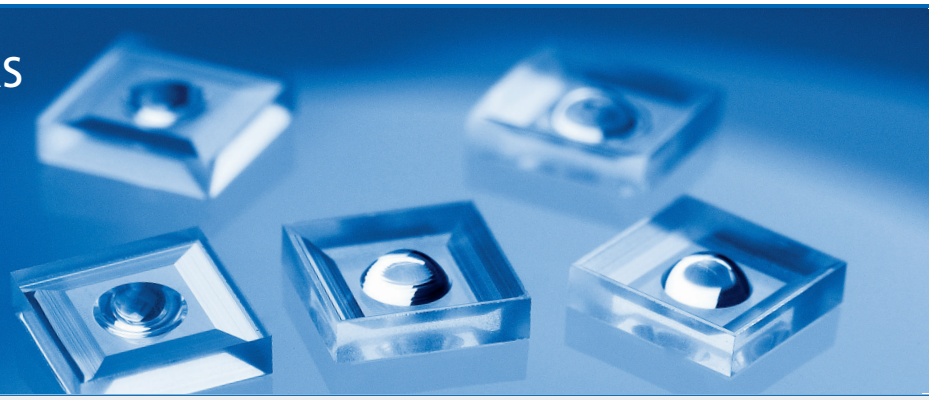
INGENERIC

ASPHERES AND ACYLINDERS

For highest imaging quality



GENERAL DESCRIPTION

The use of aspheres and acylinders offers substantial advantages: minimization of aberrations, increase in efficiency, reduction of optical elements and weight of the optical system. With its unique molding technique, INGENERIC combines cost effectiveness with highest serial precision.

Molded optics can be structured/curved on one or both sides with a large degree of geometrical freedom and a flexible lateral contour. The lateral dimensions range approximately from 2.0 mm to 50.0 mm. Structures in the sub-millimeter range are feasible.

ADVANTAGES

- superior image quality
- freedom of design
- free form surfaces
- integrated alignment features
- highest level of precision and uniformity
- volume production
- highest serial reproducibility
- advantageous price-performance ratio

SERVICE

Optionally, INGENERIC offers the complete value chain:

- We design and develop aspheres which are optimized to meet the specific requirements of your application.
- In order to evaluate the performance of the optics in the design phase INGENERIC offers the rapid manufacture of prototypes and small series production.
- We scale up to volume production

QUALITY

INGENERIC ensures a substantial quality insurance throughout the whole manufacturing process. From the incoming component inspection to the precise final control of each processed item, all steps are recorded. If required a customized test set-up can be realized to ensure that there will be no deviation from the measured characteristics when the optic is subsequently used in industrial practice.

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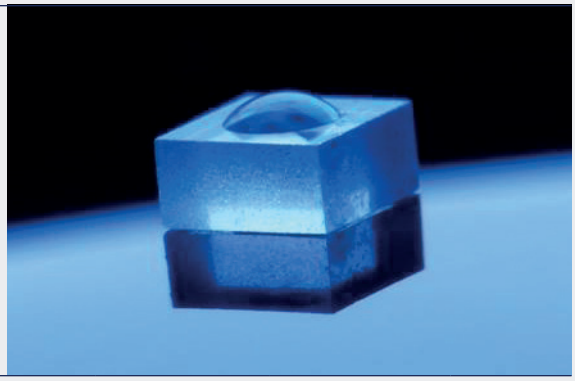
Aspheres and Acylinders

For highest imaging quality

ASPHERES / SPHERES < 5.0 MM

Material:	optical glass (high index material)
Lens diameter:	2.0 mm … 5.0 mm
Diameter tolerance:	< 0.30 mm
Lens aperture:	round, rectangular
EFL:	2.0 mm … 20.0 mm
Center Thickness:	1.0 mm … 4.0 mm
EFL tolerance:	< 1%
Form accuracy:	100 nm … 260 nm



Example Products

Lens Type	d [mm]	Aperture	CT [mm]	EFL [mm]	EFL tolerance	Form accuracy	Material
ASPH-PL-CX-R1.91	4.2 mm x 4.2 mm	rectangular	2.0	2.4	< 0.1%	< 260 nm	K-VC89
ASPH-PL-CX-9.5	5.6 mm	round	3.0	9.5	< 0.03 %	< 97 nm	K-VC89

ACYLINDERS

Material:	fused silica, optical glass (high index material)
Dimension:	Length: 20.0 mm … 60.0 mm
	Height: 40.0 mm … 120.0 mm
	Center Thickness: 4.0 mm … 40.0 mm
EFL:	70 mm … 200 mm
EFL tolerance:	< 0.5 %
Form accuracy:	< 600 nm

Example Products

Lens Type	W [mm]	L [mm]	T [mm]	EFL [mm]	EFL tolerance	Form accuracy	Material
ACYL-PL-CX-123	20.0	49.0	9.0	123.0	< 0.1%	< 400 nm	fused silica
ACYL-PL-CX;R70	58.0	120.0	35.0	155.0	< 0.2 %	< 600 nm	fused silica