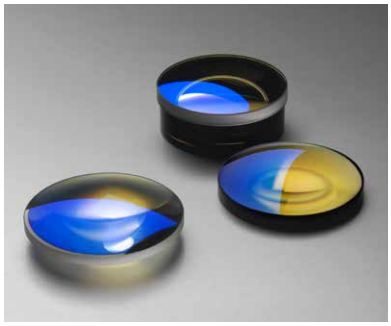
FISBA Innovators in Photonics

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
- 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

FISBA AG
9016 St. Gallen, Switzerland

FISBA LLC
Tucson, AZ 85712, United States

FISBA Photonics GmbH
12489 Berlin, Germany

sales@fisba.com
www.fisba.com

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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 x 0.063 5 / 3 x 0.16 5 / 2 x 0.4	5 / 2 x 0.025 5 / 3 x 0.1 5 / 3 x 0.16

*according to ISO 10110
Customized designs available upon request

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