

[See all 177 Products in Family](#)

**TECHSPEC® 12.7mm Dia. x 50.8mm FL, MgF<sub>2</sub> Coated, Achromatic Doublet Lens**



MgF<sub>2</sub> Coated Achromatic Lenses



Stock **#49-764** **20+ In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ **\$\$120<sup>00</sup>**

**ADD TO CART**

Volume Pricing	
Qty 1-5	<b>\$\$120.40</b> each
Qty 6-25	<b>\$\$95.90</b> each
Qty 26-49	<b>\$\$91.00</b> each
Need More?	<a href="#">Request Quote</a>

Product Downloads

**General**

Achromatic Lens **Type:**

**Physical & Mechanical Properties**

**Diameter (mm):**

12.70 +0.0/-0.025

11.70 **Clear Aperture CA (mm):**

<1 **Centering (arcmin):**

4.00 ±0.20 **Center Thickness CT (mm):**

2.50 ±0.10 **Center Thickness CT 1 (mm):**

1.50 ±0.10 **Center Thickness CT 2 (mm):**

3.16 **Edge Thickness ET (mm):**

Protective as needed **Bevel:**

## Optical Properties

50.80 **Effective Focal Length EFL (mm):**

±1 **Focal Length Tolerance (%):**

48.86 **Back Focal Length BFL (mm):**

587.6 **Focal Length Specification Wavelength (nm):**

33.17 **Radius R<sub>1</sub> (mm):**

-23.98 **Radius R<sub>2</sub> (mm):**

-89.03 **Radius R<sub>3</sub> (mm):**

**Substrate:**   
N-BAK1 / N-SF15

40-20 **Surface Quality:**

4.00 **f#:**

0.13 **Numerical Aperture NA:**

MgF<sub>2</sub> (400-700nm) **Coating:**

R<sub>avg</sub> ≤ 1.75% @ 400 - 700nm **Coating Specification:**

1.5λ **Power (P-V) @ 632.8nm:**

M4 **Irregularity (P-V) @ 632.8nm:**

400 - 700 **Wavelength Range (nm):**

## Regulatory Compliance

**Compliant** **RoHS 2015:**

**Compliant** **Reach 224:**

**View** **Certificate of Conformance:**

## Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

- Designed for 0° Angle of Incidence

- Less Than 1.75% Reflectance Per Surface @400 - 700nm
- VIS 0° and VIS-NIR Coated Achromats Also Available

TECHSPEC® MgF2 Coated Achromatic Lenses consist of two optical components cemented together to form an achromatic doublet which is computer optimized to correct for on-axis spherical and chromatic aberrations. These lenses feature a single layer of MgF2 which provides less than 1.75% reflectivity from 400 – 700nm. TECHSPEC MgF2 Coated Achromatic Lenses are best for applications involving multi-color (white light) imaging due to their specific doublet lens pairing that enables them to correct the color separation inherent in glass. Having eliminated the problematic chromatic aberrations, achromatic doublet lenses become the most cost-efficient means for polychromatic illumination and imaging.

## Technical Information



## Coating Curves

## Compatible Mounts