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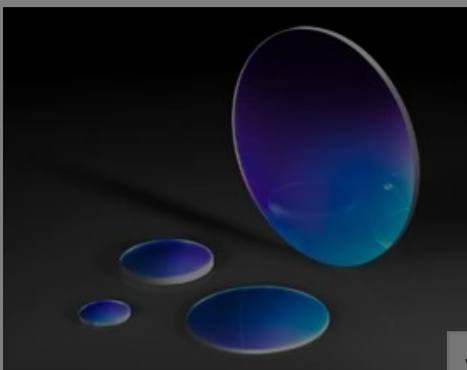
**TECHSPEC®**

10mm Dia., 3mm

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Stock #28-555 12 In Stock

1

€63<sup>.00</sup>

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Volume Pricing	
Qty 1-24	€63,00 each
Qty 25-50	€48,00 each
Qty 51-99	€47,00 each
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Product Downloads	
STEP:step	Curve:pdf
PDF Drawing:pdf	IGES:igs
Curve (xlsx):xlsx	
eDrawing:eprt	
EO Spec Sheet	<a href="#">Download All</a>

Prices shown are exclusive of VAT/local taxes

### General

**Type:** Protective Window

**Type of Window:** Crystal

### Physical & Mechanical Properties

**Clear Aperture CA (mm):** 9.00

**Diameter (mm):** 10.00 ±0.05

**Thickness (mm):** 3.00 ±0.05

**Parallelism (arcmin):** ≤3.5

**Bevel:** Protective as needed

**Clear Aperture (%):** ≥90

**Edges:** Fine Ground

**Poisson's Ratio:** 0.27

**Young's Modulus (GPa):** 435

**Knoop Hardness (kg/mm<sup>2</sup>):** 1,900.00

### Optical Properties

**Coating:** VIS-EXT (350-700nm)

**Substrate:** Sapphire (Al<sub>2</sub>O<sub>3</sub>)

**Index of Refraction (n<sub>d</sub>):** 1.77

**Surface Quality:** 80-50

**Abbe Number (v<sub>d</sub>):** 72.24

**Birefringence (n<sub>o</sub>-n<sub>e</sub>):** 0.008 for Visible Light Orthogonal to Optical Axis

**Axis Orientation:** Random

**Coating Specification:** R<sub>avg</sub> <0.5% @ 350 - 700nm

**Wavelength Range (nm):** 350 - 700

**Surface Flatness (P-):** 2λ (typical)

## Material Properties

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

Coefficient of Expansion: 5.4 (Parallel to

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## Regulatory Compliance

Certificate of Conformance: [View](#)

## 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

## Resources

## Media Type

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

APPLICATION NOTE

Anti-Reflection

APPLICATION NOTE

Ap

TECHNICAL TOOL

Beam  
Displacement  
Calculator

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APPLICATION NOTE

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Optical  
Windows

VIDEO

Optical  
Windows  
Review

APPLICATION NOTE

Optical Glass

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