

TECHSPEC<sup>®</sup> 12.5mm Dia x 2mm Thick, Barium Fluoride Window



Stock #87-700 15 In Stock

-

1

+

£150<sup>-40</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | £150.40 each                  |
| Qty 11-25      | £134.40 each                  |
| Qty 26-49      | £127.20 each                  |
| Need More?     | <a href="#">Request Quote</a> |

! Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:  
Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):  
11.25

Diameter (mm):  
12.50 +0.0/-0.1

|                      |                             |
|----------------------|-----------------------------|
| 2.00 ±0.1            | Thickness (mm):             |
| <3                   | Parallelism (arcmin):       |
| +0.0/-0.1            | Dimensional Tolerance (mm): |
| Protective as needed | Bevel:                      |
| 90.00                | Clear Aperture (%):         |
| Fine Ground          | Edges:                      |
| 0.34                 | Poisson's Ratio:            |
| 53                   | Young's Modulus (GPa):      |
| 82.00                | Knoop Hardness (kg/mm²):    |

Optical Properties

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Uncoated                            | Coating:                               |
| Barium Fluoride (BaF <sub>2</sub> ) | Substrate: □                           |
| 1.48                                | Index of Refraction (n <sub>d</sub> ): |
| 60-40                               | Surface Quality:                       |
| 81.78                               | Abbe Number (v <sub>d</sub> ):         |
| 200 - 12000                         | Wavelength Range (nm):                 |
| λ/2                                 | Surface Flatness (P-V):                |

Material Properties

|      |                                                              |
|------|--------------------------------------------------------------|
| 4.89 | Density (g/cm³):                                             |
| 18.1 | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |

Environmental & Durability Factors

|              |                             |
|--------------|-----------------------------|
| Maximum: 800 | Operating Temperature (°C): |
|--------------|-----------------------------|

Regulatory Compliance

|           |                             |
|-----------|-----------------------------|
| Compliant | RoHS 2015:                  |
| Compliant | Reach 219:                  |
| View      | Certificate of Conformance: |

## Product Details

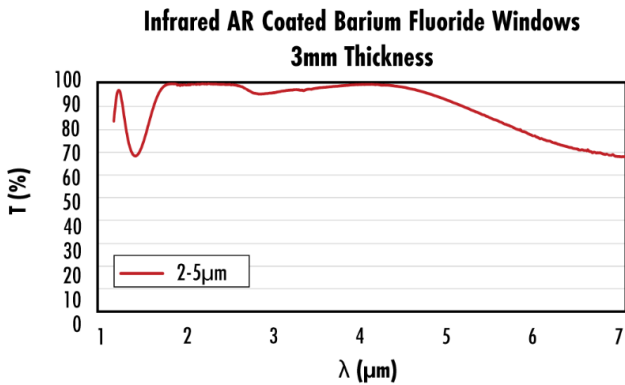
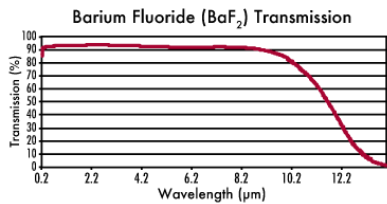
- Excellent Transmission from 200nm - 12µm
- Resistant to High-Energy Radiation
- Provide High Transmission without AR Coatings

TECHSPEC® Barium Fluoride (BaF<sub>2</sub>) Windows can be used in a variety of applications, such as infrared spectroscopy, due to their wide broadband transmission that extends from the deep ultraviolet to the long-wave infrared. Barium fluoride's low index of refraction of 1.48 provides high transmission without the need for anti-reflection coatings. Barium fluoride windows can be used up to 800°C in a dry environment, but prolonged exposure to moisture can degrade transmission in the ultraviolet range. While barium fluoride windows are less resistant to water than calcium fluoride, BaF<sub>2</sub> windows are the most resistant optical fluoride to high-energy radiation, but feature lower UV transmittance. BaF<sub>2</sub> has a Knoop hardness of 82.

**Note:** These optical windows are very sensitive to thermal shock.

Barium fluoride is a fast scintillator and can be used to detect X-rays, gamma rays, or other high energy particles such as 511 keV gamma photons in Positron Emission Tomography (PET). BaF<sub>2</sub> can also be used to detect high-energy neutrons and separate them from simultaneously occurring gamma photons using pulse shape discrimination techniques.

## 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

## Compatible Mounts