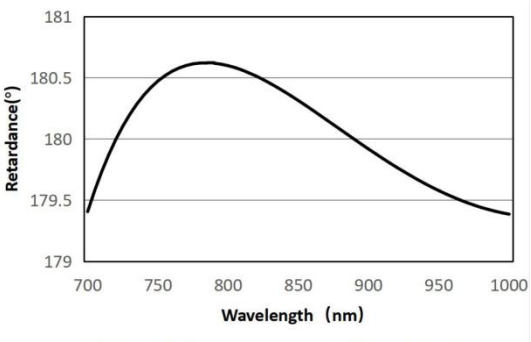
Achromatic Zero-Order Waveplates

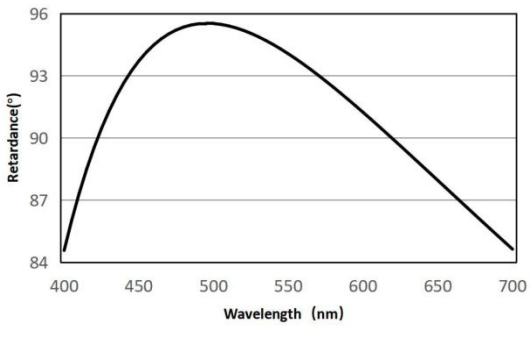
- Material: Crystal Quartz & MgF_2
- Custom dimension and shapes
- Diameter from 5 to 100 mm
- Clear aperture: Central 90% of diameter
- Transmission wavefront: λ/10@632.8nm
- Surface quality: 20-10 S/D
- Parallelism:＜1 ′
- Retardation tolerance up to λ /100 over the wavelength range
- Multiple wavelength ranges available
- High laser damage threshold
- Mounted and unmounted waveplates are available

Achromatic Zero-Order waveplates are made of two different birefringent crystalline materials, such as Crystal Quartz and MgF_2 to achieve wavelength independence comparing to single material waveplates which are very sensitive to the wavelength change. Achromatic waveplates is an ideal choice for tunable, multiple and board band wavelengths applications.

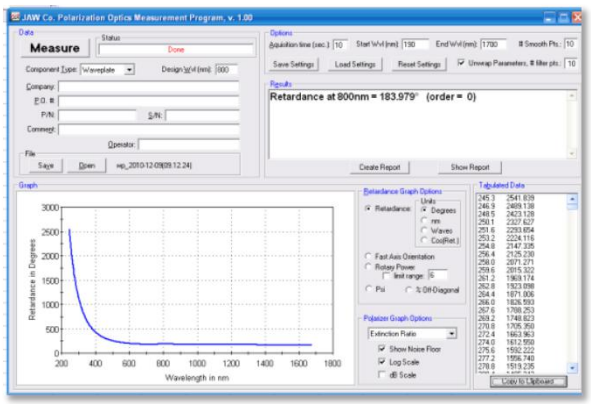
CASTECH designs Achromatic Zero-Order Crystal Quartz-MgF_2 waveplates with working wavelength range larger than 300nm and retardation accuracy better than λ/50 for λ/2 waveplate and better than λ/100 for λ/4 waveplate.

Metrology





JAW Ellipsometry Retardation Measurement



Retardation measured by Ellipsometry

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