



Aspherical optical components

Know-how:

- Technology and manufacturing equipment:
Conventional polishing, CNC grinding, CNC polishing, computer controlled polishing, diamond turning, MRF
- Metrology:
2D/3D tactile profilometry, noncontacting contour measurement system, interferometry (Computer Generated Hologram*), compensating system
- Design:
Optical design service
- Coating:
Development and manufacturing of custom coatings from 157 nm to 25 μm
- Application:
Industrial fabrication, defense & security, optics, life science, avionics & space

* Proprietary know-how and technology for design and manufacture of CGHs.



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Specifications

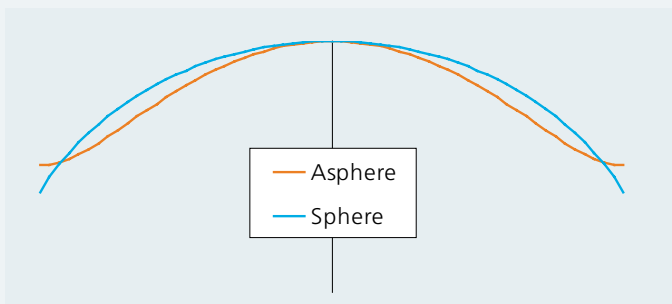
Manufacturing range

Diameter:	5.0 mm - 250.0 mm
Material:	Wide variety of materials (glasses, crystals, metals) for IR, VIS, UV, DUV
Edge shape:	On customer's request

Manufacturing tolerances**

Attribute	Units of measure	Standard quality	Precision quality
Total error	µm	± 1.5	± 0.5
Sagitta error	µm	± 1.0	± 0.3
Irregularity	µm	0.6 PV	0.1 PV
Slope error	µm / mm	0.2	0.1
Surface quality	ISO 10110-7	5/ 3 x 0.1	5/ 3 x 0.063
Centricity (T.I.R.)	µm	10	4

** Tighter tolerances on request.



Spherical Component:

$$|z| = \sqrt{R^2 - h^2}$$

Aspherical Component:

$$z(h) = \frac{h^2}{R(1 + \sqrt{1 - (1+k) \frac{h^2}{R^2}})} + \sum_{i=2}^n (A_{2i} h^{2i})$$

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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