

# Single Wavelength Waveplates



- Material: Crystal Quartz, MgF<sub>2</sub>
- Custom dimension and shapes
- Diameter from 5 to 100 mm
- Clear aperture: Central 90% of diameter
- Transmission wavefront:  $\lambda/10@632.8\text{nm}$
- Surface quality: 10-5 S/D
- Parallelism:  $<3''$
- Retardation accuracy:  $\lambda/500$
- Standard and custom coating options available
- High laser damage threshold
- Mounted and unmounted waveplates are available

Wave retarders are used widely in applications like rotating polarization, transforming between linear and circular polarization. CASTECH offers quarter- and half-wave plates in a variety of options including Multiple Order Waveplates, Cemented Zero-Order Waveplates, Airspaced Zero-Order Waveplates, True Zero-Order Waveplates, Dual Wavelength waveplates. CASTECH's waveplates feature high precision, high damage threshold level and more importantly, we have the capacity to design and customize specific ideal waveplates to fit your exact application.

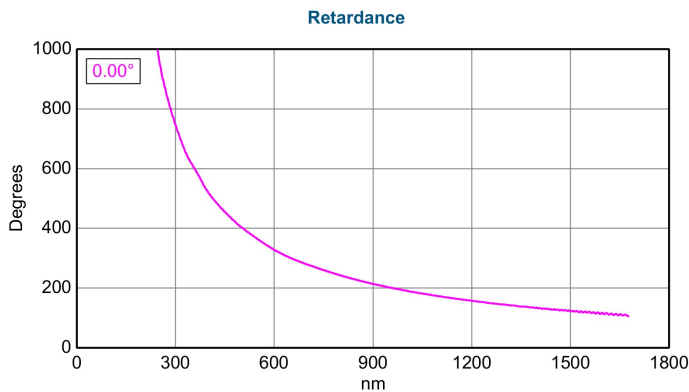
## Metrology



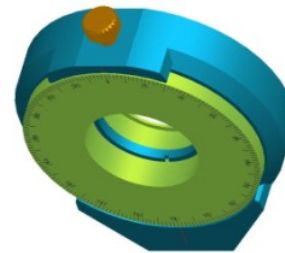
ZYGO Interferometer: parallelism & wave front  
Parallelism measure accuracy: 0.5 "



JAW Ellipsometry Retardation Measurement



Retardance at 1064nm = 180.005 (order = 0) measured by JAW Ellipsometry



Rotating Holder