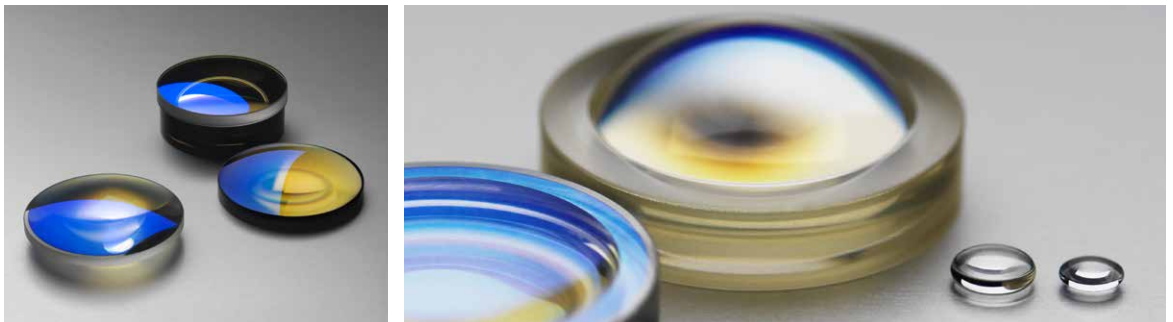


Precision Molded Optics

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

Design Recommendations Precision Molded Optics

Parameters		Standard values	High standard values
Diameters \varnothing	Range	approx. 3 – 30 mm	approx. 2 – 3 mm approx. 30 – 40 mm
	Tolerance for lens $\varnothing < 5$ mm Tolerance for lens $\varnothing > 5$ 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	$< 40^\circ$	$< 50^\circ$
	Max. edge steepness convex surface	$< 50^\circ$	$< 65^\circ$
Free aperture		\varnothing minus 1 mm	\varnothing minus 0.5 mm
Shape deviation and irregularity*	Lens $\varnothing < 10$ mm	3 / 3 (1)	3 / 3 (0.5)
	Lens $\varnothing 10 - 20$ mm	3 / 5 (2)	3 / 3 (1)
	Lens $\varnothing > 20$ mm	3 / 5 (2)	3 / 5 (1)
Tilt angle*		4 / 5'	4 / 3'
Decentration (lateral shift)		15 μ m	5 μ m
Surface roughness		5 – 6 nm rms	approx. 4 nm rms
Cleanliness*	Lens $\varnothing < 3$ mm	5 / 3 x 0.063	5 / 2 x 0.025
	Lens $\varnothing < 15$ mm	5 / 3 x 0.16	5 / 3 x 0.1
	Lens $\varnothing > 15$ mm	5 / 2 x 0.4	5 / 3 x 0.16

*according to ISO 10110
Customized designs available upon request