

TECHSPEC®

18mm Dia. x 27mm FL, MgF₂ Coated, Achromatic Doublet Lens



MgF₂ Coated Achromatic Lenses



Stock #45-412 **20+ In Stock** [Other Coating Options](#)

1

MRP ₹10,594

Price inclusive of all taxes

ADD TO CART

Volume Pricing	
Qty 1-5	₹10,594 each
Qty 6-25	₹8,475 each
Qty 26-49	₹7,920 each
Need More?	Request Quote

Product Downloads	
STEP:stp	PDF Drawing:pdf
ISO 10110 Drawing	
IGES:igs	Spec Sheets:pdf
Zemax:zar	Zemax:zmx
eDrawing:easm	Code V:seq
EO Spec Sheet	Download All

General

Type: Achromatic Lens

Physical & Mechanical Properties

Diameter (mm): 18.00 +0.0/-0.025	Clear Aperture CA (mm): 17.00
Centering (arcmin): <1	Center Thickness CT (mm): 9.27 ±0.20
Center Thickness CT 1 (mm): 7.67 ±0.10	Center Thickness CT 2 (mm): 1.60 ±0.10
Edge Thickness ET (mm): 6.62	Bevel: Protective as needed

Optical Properties

Effective Focal Length EFL (mm): 27.00	Focal Length Tolerance (%): ±1
Back Focal Length BFL (mm): 21.74	Focal Length Specification Wavelength (nm): 587.6
Radius R₁ (mm): 18.70	Radius R₂ (mm): -13.11
Radius R₃ (mm): -119.12	Substrate: N-BAF10 / N-SF10
Surface Quality: 40-20	f/#: 1.5
Numerical Aperture NA: 0.33	Coating: MgF ₂ (400-700nm)

Coating Specification:	$R_{avg} \leq 1.75\%$ @ 400 - 700nm	Power (P-V) @ 632.8nm:	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4	Wavelength Range (nm):	400 - 700

Regulatory Compliance

RoHS 2015:	Compliant	Reach 224:	Compliant
Certificate of Conformance:	View		
Country of Origin:	Japan	Imported By:	Edmund Optics India Private Limited 267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038 Phone: +91- 80-6845 0000

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

MgF₂ (400-700nm)



SHIFT + SELECT an area on CURVE to zoom

Please note that coating performance outside each product's specified design range is theoretical and may vary.

Related Products



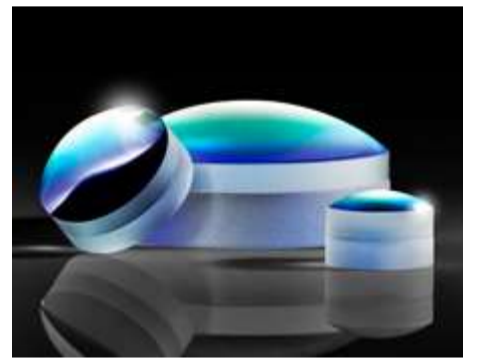
Optic Component Mounts



C, S, and T-Mount Circular Optic Mounts



Basic and Plus Optical Component Cleaning Kits



Aspherized Achromatic Lenses

Frequently Purchased Together



#32-913 - 18mm Dia. x 50mm FL, MgF₂ Coated, Achromatic Doublet Lens
₹10,594

Qty



#31-857 - 18.0mm Dia. x 36.0mm FL, MgF₂ Coated, Plano-Convex Lens
₹4,011

Qty



#32-002 - 18.0mm Dia. x 27.0mm FL, MgF₂ Coated, Plano-Convex Lens
₹4,187

Qty



#32-327 - 25mm Dia. x 100mm FL, MgF₂ Coated, Achromatic Doublet Lens
₹12,309

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
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18.0mm Optic Dia., Optic Mount
Fixed

#64-558

₹3,305
Request Quote

CONTACT US

	Title	Type	Compare	Stock Number	Price	Buy
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MORE+



18mm
Diameter, C-
Mount Thick
Optic Mount

Fixed

#54-625

₹6,003
Request
Quote

5 In Stock

1



Check out our full selection of mounts [here](#).

Resources

Media Type

- Application Note
- Scientific Paper
- Video
- FAQ
- Glossary

APPLICATION NOTE

Anti-Reflection
(AR) Coatings

APPLICATION NOTE

An
Introduction to
Optical
Coatings

APPLICATION NOTE

Lens Geometry
Performance
Comparison

SCIENTIFIC PAPER

Achrotech:
achromat cost
versus
performance...

APPLICATION NOTE

Why Use an
Achromatic
Lens?

VIDEO

Achromatic
Lenses Review

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