

# HIGH PERFORMANCE SPHERICAL LENS

Spherical lenses are used for beam focusing and beam expansion in a wide variety of applications from microscopy to laser processing, such as in the life sciences, imaging, industrial, defense, and telecom industries. Coherent provides plano-convex, bi-convex, plano-concave, bi-concave, meniscus, and achromatic lenses. Plano-convex lenses are typically used to focus, collect, and collimate light and are the best choice for focusing parallel rays of light to a single point. Bi-convex lenses are typically used for focusing applications and are the best choice when the object and image are at equal or near-equal distances from the lens. Plano-concave lenses bend parallel input rays so that they diverge from one another, making them useful for beam expansion applications. They are the best choice when the object and image are at absolute conjugate ratios greater than 5:1 and less than 1:5 to reduce spherical aberration, coma, and distortion. Bi-concave lenses are typically used for beam expansion and are the best choice when the object and image are at absolute conjugate ratios closer to 1:1 with a converging input beam. Meniscus lenses are designed to minimize spherical aberration; achromatic lenses are ideal for applications requiring color correction.

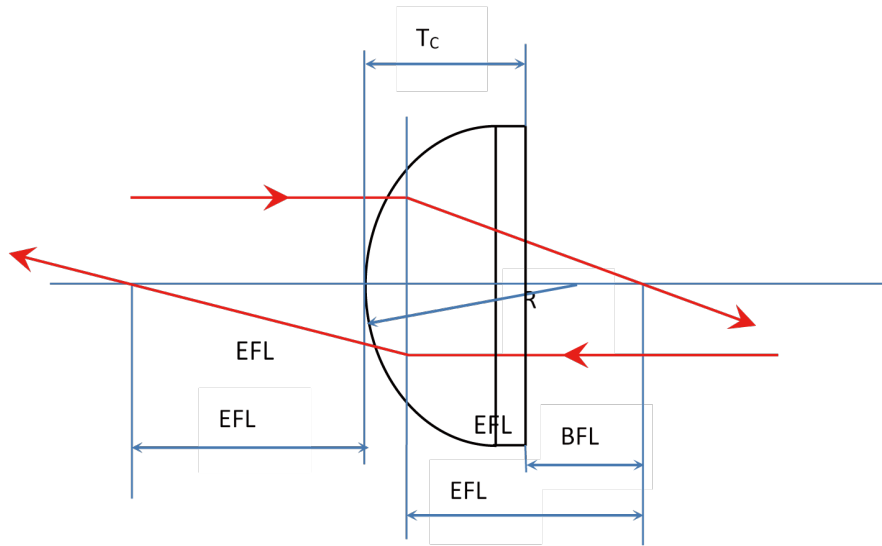


## APPLICATIONS

- Life sciences
- Imaging
- Industrial
- Defense
- Laser measurement systems
- Telecommunication systems, WSS

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## Dimensions



## Common Specification

Material	N-BK7, Fused Silicon, or others as specified by customer
Diameter Range	3-200mm
Surface Quality	20/10
Surface Irregularity	$\lambda/8$ @ 632.8nm
Beam Deviation	<5 arc minutes
Focal Length	$\pm 1\%$
Thickness Tolerance	2.54mm nominal
Diameter Tolerance	+0/ -0.10mm
Clear Aperture	Central 90%
Centration	<3 arc min
Coating	AR coating, HR coating, or metal reflective coating

Other sizes, diameters and coatings are also available upon request.