find more at EksmaOptics.com

Multiple Order Plates for Nd:YAG applications

See page 22

Thin Film Laser Polarizers for Nd:YAG applications

See page 17

VARIABLE ATTENUATOR FOR Nd:YAG LASER PULSES **990-0072**

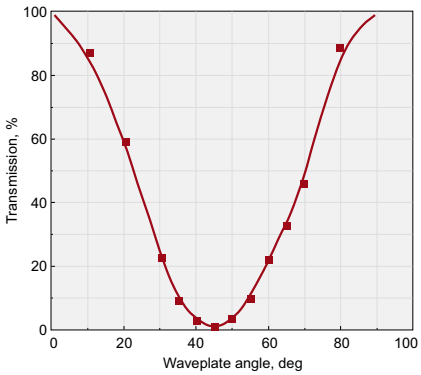
Features

- Divides laser beam into two beams of manually adjustable intensity ratio separated by 68° angle
- Large dynamic range
- Transmitted beam shift ~1 mm
- High optical damage threshold
- Motorized version 990-0072M available online

This variable attenuator/beamsplitter consists of Polarizer Holder 840-0190-01 and Kinematic Mirror/Beamsplitter Mount 840-0056-12. UVFS Thin Film Brewster type polarizer diameter 50.8 mm, which reflect s-polarized light while transmitting p-polarized light, is housed into Beamsplitter Mount 840-0056-12. A quartz Multi Order Half Waveplate diameter 25.4 mm housed in rotating holder 840-0190-01 and placed in the incident linearly polarized laser beam.

The intensity ratio of those two separted and different polarized beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. P-polarization could be selected for maximum transmission, or high-purity s-polarization could be reflected when maximum attenuation of the transmitted beam takes place.

The holder 840-0056-12 allows to adjust Angle Of Incidence of the Thin Film Brewster type polarizers by ±4.5° and to get the maximum extinction contrast. The mounts are on rods, rod holders and Movable Base 820-0090. The optical axis height from the table top can be adjusted in the range 78-88 mm. Other height can be offered as custom changing the standard rods and rod holders into higher.

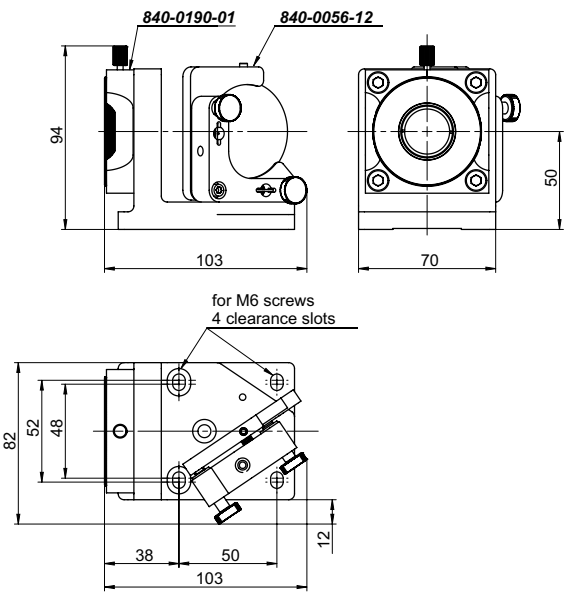


Specifications

Clear aperture diameter	22 mm
Damage threshold	>5 J/cm², 10 ns pulse, 10 Hz at 1064 nm, typical
Polarization contrast	>1:200
Transmitted beam shift	~1 mm
Weight	0.45 kg

Wavelength, nm	Catalogue number	Price, EUR
266	**990-0072-266H ***	1115
355	**990-0072-355**	795
532	**990-0072-532**	765
1064	**990-0072-1064**	785

* With Zero Order Air-Spaced half waveplate.



VARIABLE ATTENUATOR FOR Nd:YAG LASER PULSES **990-0073**

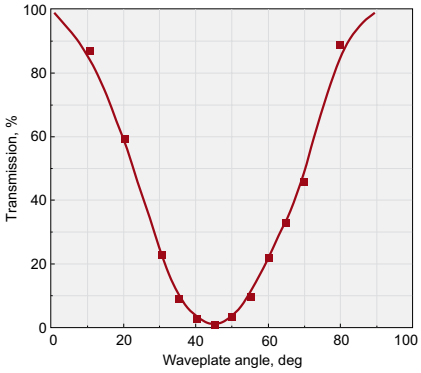
Features

- Divides laser beam into two beams of manually adjustable intensity ratio separated by 68° angle
- Large dynamic range
- Transmitted beam shift ~1.4 mm
- High optical damage threshold

This variable attenuator/beamsplitter consists of Polarizer Holder 840-0180-A2 and Kinematic Mirror/Beamsplitter Mount 840-0056-13. UVFS Thin Film Brewster type polarizer Ø76.2 mm, which reflect s-polarized light while transmitting p-polarized light, is housed into Beamsplitter Mount 840-0056-13. A quartz Multi Order Half Waveplate Ø40 mm housed in rotating holder 840-0180-A2 and placed in the incident linearly polarized laser beam.

The intensity ratio of those two separated and different polarized beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. P-polarization could be selected for maximum transmission, or high-purity s-polarization could be reflected when maximum attenuation of the transmitted beam takes place.

The holder 840-0056-13 allows to adjust Angle Of Incidence of the Thin Film Brewster type polarizers by ±4.5° and to get the maximum extinction contrast. The mounts are on rods, rod holders and Movable Base 820-0090. The optical axis height from the table top can be adjusted in the range 92-98 mm. Other height can be offered as custom changing the standard rods and rod holders into higher.

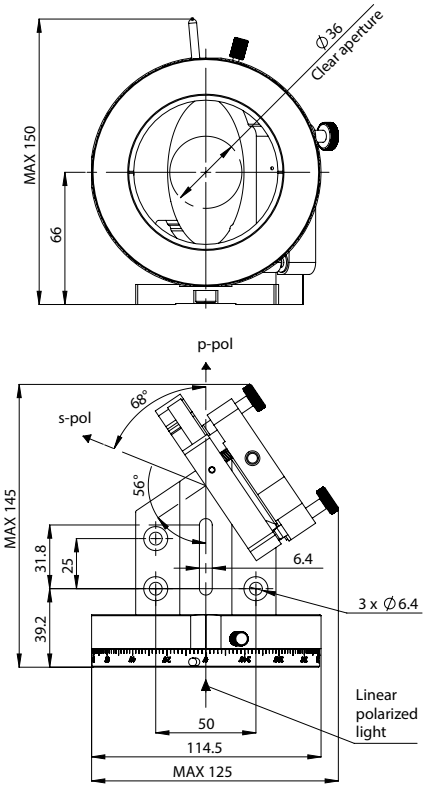


Specifications

Clear aperture diameter	36 mm
Damage threshold	>5 J/cm², 10 ns pulse, 10 Hz at 1064 nm, typical
Polarization contrast	>1:200
Transmitted beam shift	~1.4 mm
Weight	0.6 kg

Wavelength, nm	Catalogue number	Price, EUR
266	**990-0073-266H ***	1820
355	**990-0073-355**	1490
532	**990-0073-532**	1470
1064	**990-0073-1064**	1545

* With Zero Order Air-Spaced half waveplate.



Nd:YAG Laser Crystals

Nd:YAG CRYSTALS (STANDARD RODS)

Specifications of standard Nd:YAG Laser Rods

Nd doping level	0.8% or 1.1%
Orientation	<111> crystalline direction
Surface quality	10 – 5 scratch & dig (MIL-PRF-13830B)
Surface flatness	λ/10 at 633 nm
Parallelism	< 10 arcsec
Perpendicularity	< 5 arcmin for plano/plano ends
Diameter tolerance	+0 / -0.05 mm
Length tolerance	+1 / -0.5 mm
Clear aperture	> 90 % of full aperture
Chamfers	0.1 mm at 45 deg
Coating	Both sides coated AR @ 1064 nm, R < 0.2%, AOI = 0 deg
Barrel grooving	All Ø6.35, 8, 10, 12 mm rods with barrel grooving

Diameter, mm	Length, mm	Doping, %	Wedge of the ends, deg	Description	Coating	Application	Catalogue number
3	53	0.9	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-3-0.9-A/A**
3	65	0.8	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-3-0.8-A/A**
3	65	1.1	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-3-1.1-A/A**
4	65	0.8	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-4-0.8-A/A**
4	65	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-4-1.1-A/A**
6.35	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-6.35-1.1-A/A**
8	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-8-1.1-A/A**
10	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-10-1.1-A/A**
12	100*	0.8	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-12-0.8-A/A**
12	100*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	**E-Y-12-1.1-A/A**

* Rods with barrel grooving, except 10 mm at both ends of the rod without grooving.

Related Products

Laser Safety Eyewear
Find more at EksmaOptics.com

Visualizator 990-0840
Find more at EksmaOptics.com

Pockels Cells for Q-Switching
Find more at EksmaOptics.com

NONLINEAR CRYSTALS for SHG @ 1064 nm

LBO CRYSTALS

LBO crystals feature the highest damage threshold, small walk-off and have high efficiency. These crystals are the best choice for harmonics generation of relatively high power and high repetition rate Q-switched or mode-locked lasers.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3×3×10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-401**	245
3×3×15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-402**	325
4×4×10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-301**	510
4×4×15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-302**	630
4×4×20	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-303**	745
5×5×10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-501**	655
5×5×15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-503**	765
5×5×20	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	**LBO-502**	940
3×3×15	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-404**	325
3×3×20	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-405**	405
3×3×30	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-409**	710
3×3×50	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-410**	1300
4×4×10	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-304**	510
4×4×15	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-305**	630
4×4×20	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	**LBO-306**	745

KTP CRYSTALS

KTP crystals feature the highest efficiency and are suited for low average power or CW lasers applications. These crystals are temperature change insensitive and operate with sharply focused or highly divergent laser beams.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3×3×5	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	**KTP-401**	112
3×3×10	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	**KTP-402**	166
4×4×6	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	**KTP-403**	170
7×7×9	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	**KTP-404**	765

DKDP CRYSTALS

Large aperture DKDP crystals are used for high energy Q-switched lasers with large beam diameters.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
15×15×13	36.5	45	Type 1	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	**DKDP-401**	890
15×15×13	53.5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	**DKDP-402**	890
12×12×20	53.5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	**DKDP-404**	830
15×15×20	53.5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	**DKDP-405**	950

Please contact EKSMA OPTICS for special OEM and large volume pricing.

Related Products

Ovens with thermocontrollers and heaters for different crystal sizes

Find more at EksmaOptics.com

High-temperature crystal oven HP200 for NCPM (149°C)

Find more at EksmaOptics.com

NONLINEAR CRYSTALS for THG @ 1064 nm

LBO CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3×3×10	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	**LBO-406**	245
3×3×15	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	**LBO-407**	325
5×5×15	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	**LBO-508**	765

DKDP CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
12×12×20	59.3	0	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	**DKDP-403**	830
15×15×20	59.3	0	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	**DKDP-406**	950

NONLINEAR CRYSTALS for 4HG @ 1064 nm

BBO CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
7×7×6	47.6	90	Type 1	P/P @ 532/266 nm	SHG@532 nm	**BBO-700**	925

KDP CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
12×12×5	76.5	45	Type 1	AR/AR @ 532/266 nm	SHG@532 nm	**KDP-401**	490
15×15×7	76.5	45	Type 1	AR/AR @ 532/266 nm	SHG@532 nm	**KDP-402**	510

Housing Accessories

Ring Holders for Nonlinear Crystals

Find more at EksmaOptics.com

Positioning Mount 840-0199 for Nonlinear Crystal Housing

Find more at EksmaOptics.com

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