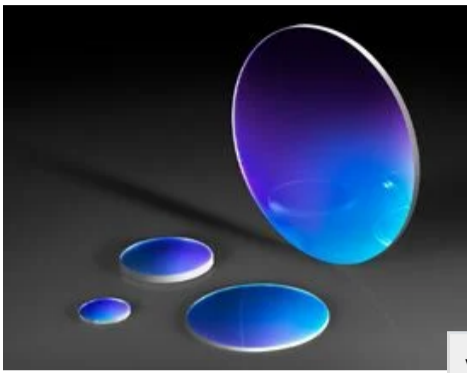


# TECHSPEC® 55.0mm Dia., 2.0mm Thick, Uncoated, Sapphire Window



Stock #23-297 **20+ In Stock**

1 **C\$742<sup>.00</sup>**

**ADD TO CART**

Volume Pricing	
Qty 1-24	C\$742.00 each
Qty 25-50	C\$567.00 each
Qty 51-99	C\$555.80 each
Need More?	<a href="#">Request Quote</a>

Product Downloads	
STEP:step	PDF Drawing:pdf
IGES:igs	eDrawing:eprt
EO Spec Sheet	<a href="#">Download All</a>

## General

<b>Type:</b> Protective Window	<b>Type of Window:</b> Crystal
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## Physical & Mechanical Properties

<b>Clear Aperture CA (mm):</b> 49.5	<b>Diameter (mm):</b> 55.00 +0/-0.20
<b>Thickness (mm):</b> 2.00 ±0.10	<b>Parallelism (arcmin):</b> ≤3.5
<b>Bevel:</b> Protective as needed	<b>Clear Aperture (%):</b> ≥90
<b>Edges:</b> Fine Ground	<b>Poisson's Ratio:</b> 0.27
<b>Young's Modulus (GPa):</b> 435	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b> 1,900.00

## Optical Properties

<b>Coating:</b> Uncoated	<b>Substrate:</b> Sapphire (Al <sub>2</sub> O <sub>3</sub> )
<b>Index of Refraction (n<sub>d</sub>):</b> 1.77	<b>Surface Quality:</b> 80-50
<b>Abbe Number (v<sub>d</sub>):</b> 72.24	<b>Birefringence (n<sub>o</sub>-n<sub>e</sub>):</b> 0.008 for Visible Light Orthogonal to Optical Axis
<b>Axis Orientation:</b> Random	<b>Wavelength Range (nm):</b> 330 - 5500
<b>Surface Flatness (P-V):</b> 2λ (typical)	

## Material Properties

**Density (g/cm<sup>3</sup>):** 3.97

**Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):** 5.4 (Parallel to C-Axis)  
4.3 (Perpendicular to C-Axis)

## Regulatory Compliance

RoHS 2015: [Compliant](#)

Certificate of Conformance: [View](#)

Reach 247: [Compliant](#)

## Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

- Features Extreme Surface Hardness Chemical Resistance
- Transmits Wavelengths Ranging From UV to Mid-Infrared
- Thinner and Stronger than Standard Glass Windows
- Anti-Reflection Coating Options Covering 350 - 5000nm Available

TECHSPEC® Sapphire Windows are manufactured from single crystal sapphire, making them ideal for demanding applications (such as laser systems) because of their extreme surface hardness, high thermal conductivity, high dielectric constant and resistance to common chemical acids and alkalis. Sapphire is the second hardest crystal next to **diamond** and, because of their structural strength, sapphire windows can be made much thinner than other common windows with improved transmittance. Chemically, sapphire is single crystal aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) and is useful in a transmission range from UV to mid-infrared or 330 - 5500nm when uncoated. TECHSPEC® Sapphire Windows are available with anti-reflection (AR) coatings to improve performance in the visible, NIR, and IR spectra with coating options covering 350 - 5000nm.

## Technical Information

### Related Products



Cage System Optical Lens Mounts















C, S, and T-Mount Circular Optic Mounts



PUROSOL™ Optical Cleaner

## Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
 	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	C\$151.20 Request Quote	CONTACT US <input type="text" value="1"/> 
 	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	C\$162.40 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	C\$168.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	C\$574.00 Request Quote	CONTACT US <input type="text" value="1"/> 

Check out our full selection of mounts [here](#).

## Resources

### Media Type

- Application Note
- Technical Tool
- Video
- Glossary
- FAQ

 APPLICATION NOTE

Anti-Reflection (AR) Coatings

 APPLICATION NOTE

An Introduction to Optical Coatings

 TECHNICAL TOOL

Beam Displacement Calculator

 APPLICATION NOTE

Understanding Optical Windows

 VIDEO

Optical Windows Review

 APPLICATION NOTE

Optical Glass

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