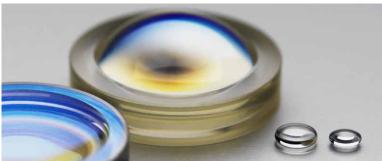


Precision Molded Optics with customized design options





Supported by advanced tactile metrology, FISBA offers customized designs for a wide range of Precision Molded Optics. We partner with customers from the design concept through to prototype and serial production.

Technical Data

- · Irregularities down to 160 nm PV
- \cdot Moldable glass types with refractive indexes from 1.5 1.9
- Moldable glass types abbe numbers from 21 to > 80
- Achievable precision suitable for imaging optics and laser beam shaping

FISBA Capabilities

- · Customized design for a wide range of Precision Molded Optics
- · Collaborative relationship with customer during design and production

Your Benefits

- Design support, prototype production and serial production
- Services include centering, truncating, coating, cementing and blackening
- · Assembling complete lines upon request

Industries & Applications

- · Defense & Security
- · Machine Vision
- · Life Sciences
- · Diode Laser Integration
- · Optical Communications



Design Recommendations Precision Molded Optics

Parameters		Standard values	High standard values
Diameters Ø	Range	approx. 3 – 30 mm	approx. 2 – 3 mm approx. 30 – 40 mm
	Tolerance for lens Ø < 5 mm Tolerance for lens Ø > 5 mm	± 0.01 mm ± 0.02 mm	± 0.005 mm ± 0.01 mm
Center thickness	Range	approx. 1 – 6 mm	approx. 0.5 – 12 mm
	Tolerance	± 0.04 mm	± 0.01 mm
Edge steepness	Max. edge steepness concave surface	< 40°	< 50°
	Max. edge steepness convex surface	< 50°	< 65°
Free aperture		Ø minus 1 mm	Ø minus 0.5 mm
Shape deviation and irregularity*	Lens Ø < 10 mm Lens Ø 10 – 20 mm Lens Ø > 20 mm	3 / 3 (1) 3 / 5 (2) 3 / 5 (2)	3 / 3 (0.5) 3 / 3 (1) 3 / 5 (1)
Tilt angle*		4 / 5′	4 / 3'
Decentration (lateral shift)		15 μm	5 μm
Surface roughness		5 – 6 nm rms	approx. 4 nm rms
Cleanliness*	Lens Ø < 3 mm Lens Ø < 15 mm Lens Ø > 15 mm	5 / 3 × 0.063 5 / 3 × 0.16 5 / 2 × 0.4	5 / 2 × 0.025 5 / 3 × 0.1 5 / 3 × 0.16

^{*}according to ISO 10110 Customized designs available upon request