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**TECHSPEC® 20mm Dia., 3mm Thick, 1 Side VIS-EXT Sapphire Window**



Single-Side AR-Coated Sapphire Windows

Stock #90-059 **NEW** 9 In Stock

⊖ 1 ⊕ €110.<sup>00</sup>

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Volume Pricing	
Qty 1-24	€110,00 each
Qty 25-50	€88,00 each
Qty 51-99	€82,50 each
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Protective Window **Type:**

**Physical & Mechanical Properties**

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

**Diameter (mm):**

20.00 ±0.05	
3.00 ±0.05	<b>Thickness (mm):</b>
≤3.5	<b>Parallelism (arcmin):</b>
Protective as needed	<b>Bevel:</b>
90	<b>Clear Aperture (%):</b>
Fine Ground	<b>Edges:</b>
0.27	<b>Poisson's Ratio:</b>
435	<b>Young's Modulus (GPa):</b>
1,900.00	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b>

## Optical Properties

VIS-EXT (350-700nm)	<b>Coating:</b>
Sapphire (Al <sub>2</sub> O <sub>3</sub> )	<b>Substrate:</b> <input type="checkbox"/>
1.77	<b>Index of Refraction (n<sub>d</sub>):</b>
80-50	<b>Surface Quality:</b>
72.24	<b>Abbe Number (v<sub>d</sub>):</b>
0.008 for Visible Light Orthogonal to Optical Axis	<b>Birefringence (n<sub>o</sub>-n<sub>e</sub>):</b>
Random	<b>Axis Orientation:</b>
R <sub>avg</sub> <0.5% @ 350 - 700nm	<b>Coating Specification:</b>
350 - 700	<b>Wavelength Range (nm):</b>

## Material Properties

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

## Regulatory Compliance

<a href="#">View</a>	<b>Certificate of Conformance:</b>
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## Product Details

- Combines the High Transmission of an AR-Coating with the Ruggedness of Sapphire
- Ideal for Applications Where High Environmental Resistance is Required
- Uncoated Surface can Withstand Intensive Cleaning and Abrasion

TECHSPEC® Single-Side AR-Coated Sapphire Windows feature a durable single-crystal sapphire substrate with an Anti-Reflection coating on one side for improved performance. The single-surface coating combines the benefits of higher transmission with the hardness, strength, and chemical resistance of sapphire. These windows are available in VIS-NIR (400-1000nm) or VIS-EXT (350-700nm) single-sided coating options. TECHSPEC® Single-Side AR-Coated Sapphire Windows can be used with the uncoated surface facing outwards to resist abrasion or harsh chemicals, ensuring the coated surface is not exposed to conditions that may cause damage and reduce performance. These windows are ideal for applications in food or healthcare where intensive cleaning is necessary.