

Lens

Optical lenses are transparent components made of one or more pieces of optical-quality materials (ground and polished or molded) and curved (always spherical) to converge or diverge transmitted rays from an object. These rays then form a real or virtual image of the object.

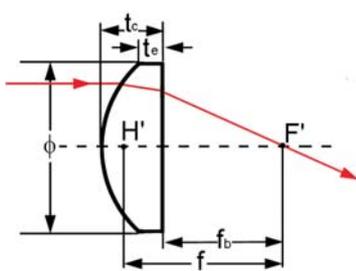
FOCtek provides spheric lens, aspheric lens, cylindrical lens and achromatic lens with a wide range of sizes and materials including BK7, Fused Silica, SF5, Sapphire, CaF2, Silicon, Germanium, ZnSe, ZnS, etc.



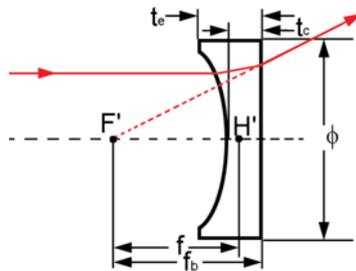
Spheric Lens

FOCtek provides five kinds of spheric lens forms, or shapes, that determine the imaging Characteristics of the lenses, they are plano-convex, plano-concave, Double-convex, Double-concave and Meniscus.

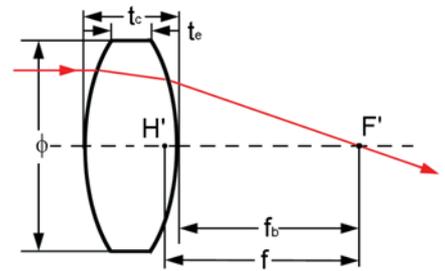
- Plano-convex lens has a positive focal length, which makes it ideal for collecting and focusing light for many imaging applications..
- Plano-concave lens has a negative focal length and is used for image reduction or to spread light.
- Double-convex lens has a positive focal length and is useful for 1:1 imaging and in multielement systems. also known as biconvex or equiconvex.
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- Meniscus lense has a positive or negative focal length, it forms a real or virtual image of objects.



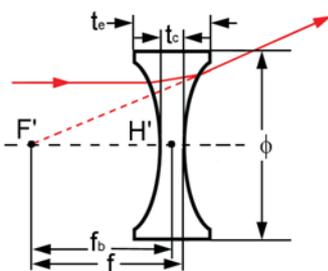
Plano Convex Lens



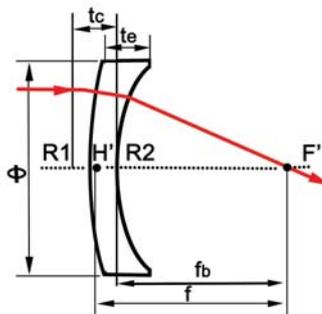
Plano Concave Lens



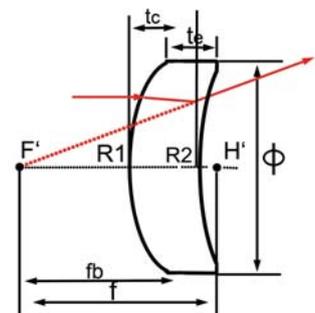
Double Convex Lens



Double Concave Lens



Positive Meniscus Lens



Negative Meniscus Lens

Specifications of Spheric Lens ⁽¹⁾

Attribute	Specification
Material ⁽²⁾	BK7, K9, Fused Silica, SF10, Silicon, CaF ₂ , Sapphire etc.
Typical Diameter (Φ mm) ⁽³⁾	10.0, 12.7, 15.0, 20.0, 25.4, 30.0, 50.8, etc.
Diameter Tolerance (mm)	+0.0/-0.2 (General), +0.0/-0.02 (High Precision)
Paraxial Focal Length Tolerance (mm) ⁽⁴⁾	±2%
Centration ⁽⁵⁾	<3 arc min
Clear Aperture	>80% (Small Size), >95% (Large Size)
Surface Figure (per 25mm@632.8nm)	<1.5λ, (General), <λ/4 (High Precision)
IRR (@632.8nm)	<λ/4 (General), <λ/10 (High Precision)
Surface Quality	60/40 (General), 10/5 (High Precision)
Bevel (face width x 45°)	<0.25mm
Coating ⁽⁶⁾	uncoated, AR, HR, PR Coating, etc.

Note for Spheric Lens:

- (1). Please visit our web for price list of standard Spheric Lenses.
- (2). Other optical glass materials from Schott or Chines CDGM are also available upon request.
- (3). Custom-made Spheric Lenses at any size from diameter 2.0mm to 300mm are available upon request.
- (4). Typical paraxial focal length tolerance is ±2%, better tolerance is available upon request
- (5). Typical centration is 3 arc minutes, better precision is available upon request.
- (6). Besides uncoated, Lenses with Anti-Reflective(AR), High-Reflective(HR), Partial-Reflective(PR) coating are available upon request, Please refer to Part 4 OPTICAL COATING for more information about coating.