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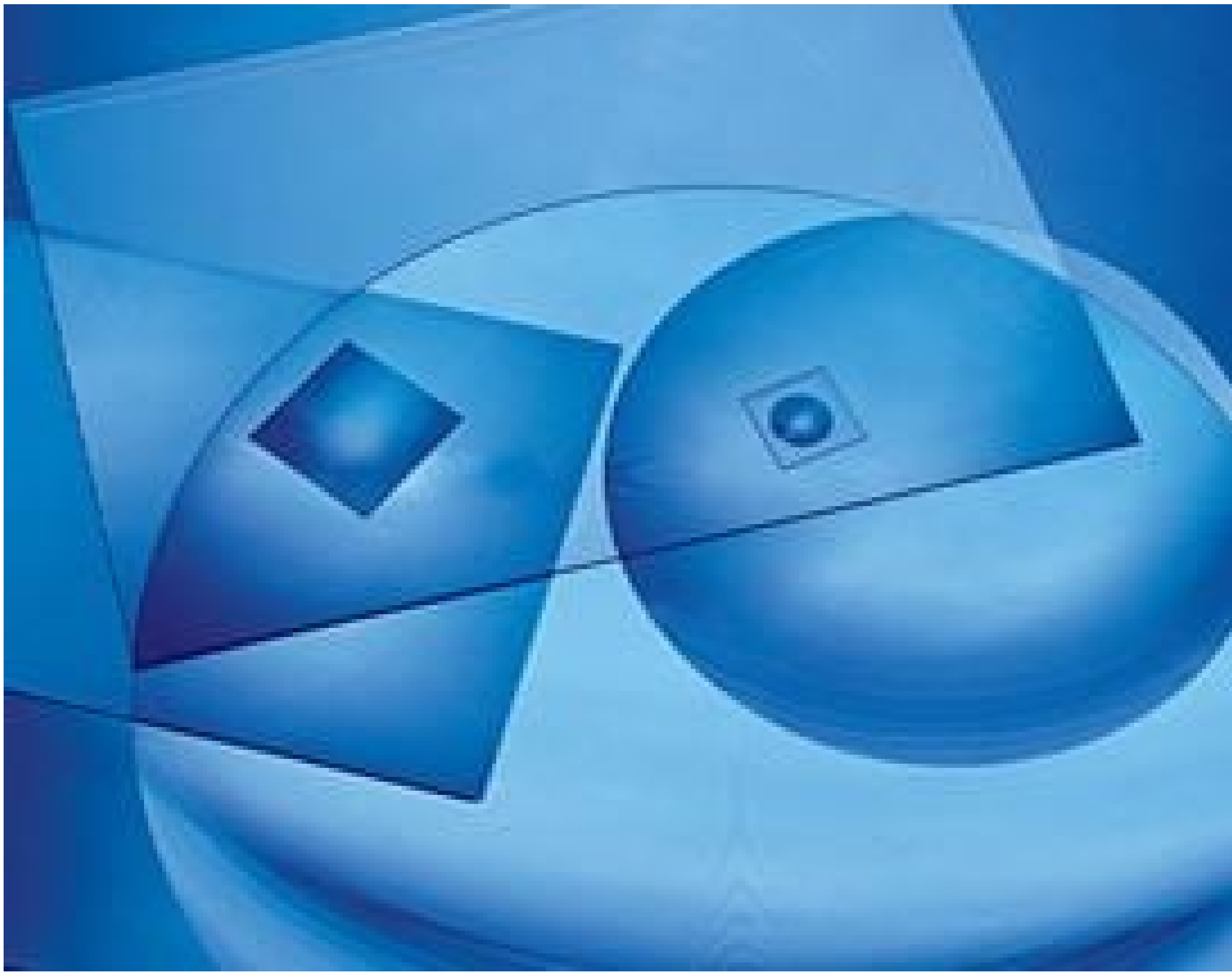
18.5" Diameter, FL -18.0", Negative Fresnel Lens



Aspherically Contoured Fresnel Lenses

Stock **#46-397** **2 In Stock**

- 1 + **C$600.60**

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Volume Pricing	
Qty 1-10	**C$600.60** each
Qty 11-49	**C$540.40** each
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General

Type:
Fresnel Lens

Physical & Mechanical Properties

Diameter (mm):
463.55

Center Thickness CT (inches):
0.11

Diameter (inches):

18.5

Dimensional Tolerance (inches):

±0.05

Effective Diameter (inches):

18.0

Thickness Tolerance (%):

±40

Optical Properties

Effective Focal Length EFL (mm):

-457.20

Substrate:

Acrylic

Coating:

Uncoated

Wavelength Range (nm):

400 - 1100

Effective Focal Length EFL (inches):

-18.00

Groove Density (grooves/inch):

143.00

Index of Refraction (n_d):

1.49

Transmission (%):

85 (Typical)

Environmental & Durability Factors

Operating Temperature (°C):

≤80

Regulatory Compliance

RoHS 2015:

Compliant

Certificate of Conformance:

View

Reach 242:

Compliant

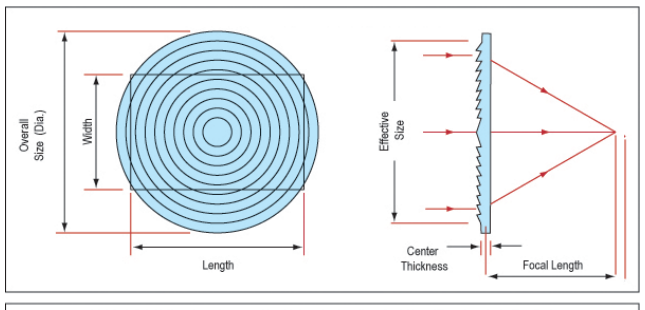
Product Details

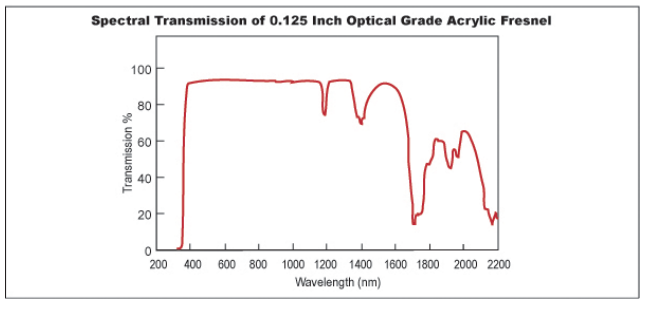
- Negative Focal Length
- Acrylic Substrate
- Square and Rectangular Options

A Fresnel lens replaces the curved surface of a conventional lens with a series of concentric grooves, molded into the surface of a thin, lightweight plastic sheet. The grooves act as individual refracting surfaces, like tiny prisms when viewed in cross section, bending parallel rays in a very close approximation to a common focal length. Because the lens is thin, very little light is lost by absorption. Fresnel lenses are a compromise between efficiency and image quality. High groove density allows higher quality images, while low groove density yields better efficiency (as needed in light gathering applications). In infinite conjugate systems, the grooved side of the lens should face the longer conjugate.

Fresnel lenses are most often used in light gathering applications, such as condenser systems or emitter/detector setups. Fresnel lenses can also be used as magnifiers or projection lenses; however, due to the high level of distortion, this is not recommended.

Technical Information





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