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TECHSPEC® 20mm Diameter x 3.3mm Thickness, Uncoated, BOROFLOAT® Window

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TECHSPEC BOROFLOAT Borosilicate Windows

Stock **#45-461** [CONTACT US](#)

⊖ 1 ⊕ €28.⁰⁰

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| Volume Pricing | |
|----------------|-------------------------------|
| Qty 1-5 | €28,00 each |
| Qty 6-25 | €22,00 each |
| Qty 26-99 | €21,00 each |
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Protective Window **Type:**

Glass **Type of Window:**

Physical & Mechanical Properties

| | |
|----------------------|--|
| 18.00 | Clear Aperture CA (mm): |
| 20.00 ±0.5 | Diameter (mm): |
| 3.30 ±0.2 | Thickness (mm): |
| Protective as needed | Bevel: |
| ≥90 | Clear Aperture (%): |
| Ground | Edges: |
| 0.20 | Poisson's Ratio: |
| 64 | Young's Modulus (GPa): |
| 480.00 | Knoop Hardness (kg/mm²): |

Optical Properties

| | |
|-------------------|---|
| Uncoated | Coating: |
| BOROFLOAT® | Substrate: <input type="checkbox"/> |
| 1.472 | Index of Refraction (n_d): |
| 80-50 | Surface Quality: |
| 90 | Transmission (%): |
| 65.41 | Abbe Number (v_d): |
| 350 - 2000 | Wavelength Range (nm): |
| 4 - 6λ | Surface Flatness (P-V): |

Material Properties

| | |
|----------------------|---|
| 2.23 | Density (g/cm³): |
| 525 | Transformation Temperature (°C): |
| 3.25 (+20 to +300°C) | Coefficient of Thermal Expansion CTE (10⁻⁶/°C): |

Environmental & Durability Factors

| | |
|--|--|
| 1 hour @ 500; >100 hours @ 450 | Operating Temperature (°C): |
| Short Term, 1 hr: 110K 1 - 100 hrs: 90K Long Term, >100 hrs: 80K | Resistance to Temperature Difference (K): |
| Up to 4mm Thick: 175K 4 - 6mm Thick: 160K 6 - 15mm Thick: 150K | Thermal Shock (K): |

Regulatory Compliance

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

Product Details

- Low Coefficient of Thermal Expansion
- Visible to Near Infrared Transmission
- High Resistance to Thermal Shock

TECHSPEC® BOROFLOAT® Borosilicate Windows are ideal for high temperature and harsh environment applications. The windows have a low coefficient of thermal expansion of 3.25 (+20 to +300°C). TECHSPEC® BOROFLOAT® Borosilicate Windows feature visible to near infrared transmission. Unlike common borosilicate that is drawn flat, BOROFLOAT® is produced by a float technique that yields superior surface flatness — typically 4 - 6λ per inch. BOROFLOAT® is about three times more resistant to thermal shock than standard soda lime glass.

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Technical Information



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Compatible Mounts