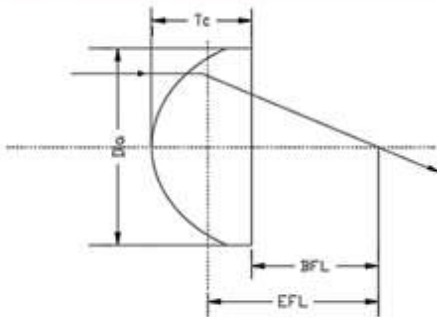


Aspheric Lenses



Aspheric optical parts in the optical system can well correct a variety of aberrations and improve the quality of imaging. ICC uses computer-controlled CNC polishing aspherical lenses for grinding and polishing, which can achieve better surface flatness and focal length deviation. Aspherical optical parts are also widely used in military and civilian optoelectronic products, such as in photographic lenses, infrared telescopes, VCR lenses, bar code readout heads, fiber optic connectors for fiber optic communications, medical instruments, etc.

Technical Notes



Schematic

$$Z(s) = \frac{Cs^2}{1 + \sqrt{1 - (K+1)C^2s^2}} + A_4s^4 + A_6s^6 + A_8s^8 + \dots$$

Z=sag of surface parallel to the optical axis
 s= radial distance from the optical axis
 C=curvature, inverse of radius
 k=conic constant
 A4,A6,A8,...:4th, 6th, 8th... order aspheric coefficients
 When the aspheric coefficients are equal to zero, the resulting aspheric surface is considered to be a conic. As the picture on the right.

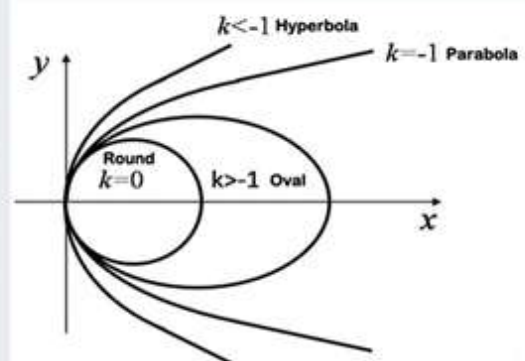
Specification

Diameter 7-120mm
Tolerance +0.0/-0.1mm
S/D 40-20/60-40
PV 1μm/3μm
Concentricity 3 arcmin
Coating Customizable

Materials

Ge IRG26 Si
 ZnS ZnSe CaF2
 BaF2 GaAs Cu
 Al PMMA

Graph of aspheric curve presentation



Single Point Diamond Turning



Profilmeter measurement and analysis