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**TECHSPEC® 50mm Dia., 1mm Thick, VIS-NIR Coated, Calcium Fluoride Window**



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

Stock **#22-610** **6 In Stock**

⊖ 1 ⊕ €350.<sup>00</sup>

**ADD TO CART**

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | €350,00 each                  |
| Qty 11-25      | €309,00 each                  |
| Qty 26-49      | €293,00 each                  |
| Need More?     | <a href="#">Request Quote</a> |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Protective Window **Type:**  
Crystal **Type of Window:**

**Physical & Mechanical Properties**

Clear Aperture CA (mm):

|                      |  |
|----------------------|--|
| 45.00                | <b>Diameter (mm):</b>                      |
| 50.00 +0.0/-0.1      |  |
|                      | <b>Thickness (mm):</b>                     |
| 1.00 ±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>  |
| VIS-NIR (400-1000nm)   |  |
|  | <b>Substrate:</b> <input type="checkbox"/>                   |
| 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> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm |  |
|  | <b>Wavelength Range (nm):</b>                                |
| 400 - 1000   |  |
|  | <b>Surface Flatness (P-V):</b>                               |
| 2λ   |  |
|  | <b>Damage Threshold, By Design:</b> <input type="checkbox"/> |
| 5 J/cm <sup>2</sup> @ 532nm, 10ns  |  |

## Material Properties

|       |   |
|-------|---|
|       | <b>Density (g/cm<sup>3</sup>):</b>                                |
| 3.18  |   |
|       | <b>Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):</b> |
| 18.85 |   |

## Regulatory Compliance

|                                    |           |
|------------------------------------|-----------|
| <b>RoHS 2015:</b>                  | Compliant |
| <b>Certificate of Conformance:</b> | View      |
| <b>Reach 235:</b>                  | Compliant |

### 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 (MMIR). 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 MMIR, 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

## Coating Curves

## Compatible Mounts