

PFG Optics – Standard and Best Tolerances

(for reference only as PFG constantly strives to exceed expectations)

Diameters

Standard: ± 0.05 mm

Best: ± 0.010 mm for thick edge parts (5+mm), $+0/-0.015$ for thin edges (<5mm)

Center Thickness

Standard: ± 0.1 mm

Best: ± 0.025 mm

Sags

Standard: ± 0.05 mm

Best: ± 0.010 mm

Clear Aperture (minimum)

Standard: 85%

Best: 0.5 mm or more from edge of finished lens

Radius (larger of the 2)

Standard: ± 8 fringes of $\pm 0.1\%$ of radius

Best: ± 1 fringe power or ± 0.003 mm

Irregularity at 633nm

Standard: 0.5 fringe from test plate reading or interferometers

Best: 0.2 fringe reading from interferometer only

0.1 fringe possible, dependent on geometry

Lens Centering

Standard: 0.01 mm ETD or 1 minute deviation

Best: 0.003 mm ETD or 20 seconds deviation

Wedge Prism

Standard: ± 1 minute TIA

Best: ± 15 seconds TIA

Bevels

Standard: 0.5 mm max. face

Best: 0.25 mm max. face possible, dependent on geometry

Scratch-Dig

Standard: 60-40

Best: 10-5 possible, major cost driver

Surface Roughness

Standard: 15 Angstroms

Best: 5 Angstroms possible, dependent on material type and geometry

AR Coating (Rave)

V coat $R < 0.2\%$ possible, dependent on wavelength band and AOI

NOTE: "Best" tolerances are typically cost drivers and may require longer delivery times