Telecom Wave Plates

These zero-order telecom wave plates are specifically designed to meet the demanding requirements of WDM component designers using 1550 nm light. The half-wave plate is 91 µm thick while the quarter-wave plate is 137 µm thick. Due to the thickness of the crystal quartz plate, the quarter-wave plate retards the wave by 0.75 λ, which results in a polarization state with the opposite sign of that produced by using a quarter-wave plate with a retardation of 0.25 λ. Zero-order wave plates have the best possible angle, temperature, and wavelength performance.

Specifications

- **Material:** Crystal Quartz
- **Size:** 5.0 mm x 5.0 mm
- **Retardance Accuracy:** λ/500
- **Surface Flatness:** ≥λ/10 @ 633 nm
- **Surface Quality:** 20-10 Scratch-Dig
- Parallelism: 10 arcsec
- **Damage Threshold:** 10 J/cm² @ 1542 nm, 10 ns Pulses, 10 Hz
- **AR Coated:** < 0.25% Per Surface

Features

- Low-Temperature Sensitivity
- Custom Sizes Available
- Custom Center Wavelengths Available

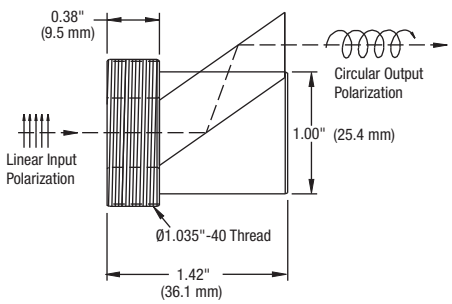
ITEM #	$	£	€	RMB	THICKNESS	DESCRIPTION
WPQ501	$ 85.00	£ 61.20	€ 73,95	¥ 677.45	137 µm	Quarter-Wave Plate, 1550 nm Center Wavelength, 5 mm x 5 mm
WPH502	$ 85.00	£ 61.20	€ 73,95	¥ 677.45	91 µm	Half-Wave Plate, 1550 nm Center Wavelength, 5 mm x 5 mm

λ/4 and λ/2 Fresnel Rhomb Retarders

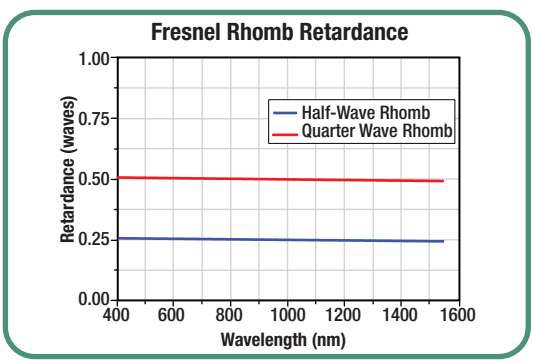
Specifications

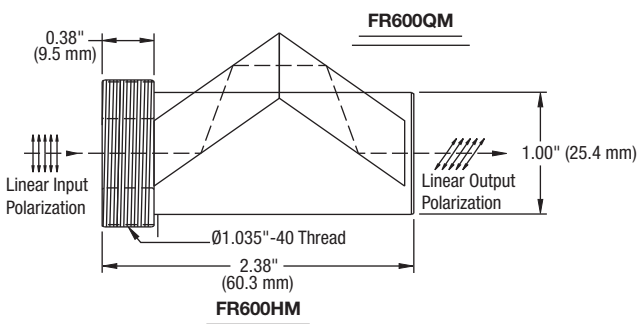
- **Material:** N-BK7
- **Clear Aperture:** 10.0 +0.0/-0.1 mm
- **Surface Quality:** 20-10 Scratch-Dig
- **Damage Threshold:** 2 W/cm²
- **Wavelength Range:** 400 - 1550 nm
- **Retardance Variation:** ±2% 600 – 1550 nm (Max 5% @ 400 nm)

Fresnel rhomb retarders act like broadband wave plates, providing uniform λ/4 or λ/2 retardance over a wider range of wavelengths than is possible with birefringent wave plates. The rhomb is designed so that a 45° phase shift occurs at each internal reflection boundary, creating a total retardance of λ/4. Because the retardance variation is a function of the slowly varying rhomb dispersion, the retardance change with wavelength is much lower than other types of retarders. The half-wave retarder combines two quarter-wave rhombs. Mounted versions allow for easy installation using Thorlabs' rotation mounts such as the RSP1C and PRM1 (see pages 291 and 292).



Please refer to our website for complete models and drawings.





ITEM #	$	£	€	RMB	DESCRIPTION
FR600QM	$ 369.00	£ 265.68	€ 321,03	¥ 2,940.93	Mounted Quarter-Wave Rhomb Retarder
FR600HM	$ 668.00	£ 480.96	€ 581,16	¥ 5,323.96	Mounted Half-Wave Rhomb Retarder