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# 38.1mm Dia., 1mm Thick, Uncoated, ISP Optics Barium Fluoride ($BaF_2$) Window | BF-W-38-1

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Stock **#24-497** CLEARANCE **11 In Stock**

- 1 + **€230**.95

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Product Downloads

## General

**Model Number:**
BF-W-38-1

**Type:**
Protective Window

**Type of Window:**

Crystal

## Physical & Mechanical Properties

**Clear Aperture CA (mm):**
32.38

**Diameter (mm):**
38.10 +0.00/-0.13

**Thickness (mm):**
1.00 ±0.13

**Parallelism (arcmin):**
<3

**Bevel:**
Protective as needed

**Clear Aperture (%):**
85

**Edges:**
Fine Ground

**Poisson's Ratio:**
0.34

**Young's Modulus (GPa):**
53

**Knoop Hardness (kg/mm$^2$):**
82.00

## Optical Properties

**Coating:**
Uncoated

**Substrate:**
Barium Fluoride ($BaF_2$)

**Index of Refraction ($n_d$):**
1.48

**Surface Quality:**
40-20

**Abbe Number ($v_d$):**
81.78

**Axis Orientation:**
Random

**Wavelength Range (nm):**
200 - 12000

**Surface Flatness (P-V):**
2λ

## Material Properties

**Density (g/cm$^3$):**
4.89

**Coefficient of Thermal Expansion CTE ($10^{-6}$/°C):**
18.1

## Environmental & Durability Factors

**Operating Temperature (°C):**
Maximum: 800

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Certificate of Conformance:**
View

**Reach 240:**
Compliant

# Product Details

- Excellent Transmission from 0.2 - 12µm
- Resistant to High-Energy Radiation
- High Transmission without AR Coatings

ISP Optics Barium Fluoride ($BaF_2$) Windows provide excellent transmission from 0.2- 12µm without the need for an Anti-Reflection (AR) coating due to its low index of refraction. Barium Fluoride has similar physical properties to Calcium Fluoride, but features higher resistance to high-energy radiation. This makes Barium Fluoride ideal for vacuum UV (VUV) applications such as thermography or laser spectroscopy where high radiation resistance is required. ISP Optics Barium Fluoride ($BaF_2$) Windows can be used up to 800°C in a dry environment, but prolonged exposure to moisture can degrade transmission in the ultraviolet range.

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

# 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**

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