

**TECHSPEC®**

# 50.8mm Diameter, UV-VIS Coated, Calcium Fluoride Window



TECHSPEC Calcium Fluoride (CaF<sub>2</sub>) Windows

Stock #14-810 **1 In Stock**

1

MRP ₹35,312

Price inclusive of all taxes

**ADD TO CART**

Volume Pricing	
Qty 1-10	₹35,312 each
Qty 11-25	₹31,176 each
Qty 26-49	₹29,561 each
Need More?	<a href="#">Request Quote</a>

Product Downloads

- STEP:step
- PDF Drawing:pdf
- IGES:igs
- eDrawing:eprt
- EO Spec Sheet
- [Download All](#)

## General

<b>Type:</b> Protective Window	<b>Type of Window:</b> Crystal
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## Physical & Mechanical Properties

<b>Clear Aperture CA (mm):</b> 45.72	<b>Diameter (mm):</b> 50.80 +0.0/-0.1
<b>Thickness (mm):</b> 3.00 ±0.1	<b>Parallelism (arcmin):</b> <1
<b>Bevel:</b> Protective as needed	<b>Clear Aperture (%):</b> 90
<b>Edges:</b> Fine Ground	<b>Poisson's Ratio:</b> 0.26
<b>Young's Modulus (GPa):</b> 75.8	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b> 158.30

## Optical Properties

<b>Coating:</b> UV-VIS (250-700nm)	<b>Substrate:</b> <sup>①</sup> Calcium Fluoride (CaF <sub>2</sub> ) Vacuum UV Grade
<b>Index of Refraction (n<sub>d</sub>):</b> 1.434	<b>Surface Quality:</b> 40-20
<b>Abbe Number (v<sub>d</sub>):</b> 94.99	<b>Axis Orientation:</b> Random
<b>Coating Specification:</b> R <sub>abs</sub> ≤1.0% @ 350 - 450nm R <sub>avg</sub> ≤1.5% @ 250 - 700nm	<b>Wavelength Range (nm):</b> 250 - 700

**Surface Flatness (P-V):**  $\lambda/2$

**Damage Threshold, By Design:**  $3 \text{ J/cm}^2 @ 355\text{nm}, 10\text{ns}$   
 $5 \text{ J/cm}^2 @ 532\text{nm}, 10\text{ns}$

## Material Properties

**Density (g/cm<sup>3</sup>):** 3.18

**Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):** 18.85

## Regulatory Compliance

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

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

**Reach 235:** **Compliant**

**Country of Origin:** United States

**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

- Low Absorption, High Transmission UV Grade Calcium Fluoride
- Low Index of Refraction
- AR Coatings Spanning 250 - 5000nm Available
- **Calcium Fluoride (CaF<sub>2</sub>) Wedged Windows** also Available

TECHSPEC® Calcium Fluoride (CaF<sub>2</sub>) Windows offer a low index of refraction, providing high transmission from 200 - 7000nm when used uncoated. To further increase transmission and reduce back reflections, a variety of AR coatings are available spanning wavelength regions from the Ultra-Violet (UV) to the Mid-Wave Infrared (MWIR). The high bulk damage threshold of calcium fluoride coupled with its low absorption makes it a popular choice for use with laser systems, including excimer lasers. TECHSPEC® Calcium Fluoride (CaF<sub>2</sub>) Windows are ideal for use as protective windows for gas detectors operating in the Vacuum UV (VUV) and MWIR, UV spectroscopy systems, cryogenically cooled thermal imaging systems, and as substrates for coatings requiring wideband substrate transmission.

**Note:** Calcium fluoride is a relatively soft optical material and is more susceptible to scratches than typical glass windows. Calcium fluoride is also susceptible to thermal shock.

## Technical Information

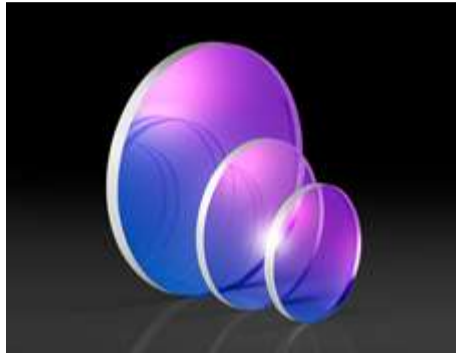
## Special Handling

These optics require special handling to avoid damage and ensure long-term performance. Proper handling, cleaning, and storage are essential to maintain optical quality. Explore our [Optics Cleaning Resources](#) for step-by-step guides and best practices. For personalized assistance, [Email us](#) or [Chat](#) with our technical support team.

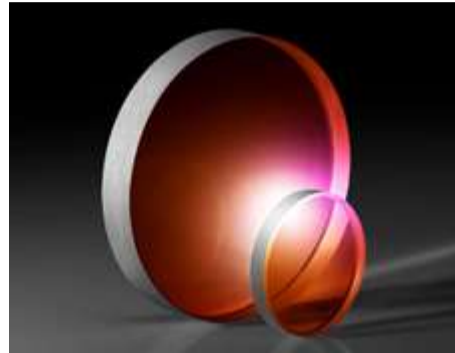


Component Handling Tools

## Related Products



Calcium Fluoride Optics



ISP Optics Calcium Fluoride (CaF<sub>2</sub>) Wedged Windows












































1λ UV Fused Silica Windows



Magnesium Fluoride (MgF<sub>2</sub>) Windows

## Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
<a href="#">MORE+</a> 	50.8mm Optic Dia., Optic Mount	Fixed		#64-569	₹4,969 <a href="#">Request Quote</a>	12 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	9.5 - 73.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#36-605	₹8,374 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	50.0/50.8mm Optic Dia., E-Series Kinematic Mount	Adjustable - Tip-Tilt		#15-867	₹9,685 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	₹10,896 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	19.5 - 108.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#03-670	₹11,501 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	₹11,703 <a href="#">Request Quote</a>	6 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	₹12,107 <a href="#">Request Quote</a>	10 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 <b>CLEARANCE</b>	₹12,739 <a href="#">Request Quote</a>	2 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	50.0/50.8mm Optic Dia., Kinematic Mount, 2-Screws	Adjustable - Tip-Tilt		#58-852	₹13,621 <a href="#">Request Quote</a>	5 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	50.0/50.8mm Optic Dia., Kinematic Mount, 3-Screws	Adjustable - Tip-Tilt		#58-855	₹15,840 <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
 	50.0/50.8mm Optic Dia., Stainless Steel Kinematic Mount, 2-Screws	Adjustable - Tip-Tilt		#26-816	₹24,819 <a href="#">Request Quote</a>	12 In Stock <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., Stainless Steel Kinematic Mount, 3-Screws	Adjustable - Tip-Tilt		#26-819	₹27,039 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-957	₹31,074 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	₹41,365 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#55-000	₹51,454 <a href="#">Request Quote</a>	7 In Stock <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-960	₹61,039 <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., 5 Axes Optical Mount	Adjustable - Linear (XYZ) & Tip-Tilt		#13-778	₹84,748 <a href="#">Request Quote</a>	10 In Stock <input type="text" value="1"/> 

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

## Resources

**Media Type**

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

**APPLICATION NOTE**  
**Anti-Reflection (AR) Coatings**

**APPLICATION NOTE**  
**An Introduction to Optical Coatings**

**SCIENTIFIC PAPER**  
**Advantages of using engineered chalcogenide...**

**VIDEO**  
**Infrared Light**

**GLOSSARY**  
**Short Wave Infrared (SWIR)**

**TECHNICAL TOOL**  
**Beam Displacement Calculator**

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