

LASER HARMONIC SEPARATORS

Offered on Ø 0.5 or 1 inch UV FS substrates with surface flatness

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

SUBSTRATE

Material	UV grade Fused Silica
S1 Surface Flatness	
S1 Surface Quality	20–10 scratch & dig (MIL-PRF-13830B)
S2 Surface Flatness	
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
Coated Surface Flatness	
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

Reflecte wavelength, nm, R > 99.5%	Transmitted wavelength, nm	Transmission, %	AOI	Substrate material	Catalogue number		
					Ø12.7x3 mm	Ø25.4x3 mm	Ø50.8x8 mm
257-275	780-820	>95	0	UV FS	041-2800	042-2800	045-2800
257-275	780-820	>95	45	UV FS	041-2805	042-2805	045-2805
257-275	390-410	>95	0	UV FS	041-2400	042-2400	045-2400
257-275	390-410	>95	45	UV FS	041-2405	042-2405	045-2405
257-275	400+800	>90	0	UV FS	041-2480	042-2480	045-2480
257-275	400+800	>90	45	UV FS	041-2485	042-2485	045-2485
390-410	780-820	>95	0	UV FS	041-4800	042-4800	045-4800
390-410	780-820	>95	45	UV FS	041-4805	042-4805	045-4805
800	400	>93	0	UV FS	041-0840	042-0840	045-0840
800	400	>93	45	UV FS	041-0845	042-0845	045-0845
333-353	1000-1060	>95	0	UV FS	041-3130	042-3130	045-3130
333-353	1000-1060	>95	45	UV FS	041-3135	042-3135	045-3135
333-353	500-530	>95	0	UV FS	041-3450	042-3450	045-3450
333-353	500-530	>95	45	UV FS	041-3455	042-3455	045-3455
333-353	515+1030	>90	0	UV FS	041-3530	042-3530	045-3530
333-353	515+1030	>90	45	UV FS	041-3535	042-3535	045-3535
500-530	1000-1060	>95	0	UV FS	041-5130	042-5130	045-5130
500-530	1000-1060	>95	45	UV FS	041-5135	042-5135	045-5135
1030	515	>93	0	UV FS	041-6510	042-6510	045-6510
1030	515	>93	45	UV FS	041-6515	042-6515	045-6515

RELATED PRODUCTS

Pellin-Broca Prisms

See page 1.39

Adapter for Beamsplitter at 45°
840-0116

See page 8.72



Kinematic Mirror and Beamsplitter Mount
840-0020

See page 8.54

