

Crystalline quartz waveplates



4Lasers provide mounted crystalline quartz zero-order compensated, air-spaced half-wave and quarter-wave retardance waveplates designed for a particular wavelength in the range of 257 - 1550 nm. Air-spaced construction enables these waveplates to be used for

high-power applications, while zero-order design features lower temperature and wavelength dependence compared to low and multiple order waveplates.

Main features

- Zero-order compensated, air-spaced design
- True first order (FO), optically bonded on UVFS plate waveplates for high power UV application
- Wide quarter and half waveplate selection
- Mounted in ø25,4 x 6 mm black anodized metal mount
- ø18 mm clear aperture
- Antireflective coatings (R<0,15%) on each surface
- Custom size, operating wavelength, and retardation available upon request

Application examples

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

Standard specifications

CRYSTALLINE QUARTZ WAVEPLATES	
Material	High-purity crystalline quartz
Type	Zero order (ZO) compensated, air-spaced and first order (FO), optically bonded for UV application
Available operating wavelength range	200 nm - 2200 nm
Typical retardation tolerance	$\lambda/300@20\text{ }^\circ\text{C}$
Clear aperture	ø18 mm
Parallelism error	<math><5\text{ arcsec}</math>
Surface quality	20-10 S-D
Transmitted wavefront distortion	$\lambda/10@632,8\text{ nm}$
Coatings	Antireflective coatings (R<0,15%) on each surface
LIDT	>12 J/cm ² @1064 nm, 10 ns (for 1064 nm waveplates)
Mount	Mounted in ø25,4 x 6 mm black anodized metal mount

Standard products

CLEAR APERTURE	RETARDATION	ORDER	TYPE	WAVELENGTH	SKU	PRICE
ø18 mm	$\lambda/2$	First order	Optically bonded	257 nm	10759	215 €
				266 nm	10750	215 €
				343 nm	10747	195 €
		Zero order	Air-spaced	355 nm	10748	195 €
				400 nm	8078	195 €
				515 nm	8079	195 €
				532 nm	8080	195 €
				780 nm	8081	195 €
				800 nm	8082	195 €
	$\lambda/4$	First order	Optically bonded	1030 nm	8083	195 €
				1064 nm	8084	195 €
				1550 nm	8085	195 €
		Zero order	Air-spaced	257 nm	15664	215 €
				266 nm	15665	215 €
				343 nm	13325	195 €
				355 nm	13611	195 €
				400 nm	8066	195 €
				515 nm	8067	195 €
Zero order	Air-spaced	532 nm	8068	195 €		
		780 nm	8069	195 €		
		800 nm	8070	195 €		
				1030 nm	8071	195 €
				1064 nm	8072	195 €
				1550 nm	8073	195 €