

Technologies

# High-End Finishing

Dimensions [ISO 10110-1]		
Diameter	mm	6 - 300
Tolerance	mm	± 0.03
Center thickness	mm	< 60
Tolerance	mm	± 0.01
Surface form [ISO 10110-1; 12]		geometry dependent up to
Radius of curvature - local cc	mm	15
Clear aperture	% of Ø	90
Clear aperture surface slope	degree	75
Surface form tolerances (ISO 10110-5) and Aspheric surfaces (ISO 10110-12)		
3/ A (B, C) RMSx < D; "lambda" = E; slope < F; slope integration length = G; spatial sampling resolution = H; see also ISO 14999-4		
Tolerance of radius of curvature	%	± 0.02
Sagitta deviation <sup>1</sup> - A (Power)	fringe/ µm	0.30 (0.08)
Irregularity <sup>2</sup> - B (PV)	fringe/ µm	0.30 (0.08)
Rotational invariant irregularity - C	fringe/ µm	0.20 (0.05)
RMS irregularity - RMSi - D	fringe/ µm	0.10 (0.03)
Slope tolerance <sup>3</sup> - F	arc sec/ mrad	12 (0.06)
Centration [ISO 10110-6] 4/ σ ( L )		
Edge thickness variation (defines tilt angle)	µm	5
Tilt angle of the aspheric surface to the second surface - σ	arc min	0.35
Lateral displacement of the aspheric to the edge of the lens - L	mm	0.01
Lateral displacement of the aspheric to the second surface - L	mm	0.01
Surface imperfections [ISO 10110-7; 5/ N x A; L N " x A"]		
Dig - N x A <sup>1</sup>		2 x 0.04
Scratches - L N " x A" <sup>1</sup>		L2 x 0.04
MIL - Scratch / Dig		20 - 10
Surface texture [ISO 10110-8]		
Surface roughness - Rq	nm	0.50
Measurement		
Full-surface interferometric measurement		guaranteed

1. Depends on the diameter. Listed values are for a diameter of 50 mm. Reference wavelength λ=546.07 nm.  
 2. Often also called the PV - error of the measured surface. Means the total surface deviation corrected for Sagitta error (power).  
 3. Depends on the diameter and the surface curvature. Normal measured length of 1 mm.

