

50.8mm Dia., 3.18mm Thick, Uncoated, Laser Grade C-Axis Sapphire Window



Laser Grade C-Axis Sapphire Windows

Stock #15-805 [CONTACT US](#)

1

£584^{.00}

ADD TO CART

Volume Pricing	
Qty 1-10	£584.00 each
Qty 11+	£528.00 each
Need More?	Request Quote

Prices shown are exclusive of VAT/local taxes

Product Downloads	
STEP:step	PDF Drawing:pdf
IGES:igs	eDrawing:eprt
EO Spec Sheet	Download All

General

Type: Protective Window	Type of Window: Crystal
--------------------------------	--------------------------------

Physical & Mechanical Properties

Clear Aperture CA (mm): 45.00	Diameter (mm): 50.80 +0.00/-0.10
Thickness (mm): 3.18 ±0.20	Parallelism (arcmin): <3
Bevel: Protective as needed	Edges: Fine Ground
Poisson's Ratio: 0.27	Young's Modulus (GPa): 435
Knoop Hardness (kg/mm²): 1,900.00	

Optical Properties

Coating: Uncoated	Substrate: ^① Sapphire (Al ₂ O ₃)
Index of Refraction (n_d): 1.77	Surface Quality: 10-5
Transmitted Wavefront, P-V: λ/10 over 25.4mm of Clear Aperture	Abbe Number (v_d): 72.24
Birefringence (n_o-n_e): 0	Axis Orientation: C-axis
Wavelength Range (nm): 200 - 5500	

Material Properties

Density (g/cm³): 3.97

Coefficient of Thermal Expansion CTE (10⁻⁶/°C): 8.8

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](#).

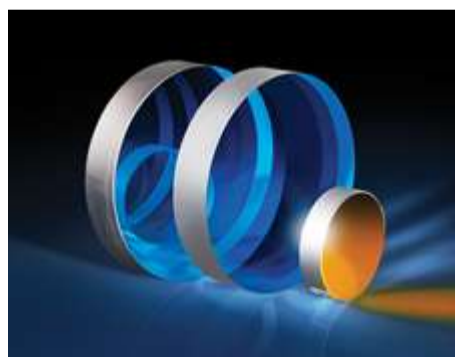
Product Details

- C-Axis Cut Sapphire to Eliminate Birefringence
- 10-5 Surface Quality and $\lambda/10$ TWFD
- Uncoated or IBS AR Coated for 1000-1100nm
- Ideal for High Power Laser Applications

Laser Grade C-Axis Sapphire Windows are precision optical windows cut to the C-axis of sapphire to eliminate the inherent birefringent properties of the material. C-axis sapphire, also referred to as C-plane sapphire or zero degree sapphire, provides high transmission from the ultraviolet (UV) to the mid-infrared, excellent chemical resistance, and high surface hardness second only to diamond. Featuring laser grade 10-5 surface quality and $\lambda/10$ transmitted wavefront distortion (TWFD), these windows are ideal for use in laser applications or for integration into laser systems. Laser Grade C-Axis Sapphire Windows are available uncoated or with an ion-beam sputtered (IBS) antireflection (AR) coating for 1000 - 1100nm, ideal for Nd:YAG, Yb:doped fiber, or Yb:YAG laser applications. Standard imperial sizes facilitate drop-in replacement into existing laser systems; please contact us if your application requires a Laser Grade C-Axis Sapphire Window with a custom size or coating.

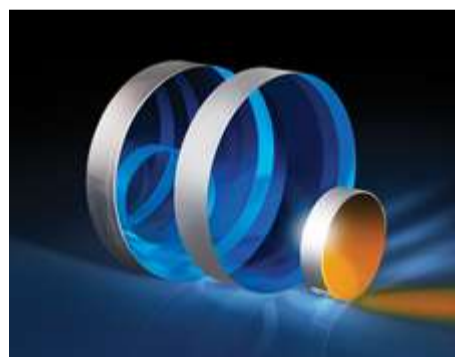
Technical Information

Frequently Purchased Together



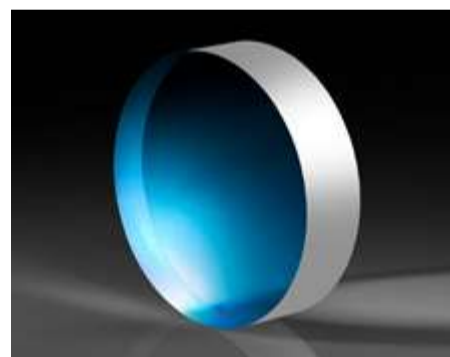
#43-404-566 - 0.5" Dia. Protected Gold, $\lambda/20$ Flat ZERODUR®
£148.00

Qty



#43-412-566 - 1" Dia. Protected Gold, $\lambda/20$ Flat ZERODUR®
£204.00

Qty



#48-130 - 2" Dia. $\lambda/20$ Fused Silica Dual Surface Flat
£464.00

Qty



















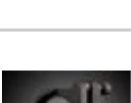

















#35-906 - 25mm Uncoated $\lambda/20$ Fused Silica Right Angle Prism
£313.60

Qty



Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	50.8mm Optic Dia., Optic Mount	Fixed		#64-569	£39.40 Request Quote	12 In Stock <input type="text" value="1"/> 
MORE+ 	9.5 - 73.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#36-605	£66.40 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., E-Series Kinematic Mount	Adjustable - Tip-Tilt		#15-867	£76.80 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	£86.40 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	19.5 - 108.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#03-670	£91.20 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	£92.80 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 CLEARANCE	£95.96 Request Quote	2 In Stock <input type="text" value="1"/> 
MORE+ 	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	£96.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Kinematic Mount, 2-Screws	Adjustable - Tip-Tilt		#58-852	£108.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Kinematic Mount, 3-Screws	Adjustable - Tip-Tilt		#58-855	£125.60 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Stainless Steel Kinematic Mount, 2-Screws	Adjustable - Tip-Tilt		#26-816	£196.80 Request Quote	12 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Stainless Steel Kinematic Mount, 3-Screws	Adjustable - Tip-Tilt		#26-819	£214.40 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-957	£246.40 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	£328.00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#55-000	£408.00 Request Quote	7 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-960	£484.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., 5 Axes Optical Mount	Adjustable - Linear (XYZ) & Tip-Tilt		#13-778	£672.00 Request Quote	10 In Stock <input type="text" value="1"/> 

Resources

Media Type

- Application Note
- Technical Tool
- Published Article
- Glossary
- Video
- FAQ
- Scientific Paper

APPLICATION NOTE

Anti-Reflection
(AR) Coatings

APPLICATION NOTE

An
Introduction to
Optical
Coatings

TECHNICAL TOOL

Gaussian
Beams
Calculator

APPLICATION NOTE

Understanding
Surface
Roughness

APPLICATION NOTE

Common Laser
Optics
Materials

APPLICATION NOTE

Importance of
Beam
Diameter on
Laser Damage...

[View More](#)