

Achromatic (broadband) waveplates



4Lasers provide mounted achromatic (broadband) half-wave and quarter-wave retardation waveplates for several bands in the wavelength range of 460 nm - 1700 nm. Air-spaced construction enables to use these waveplates for high-power applications. These

waveplates are ideal for multiple wavelengths and broadband operation, due to their constant retardance over a particular broad wavelength range.

Main features

- Air-spaced design
- Mounted in ø25,4 x 6 mm black anodized metal mount
- ø12 mm and ø18 mm clear aperture selection
- Broadband antireflective coatings (R<0,5%) on each surface
- Custom size, operating wavelength range and retardation available upon request

Application examples

- Linear-to-circular polarization transformation and vice versa
- Linear polarization rotation
- Optical isolation

Standard specifications

ACHROMATIC (BROADBAND) WAVEPLATES	
Material	High-purity crystalline quartz and magnesium fluoride
Type	Air-spaced
Retardation tolerance	$\lambda/100@20\text{ }^\circ\text{C}$
Parallelism error	<math><5\text{ arcsec}</math>
Surface quality	40-20 S-D
Transmitted wavefront distortion	<math><\lambda/8@632,8\text{ nm}</math>
Coatings	BBAR[R<0,5%] on each surface
Laser induced damage threshold	>8 J/cm ² @1064 nm, 10 ns (for 650-1100 nm waveplates)
Mount	Mounted in ø25,4 x 6 mm black anodized metal mount

Standard products

RETARDATION	WAVELENGTH	CLEAR APERTURE	SKU	PRICE
$\lambda/2$	460-650 nm	ø12 mm	8107	395 €
		ø18 mm	8109	595 €
	650-1100 nm	ø12 mm	8111	395 €
		ø18 mm	8113	595 €
	1000-1700 nm	ø12 mm	8115	395 €
		ø18 mm	8117	595 €
$\lambda/4$	460-650 nm	ø12 mm	8106	395 €
		ø18 mm	8108	595 €
	650-1100 nm	ø12 mm	8110	395 €
		ø18 mm	8112	595 €
	1000-1700 nm	ø12 mm	8114	395 €
		ø18 mm	8116	595 €