

TECHSPEC® 12.5mm Diameter x 14mm EFL Aspherized Achromatic Lens



Aspherized Achromatic Lenses



Stock **#49-658** **20+ In Stock**

⊖ 1 ⊕ C\$191⁰⁰

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Volume Pricing	
Qty 1-5	C\$191.80 each
Qty 6-25	C\$154.00 each
Qty 26-49	C\$141.40 each
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Product Downloads

General

Note:
VIS 0° Coating on First Surface, Second Surface is Aspheric Polymer

Type:
Achromatic Lens

Physical & Mechanical Properties

Diameter (mm):
12.50 +0.00/-0.05

Clear Aperture CA (mm):
10.50

Centering (arcmin):
≤5

Center Thickness CT (mm):
8.08

Center Thickness CT 1 (mm):
6.50

Center Thickness CT 2 (mm):
1.58

Edge Thickness ET (mm):
4.28

Optical Properties

Effective Focal Length EFL (mm):
14.00

Back Focal Length BFL (mm):
9.89

Focal Length Specification Wavelength (nm):
587.6

Radius R₁ (mm):
8.15

Radius R₂ (mm):
12.80

Radius R₃ (mm):
15.85

Substrate:
[S-FSL5 / N-SF57](#)

Surface Quality:
60-40, glass surface
80-50, polymer surface

f#:
1.12

Numerical Aperture NA:
0.45

Coating:
VIS 0° (425-675nm)

Coating Specification:
R_{avg} ≤0.4% @425 - 675nm

Wavelength Range (nm):
425 - 675

Environmental & Durability Factors

Operating Temperature (°C):
-20°C to 80°C

Regulatory Compliance

RoHS 2015:
[Compliant](#)

Reach 219:
[Compliant](#)

Certificate of Conformance:
[View](#)

Product Details

- Unique Innovative Design, Low Cost, Color-Corrected Asphere
- Better Color Correction than Standard Achromatic Lenses
- Similar Spherical Aberration Correction to Machined Aspheres
- Prescription Information Available

TECHSPEC® Aspherized Achromats bridge the gap between color-corrected achromats and spherical aberration-corrected aspheres. This unique design results in a cost-effective, color-corrected aspheric component. The doublet lenses consist of two cemented elements matched for their color-correction ability and small RMS spot size. The second surface of the doublet is fused with a molded polymer aspheric surface. These molds create a stable aspheric contour, removing or reducing wavefront errors present in typical achromats while boosting numerical aperture. TECHSPEC Aspherized Achromats' typical applications include fiber optic focusing or collimation, image relay, inspection, scanning, and high numerical aperture imaging.

These lenses were honored with the PhAST/Laser Focus World Innovation Award for Optics and Optical Components.

Technical Information

Spot Size



12.5 x 14 Aspherized Achromat

Spot Size



12.5 x 14 Standard Achromat



CT: Center Thickness, ET: Edge Thickness, R: Radius, P: Principal Plane, BFL: Back Focal Length, EFL: Effective Focal Length

Coating Curves

Compatible Mounts