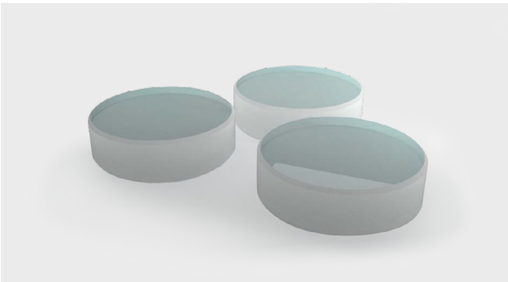
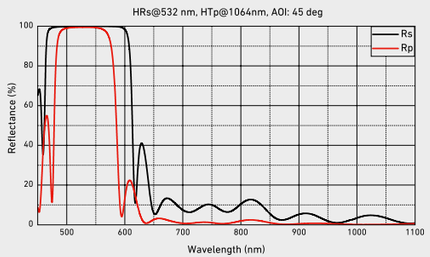
Wavelength separators and combiners





Wavelength separators and combiners provide spatial separation or combination of different spectral components. These optical elements feature highly reflective dielectric coatings on the front side and antireflective dielectric coatings for transmissive spectral components on the rear side of UV grade fused silica substrates.

Main features

- Substrates fabricated from high-quality UV grade fused silica
- Standard substrate dimensions are ø25,4 x 5 mm
- 0° or 45° angle of incidence selection
- Custom coatings, substrate material and dimensions are available upon request

Application examples

- Laser separation of the laser fundamental wavelength and its harmonics
- Laser beam combining
- Laser resonator pump (rear) mirror

Standard specifications

WAVELENGTH SEPARATORS AND COMBINERS	
Substrate material	UV grade fused silica
Clear aperture	>85%
Face dimensions tolerance	+0/-0,15 mm
Thickness tolerance	±0,25 mm
Parallelism error	<30 arcsec
Protective chamfers	<0,35 mm at 45°
Surface quality	20-10 S-D
Surface flatness	<λ/8@632,8 nm
Laser induced damage threshold	>10 J/cm²@1064 nm, 10 ns (for 1020 nm - 1070 nm reflecting separator)

Standard products

MATERIAL	DIMENSIONS	REFLECTED WAVELENGTH RANGE	TRANSMITTED WAVELENGTH RANGE	AOI	SKU	PRICE
UVFS	ø25,4 x 5 mm	R>99,5%@254-266 nm	T>90%@340-355 nm + 510-535 nm + 1020-1070 nm	0°	6359	88 €
		R>99,5%@340-355 nm	T>93%@510-535 nm + 1020-1070 nm	0°	6544	74 €
		R>99,5%@385-415 nm	T>95%@770-830 nm	0°	6545	74 €
		R>99,5%@510-535 nm	T>95%@1020-1070 nm	0°	6546	74 €
		R>99,5%@770-830 nm	T>95%@385-415 nm	0°	6548	74 €
		R>99,5%@770-830 nm	T>95%@510-535 nm	0°	6547	74 €
		R>99,5%@1020-1070 nm	T>95%@510-535 nm	0°	6549	74 €
		R>99,5%@1020-1070 nm	T>95%@800-810 nm	0°	6550	74 €
		R>99,5%@1020-1070 nm	T>95%@940-980 nm	0°	6551	195 €
		R>99,5%@1520-1570 nm	T>95%@940-980 nm	0°	6552	90 €
		R>99,5%@1890-1990 nm	T>95%@780-820 nm	0°	6553	98 €
		R>99,5%@2000-2100 nm	T>95%@780-820 nm	0°	6554	110 €
		Rs>99,5%, Rp>98,5%@254-266 nm	Ts>85%, Tp>95%@340-355 nm + 510-535 nm + 1020-1070 nm	45°	6555	88 €
		Rs>99,6%, Rp>99,2%@340-355 nm	Ts>91%, Tp>95%@510-535 nm + 1020-1070 nm	45°	6556	74 €
		Rs>99,6%, Rp>99,2%@385-415 nm	Ts>93%, Tp>97%@770-830 nm	45°	6557	74 €
		Rs>99,6%, Rp>99,2%@510-535 nm	Ts>93%, Tp>97%@1020-1070 nm	45°	6558	74 €
		Rs>99,6%, Rp>99,2%@770-830 nm	Ts>93%, Tp>97%@385-415 nm	45°	6560	74 €
		Rs>99,6%, Rp>99,2%@770-830 nm	Ts>93%, Tp>97%@510-535 nm	45°	6559	74 €
		Rs>99,6%, Rp>99,2%@1020-1070 nm	Ts>93%, Tp>97%@510-535 nm	45°	6561	74 €
		Rs>99,6%, Rp>99,2%@1020-1070 nm	Ts>93%, Tp>97%@800-810 nm	45°	6562	74 €
		Rs>99,6%, Rp>99,2%@1020-1070 nm	Ts>93%, Tp>97%@940-980 nm	45°	6563	195 €
		Rs>99,6%, Rp>99,2%@1520-1570 nm	Ts>93%, Tp>97%@940-980 nm	45°	6564	90 €
		Rs>99,6%, Rp>99,2%@1890-1990 nm	Ts>93%, Tp>97%@780-820 nm	45°	6565	98 €
		Rs>99,6%, Rp>99,2%@2000-2100 nm	Ts>93%, Tp>97%@780-820 nm	45°	6566	110 €