

ASPHERICAL LENS

Precision Molded Aspheres

Unlike the usual spherical lenses, aspheric lenses can correct problems such as image distortion and focal point misalignment with one or less lenses. With the uniting of SUMITA' s mold production technology and glass materials development technology makes it possible to manufacture precision molding aspheric lenses.

Aspheric lenses by precision molding are used in digital cameras, pickup lenses, and in the field of optical communications.

Available lens diameter: 1.0 mm – more than 60 mm

High precision: roughness Ra 0.003 um (our best measurement value)

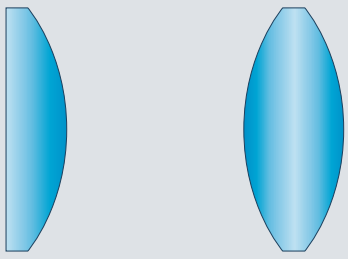
Typical volumes are available from some pieces for trial production including optical design to series production (up to 100 thousand pcs.)

Specifications

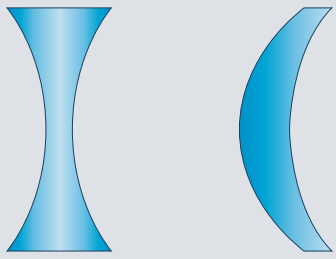
Lens diameter	ϕ1mm～ϕ60mm
Center thickness	0.5mm～20mm
Lens shape	Biconvex, convex-concave, biconcave, Meniscus
Curvature radius	0.6 mm – upon request
Coating	AR and other types of coating

Custom precision molding aspheric lenses can be manufactured upon request.

Accuracy (Reference Value)



Biconvex, convex-concave



biconcave, Meniscus

～ϕ30mm	～ϕ40mm	～ϕ50mm	～ϕ60mm		～ϕ30mm	～ϕ40mm	～ϕ50mm
±0.006	±0.008	±0.01	-	Outer Diameter Tolerance	±0.006	±0.008	±0.01
±0.017	±0.021	±0.025	-	Center Thickness Tolerance	±0.017	±0.021	±0.025
≦1.0	≦1.5	≦2.0	≦2.5	DesignP-V(μm)	≦1.5	≦2.0	≦2.5
≦0.3	≦0.4	≦0.5	≦0.6	BestfitP-V(μm)	≦0.4	≦0.6	≦0.8
≦7.0	≦8.0	≦9.0	≦10.0	Decenter(μm)	≦10.0	≦12.0	≦14.0
≦60	≦70	≦80	≦90	Tilt(")	≦90	≦120	≦120
≦0.10	≦0.15	≦0.20	≦0.25	Slope(mrad)	≦0.10	≦0.15	≦0.20

Slope : RMS △S v,w (K / L / M) @ L = 1.0mm, M = 0.2mm Direction : Radial

* Surface accuracy depends on lens' size and shape. Please contact us for details.