

Technologies

# CNC processing

		Standard	Precision
<b>Dimensions [ISO 10110-1]</b>			
Diameter	mm	8 - 300	4 - 250
Tolerance	mm	± 0.10	± 0.05
Center thickness	mm	2 - 60	2 - 60
Tolerance	mm	± 0.10	± 0.05
<b>Surface form [ISO 10110-1; 12]</b>		<b>geometry dependent up to</b>	
Radius of curvature – local cc	mm	15	
Clear aperture	% of Ø	95	90
Clear aperture surface slope	degree	75	50
<b>Surface form tolerances (ISO 10110-5) and Aspheric surfaces (ISO 10110-12)</b> 3/A (B, C) RMSi < D; slope < F; slope integration length = G; spatial sampling resolution = H; see also ISO 14999-4			
Tolerance of radius of curvature	%	± 0.10	± 0.05
Sagitta deviation – A (Power)	fringe/µm	10 / 2.50	3 / 0.75
Irregularity – B (PV)	fringe/µm	5 / 1.25	1.50 / 0.40
Rotational invariant irregularity – C	fringe/µm	1.50 / 0.40	0.50 / 0.14
RMS irregularity – RMSi – D	fringe/µm	1.20 / 0.30	0.60 / 0.16
Slope tolerance – F/G/H	arc sec/mm/mm	180/1/0.1	40/1/0.1
<b>Centration [ISO 10110-6] 4/ σ ( L )</b>			
Edge thickness variation (defines tilt angle)	µm	25	15
Tilt angle of the aspheric surface to the second surface – σ	arc min	2.50	1
Lateral displacement of the aspheric to the edge of the lens – L	mm	0.02	0.01
Lateral displacement of the aspheric to the second surface – L	mm	0.03	0.02
<b>Surface imperfections [ISO 10110-7; 5/ N x A; L N “ x A“]</b>			
Dig – N x A		2 x 0.40	2 x 0.10
Scratches – L N “ x A“		L2 x 0.10	L2 x 0.06
MIL – Scratch / Dig		40 – 20	20 – 10
<b>Surface texture [ISO 10110-8]</b>			
Surface roughness – Rq	nm	3.00	1.50
<b>Measurement</b>			
Full-surface interferometric measurement		optional	

