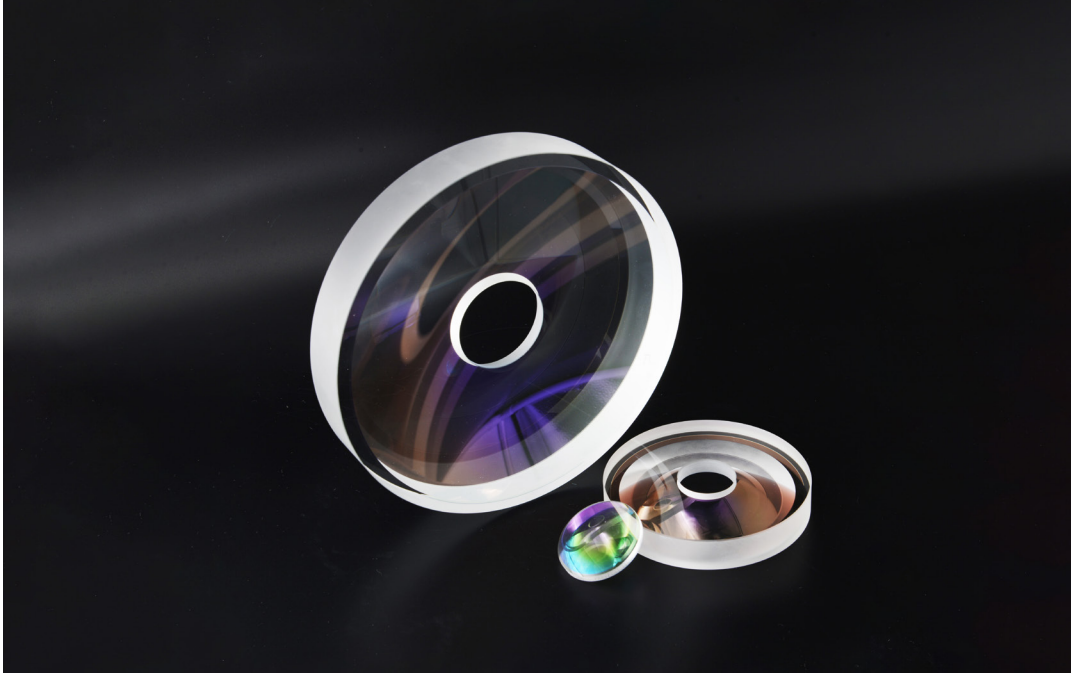


ASPHERICAL LENSES

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, Coherent produces very high-quality aspherical lens for a wide variety of applications.



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 - 260 mm | |
| 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 | 0.5 nm Ra | 0.3 nm 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

