

LASER HARMONIC SEPARATORS

FEATURES

- Offered on Ø 0.5 or 1 inch UV FS substrates with surface flatness $\lambda/10$

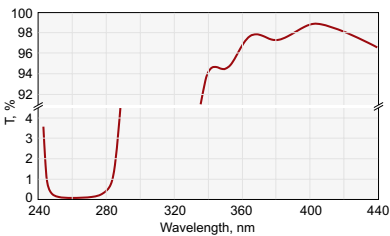
Harmonic separators are dichroic beamsplitters that reflect one wavelength and transmit others. Reflectance is better than 99.5% for the wavelength of interest and transmittance is at least 90% for the rejected wavelengths. The rear surface of harmonic separators is antireflection coated. If possible use shorter wavelength for reflection and longer wavelengths for transmission in order to have higher reflection/transmission coefficients.

COATING

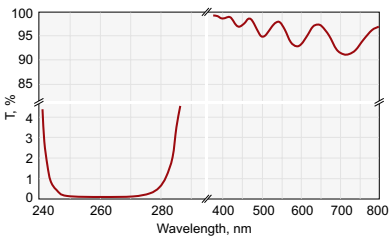
Technology	Electron beam multilayer dielectric
Adhesion and Durability	Per MIL-C-675A. Insoluble in lab solvents
Clear Aperture	Exceeds central 85% of diameter
Coated Surface Flatness	$\lambda/10$ at 633 nm over clear aperture
Back side antireflection coated	AOI 45°, R<0.5% AOI 0°, R<0.25%
Laser Damage Threshold	>100 mJ/cm ² , 50 fsec pulse, 800 nm typical

SUBSTRATE

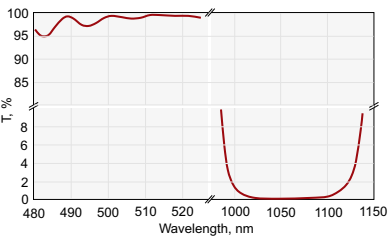
Material	UV grade Fused Silica
S1 Surface Flatness	$\lambda/10$ typical at 633 nm
S1 Surface Quality	20-10 scratch & dig (MIL-PRF-13830B)
S2 Surface Flatness	$\lambda/10$ typical at 633 nm
S2 Surface Quality	20-10 scratch & dig (MIL-PRF-13830B)
Diameter Tolerance	+0.00 mm; -0.12 mm
Thickness Tolerance	±0.25 mm
Parallelism	< 30 arcsec
Chamfer	0.3 mm at 45° typical



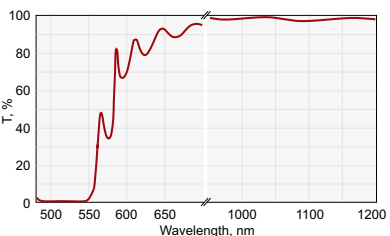
042-2405. HR>99.5% @ 257-275 nm + HT>95% @ 390-410 nm, AOI=45°



042-2485. HR>99.5% @ 257-275 nm + HT>90% @ 400+800 nm, AOI=45°



042-6515. HR>99.5% @ 1030 nm + HT>93% @ 515 nm, AOI=45°



042-5135. HR>99.5% @ 500-530 nm + HT>95% @ 1000-1060 nm, AOI=45°

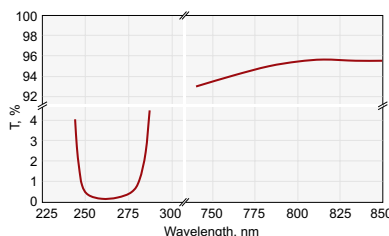
Reflected wavelength, nm, R > 99.5%	Transmitted wavelength, nm	Transmission, %	Ø12.7x3 mm		Ø25.4x3 mm		Ø50.8x8 mm	
			Catalogue number	Price, EUR	Catalogue number	Price, EUR	Catalogue number	Price, EUR

AOI = 0 deg. Substrate material: UV grade Fused Silica

257 – 275	780 – 820	>95	041-2800	145	042-2800	175	045-2800	265
257 – 275	390 – 410	>95	041-2400	145	042-2400	175	045-2400	265
257 – 275	400 + 800	>90	041-2480	165	042-2480	195	045-2480	295
390 – 410	780 – 820	>95	041-4800	145	042-4800	175	045-4800	265
800	400	>93	041-0840	140	042-0840	170	045-0840	255
333 – 353	1000 – 1060	>95	041-3130	135	042-3130	165	045-3130	245
333 – 353	500 – 530	>95	041-3450	135	042-3450	165	045-3450	245
333 – 353	515 + 1030	>90	041-3530	155	042-3530	185	045-3530	275
500 – 530	1000 – 1060	>95	041-5130	135	042-5130	165	045-5130	245
1030	515	>93	041-6510	140	042-6510	170	045-6510	255

AOI = 45 deg. Substrate material: UV grade Fused Silica

257 – 275	780 – 820	>95	041-2805	145	042-2805	175	045-2805	265
257 – 275	390 – 410	>95	041-2405	145	042-2405	175	045-2405	265
257 – 275	400 + 800	>90	041-2485	165	042-2485	195	045-2485	295
390 – 410	780 – 820	>95	041-4805	145	042-4805	175	045-4805	265
800	400	>93	041-0845	140	042-0845	170	045-0845	255
333 – 353	1000 – 1060	>95	041-3135	135	042-3135	165	045-3135	245
333 – 353	500 – 530	>95	041-3455	135	042-3455	165	045-3455	245
333 – 353	515 + 1030	>90	041-3535	155	042-3535	185	045-3535	275
500 – 530	1000 – 1060	>95	041-5135	135	042-5135	165	045-5135	245
1030	515	>93	041-6515	140	042-6515	170	045-6515	255



042-2805. HR>99.5% @ 257-275 nm + HT>95% @ 780-820, AOI=45°

RELATED PRODUCTS

Pellin-Broca Prisms.

See page 1.53

Adapter for Beamsplitter at 45° 840-0116.

Find more at EksmaOptics.com

Kinematic Mirror and Beamsplitter Mount 840-0020.

Find more at EksmaOptics.com