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TECHSPEC® 50 x 50mm Dia., 3.18mm Thick, 1 Side VIS-NIR Sapphire Window



Single-Side AR-Coated Sapphire Windows

Stock **#90-044** NEW CONTACT US

⊖ 1 ⊕ €545⁰⁰

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Volume Pricing	
Qty 1-24	€545,00 each
Qty 25-50	€437,00 each
Qty 51-99	€410,00 each
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Protective Window **Type:**

Physical & Mechanical Properties

45 x 45 **Clear Aperture CA (mm):**

Dimensions (mm):

50.0 x 50.0 ±0.15	
3.18 ±0.05	Thickness (mm):
50.00	Length (mm):
50.00	Width (mm):
≤3.5	Parallelism (arcmin):
Protective as needed	Bevel:
90	Clear Aperture (%):
Fine Ground	Edges:
0.27	Poisson's Ratio:
435	Young's Modulus (GPa):
1,900.00	Knoop Hardness (kg/mm²):

Optical Properties

VIS-NIR (400-1000nm)	Coating:
Sapphire (Al ₂ O ₃)	Substrate: <input type="checkbox"/>
1.77	Index of Refraction (n_d):
80-50	Surface Quality:
72.24	Abbe Number (v_d):
0.008 for Visible Light Orthogonal to Optical Axis	Birefringence (n_o-n_e):
Random	Axis Orientation:
R _{avg} ≤0.25% @ 880nm R _{avg} ≤1.25% @ 400 - 870nm R _{avg} ≤1.25% @ 890 - 1000nm	Coating Specification:
400 - 1000	Wavelength Range (nm):

Material Properties

3.97	Density (g/cm³):
8.8	Coefficient of Thermal Expansion CTE (10⁻⁶/°C):

Regulatory Compliance

View	Certificate of Conformance:
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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.