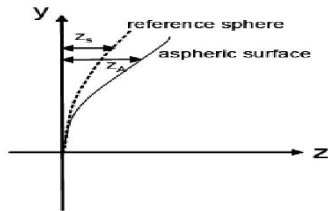


# Aspheric lens

Aspheric lens can be applied to reduce spherical aberration and other optical aberrations, especially in complex lens system, one single aspheric lens will replace multiple lenses, it will make optical system more compact and cost reduced. We provide aspheric lens made by crystal material ZnSe , ZnS, Ge, Si and glass material as well.



$$Z_{A,E} = \frac{cr^2}{1 + \sqrt{1 - (1+k)c^2r^2}} + \alpha_1 r^2 + \alpha_2 r^4 + \alpha_3 r^6 + \alpha_4 r^8 + \dots$$



Specification	Tolerance	Comment
Diameter	Up to +0 / -.05mm	
Center thickness	Up to ± .05mm	
Form error/Irregularity (peak to valley)	Up to 1 micron	
Base radius (In addition to form error) *	Up to 1 micron	* Tolerance given in terms of the sag difference across the aperture.
Centration	Up to 1'	
Surface quality	Up to 40/20	

# Diffraction lens

Diffraction lenses can be used to reduce the number of elements in conventional lens systems and eliminate the need for unusual materials in correcting chromatic aberrations.

Diffraction lenses are very thin elements with total depth height equal to  $\lambda/(n - 1)$ , where  $\lambda$  is the operating wavelength and  $n$  is the index of refraction. A diffraction lens is composed of a series of zones that become finer towards the edge of the lens.

