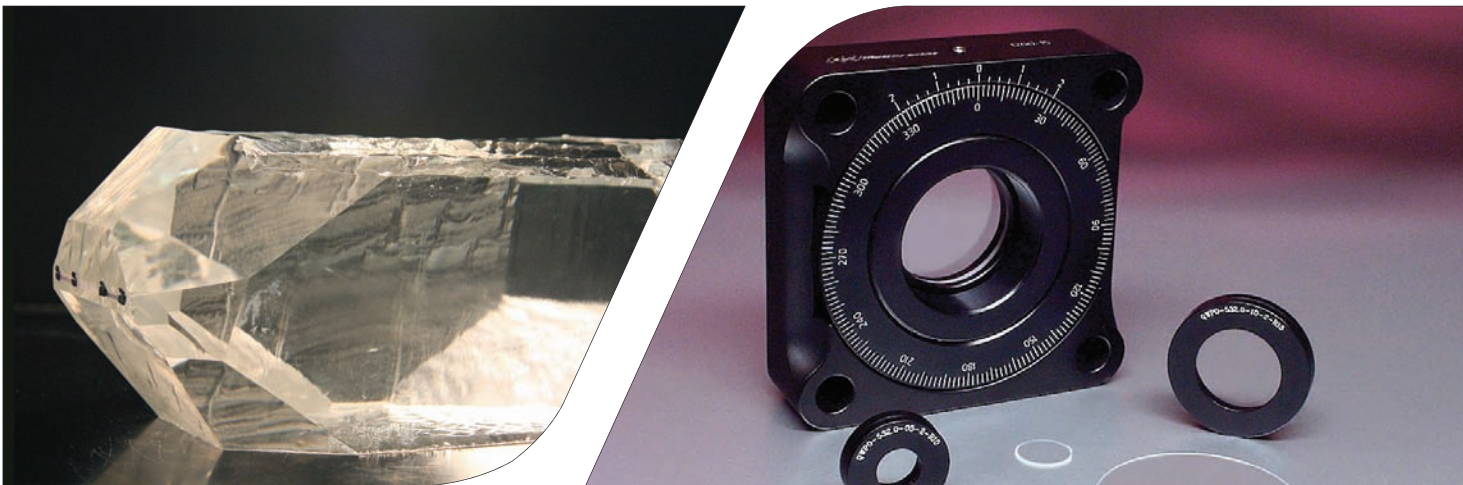


WAVEPLATES | Optics

Surface Tolerances	Precision	Laser Grade	Manufacturing Limit
Surface quality (scratch-dig) depending on material	20-10	10-5	5-2
Surface roughness (Å, RMS)	20	5	1
Transmitted Wavefront Error (waves, P-V @ 633 nm)	λ	$\lambda/10$	$\lambda/25$
Retardance Tolerance	$\lambda/20$ at 23°C	$\lambda/200$ at 23°C	$\lambda/500$ at 23°C

Dimensional Tolerances	Commercial	Precision	Manufacturing Limit
Diameter (mm)	± 0.250	+0.000/-0.250	+0.000/-0.010
Clear aperture (%)	≥ 85	≥ 90	≥ 95

- Quartz, mica, polymer, magnesium fluoride
- Wavelengths from 193 nm to 2020 nm
- High laser damage threshold
- Exceptional retardation control
- Cemented, optical contact, air spaced
- True zero-order, low order and multiple order options
- True optical measurement of retardation tolerance
- Manufacturing dimensions from 5 mm to 50.8 mm
- For materials see pgs 6-7



The general tolerance specifications above provide a guideline regarding manufacturing capabilities for uncoated optics ranging in size from 3-100 mm. The manufacturing limits are not absolute and may vary depending on material; tighter tolerances may be possible. Part specific tolerances may vary. All specifications do not need to be from single column.