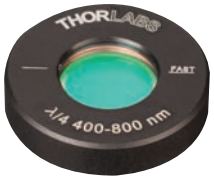
For current pricing, please see our website.

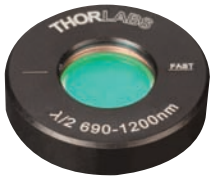
Achromatic Wave Plates: Ø10 mm Clear Aperture

A zero-order achromatic wave plate can be built by aligning the fast axis of a multi-order crystal quartz wave plate with the slow axis of a magnesium fluoride wave plate, where the optical path length difference between the two is either λ/4 or λ/2. The use of crystal quartz and magnesium fluoride allows the dispersive effects to be minimized so that a nominally flat spectral response is achieved over the operating range.

The achromatic wave plates are constructed by placing an etched stainless steel spacing ring between the two multi-order wave plates and epoxying these three pieces together (epoxy is only applied outside of the clear aperture). Then the assembly is placed into a threaded, Ø1", anodized aluminum housing and held in place using an O-ring. The wave plate housing is engraved with a line indicating the orientation of the fast axis as well as an engraving that identifies the spectral operating range and whether it is a λ/4 or λ/2 wave plate.

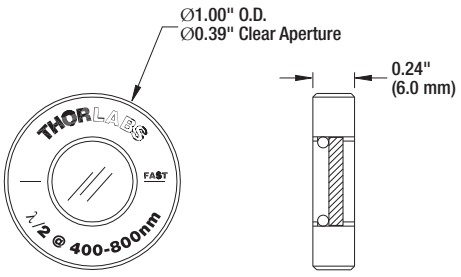


AQWP05M-600



AHWP05M-980

- Spectrally Flat Retardance
- High Energy Air-Spaced Design
- Higher Damage Threshold than Polymer Film Achromatic Wave Plates
- Quarter- and Half-Wave Plates Available
- Remove Wave Plate from Housing by Removing Retaining Ring



Please refer to our website for complete models and drawings.

Thorlabs provides quality OEM components at volume discounted prices. Please email optics@thorlabs.com.

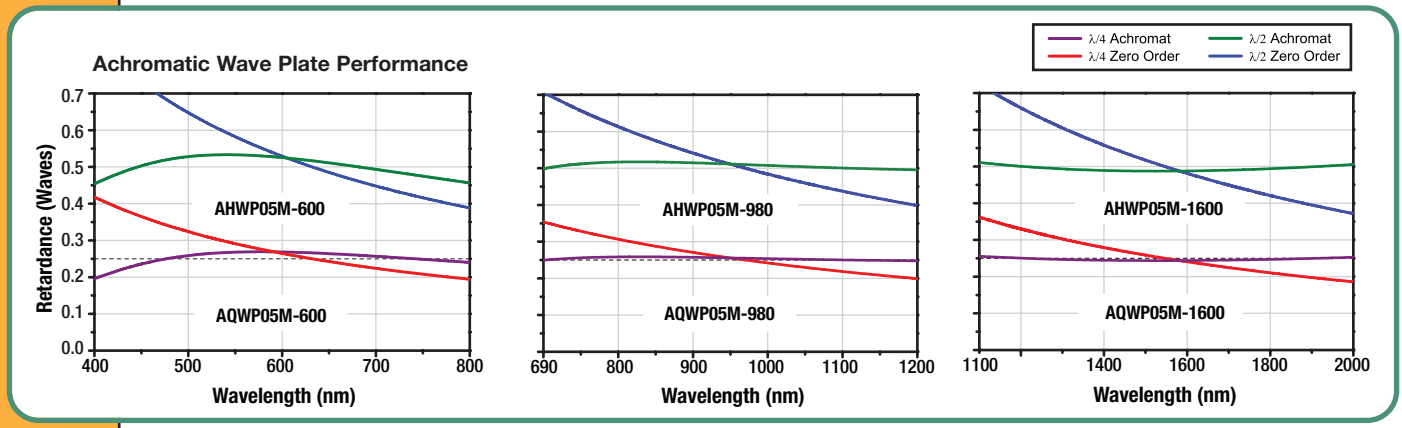
Specifications

- **Material:** Crystal Quartz and Magnesium Fluoride
- **Diameter**
  - 12.7 mm ± 0.1 mm (Unmounted)
  - 25.4 mm (Mounted)
- **Retardance Accuracy (Typ):** λ/40 - λ/230 RMS from Nominal over Spectral Range
- **Beam Deviation (Max):** 10 arcsec
- **Transmitted Wavefront Error:** ≤λ/8 at 633 nm
- **Clear Aperture:** Ø0.39" (Ø10.0 mm)
- **Surface Quality:** 20-10 Scratch-Dig
- **Reflectance:** <0.5% Avg. Per Surface
- **Damage Threshold:** 5 J/cm² at 810 nm, 10 ns Pulse, 10 Hz, Ø0.157 mm Spot Size

RSP1X15
Hybrid Rotation Mount
Adjustable Scale with 15° Fixed Rotation Increments

Wave Plate Sold Separately

See Page 292



Mounted Achromatic Wave Plates*

ACHROMATIC QUARTER-WAVE PLATE	ACHROMATIC HALF-WAVE PLATE	$	£	€	RMB	WAVELENGTH RANGE
AQWP05M-600	AHWP05M-600	$ 783.00	£ 563.76	€ 681,21	¥ 6,240.51	400 – 800 nm
AQWP05M-980	AHWP05M-980	$ 783.00	£ 563.76	€ 681,21	¥ 6,240.51	690 – 1200 nm
AQWP05M-1600	AHWP05M-1600	$ 783.00	£ 563.76	€ 681,21	¥ 6,240.51	1100 – 2000 nm

*The wave plate can be removed from the Ø1" housing. The outer diameter of the unmounted wave plate is 12.7 mm.