



Aspherical Lenses

PRODUCT OVERVIEW

Aspherical lenses have complex curved surfaces, where the radius of the curvature changes according to the distance from the optical axis. The use of aspherical lenses in optical systems enables the optical designers to use fewer elements than conventional spherical optics. This allows for a more compact design, lower weight and exceptional performance.

By combining high precision CNC polishing and 3D non-contact measurement metrology techniques, II-VI produces very high-quality aspherical lens for a wide variety of applications.

Aspherical Lenses

Features

- Complete in-house manufacturing capability enables control of all manufacturing steps
- Ultra precise and 3D non-contact measurement technique
- Quick-turn service on new products
- Capacity and flexibility to scale

Specifications

Attribute	Commercial	Precision
Material	Optical glass, Borosilicate glass, Fused Silica, Crystal	
Dimensions	Ø 10-260mm	
Diameter Tolerance	+0/-0.1 mm	+0/-0.02 mm
Centering	<3'	<20"
Surface Quality	60/40 scratch and dig	10/5 scratch and dig
Irregularity (PV)	<1 µm	<0.2 µm
Irregularity(RMS)	<0.2 µm	<0.02 µm
Slope Error 1mm Integration Length	<1 min (PV:0.3 µm)	<0.3 min (PV:0.1 µm)
Surface Roughness	0.5nm Ra	0.3nm Ra
Coating	AR, BBAR, HR-mirror, custom coatings (193 nm-3 µm)	

Metrology

Surface Figure	LUPHO Scan (3D non-contact measurement)
Wavefront	Wavefront sensor, Zygo GPI
Centering	Op Spheric® AutoFocus
Surface Roughness	Zygo Newview, AFM
Transmission / Reflection	Spectrophotometer
Additional Functional Measurement	Environmental/climatic test according to ISO and MIL standards, abrasion and adhesion, various chemical and resistance testing

Complete In-house Processing Chain

