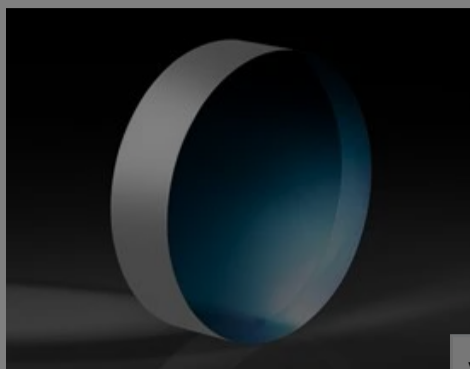


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TECHSPEC® 50mm



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Select Your Country/Region: European Union

Submit

1

€172⁰⁰

ADD TO CART

Volume Pricing	
Qty 1-5	€172,00 each
Qty 6-25	€137,00 each
Qty 26-49	€129,00 each
Need More?	Request Quote

Prices shown are exclusive of VAT/local taxes

Product Downloads

- STEP:step
- Curve:pdf
- PDF Drawing:pdf
- IGES:igs
- Curve (xlsx)
- eDrawing:eprt
- EO Spec Sheet
- [Download All](#)

General

Type: Protective Window

Type of Window: Glass

Physical & Mechanical Properties

Clear Aperture CA (mm): 45.00

Diameter (mm): 50.00 +0.00/-0.20

Thickness (mm): 4.00 ±0.38

Parallelism (arcmin): <5

Dimensional Tolerance (mm): +0.00/-0.20

Bevel: Protective as needed

Clear Aperture (%): 90

Edges: Fine Ground

Poisson's Ratio: 0.16

Young's Modulus (GPa): 73

Knoop Hardness (kg/mm²): 522.00

Optical Properties

Coating: NIR I (600-1050nm)

Substrate: **Fused Silica** (Corning 7980)

Index of Refraction (n_d): 1.458

Surface Quality: 60-40

Abbe Number (v_d): 67.8

Coating Specification: R_{avg} ≤0.5% @ 600 - 1050nm

Wavelength Range (nm): 600 - 1050

Surface Flatness (P-V): 1λ

Damage Threshold, Reference: 7 J/cm² @ 1064nm, 10ns ⓘ

Material Properties

Density (g/cm³): 2.20

Please select your shipping country to view the most accurate inventory information, and to determine the correct Edmund Optics sales office for your order.

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Fused Silica Grade: 7980 0G

Regulatory Compliance

RoHS 2015: **Compliant**

Certificate of Conformance: **View**

Reach 235: **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

- Available Uncoated or with Broadband Anti-Reflection Coatings
- Ideal for Cost Sensitive Broadband Applications
- Circular and Square Sizes from 5mm to 100mm
- $\lambda/4$ or $\lambda/10$ UV Fused Silica Windows Also Available

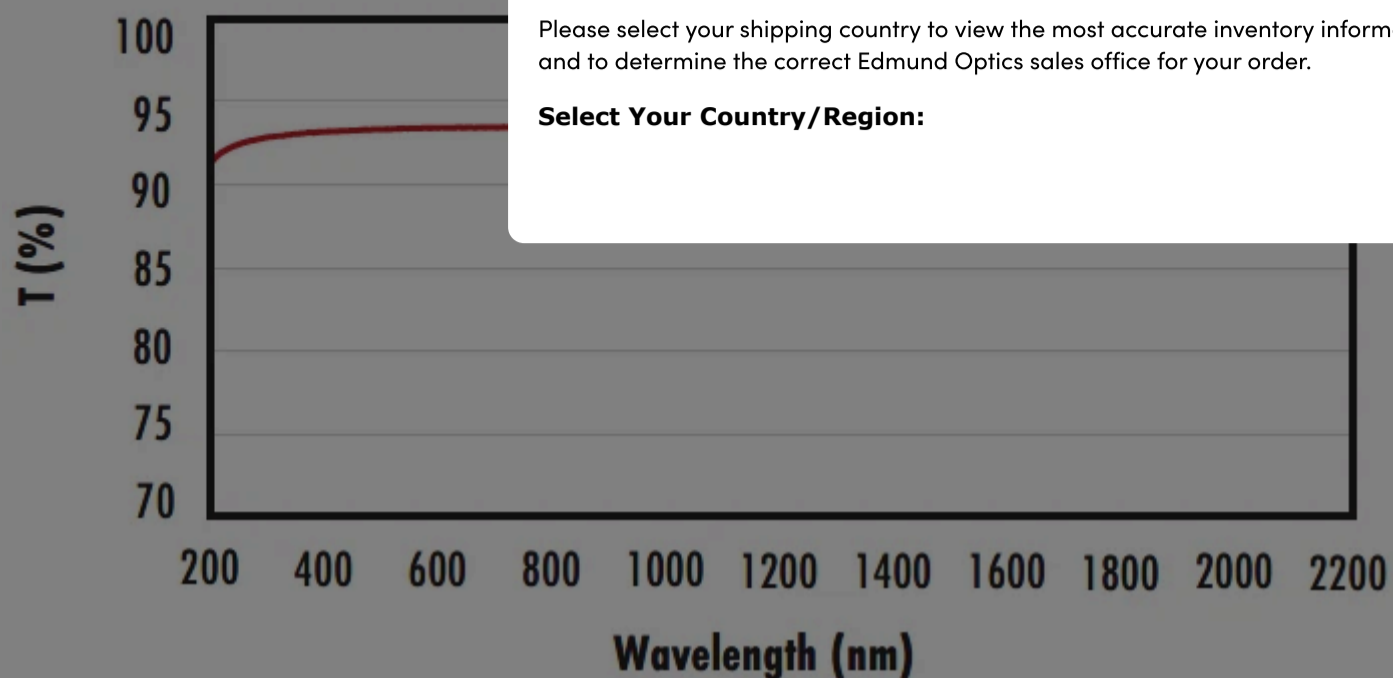
TECHSPEC® 1λ UV Fused Silica Windows are precision manufactured using UV-grade synthetic fused silica. In addition to superior transmission, the synthetic fused silica of these optical windows exhibits higher thermal properties, exceptional purity, and excellent environmental durability for demanding applications. The windows are ideal for cost-sensitive broadband applications and are available uncoated or with broadband anti-reflection coatings. TECHSPEC® 1λ UV Fused Silica Windows have circular and square sizes ranging from 5mm to 100mm. $\lambda/4$ or $\lambda/10$ UV Fused Silica Windows are also available.

Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

Technical Information

UV FS Transmission Curve

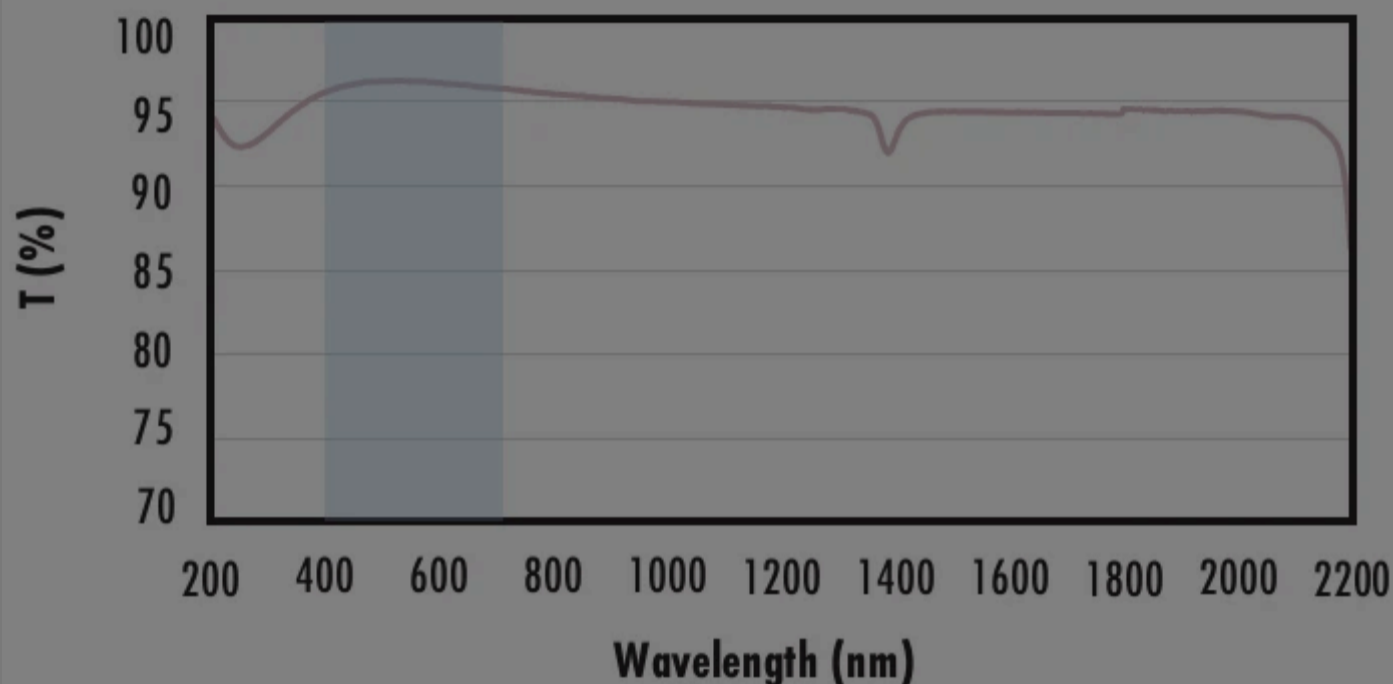
Uncoated Fused Silica Typical Transmission



Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.

[Click Here to Download Data](#)

Fused Silica with MgF₂ Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with MgF₂ (400-700nm) coating at 0° AOI.

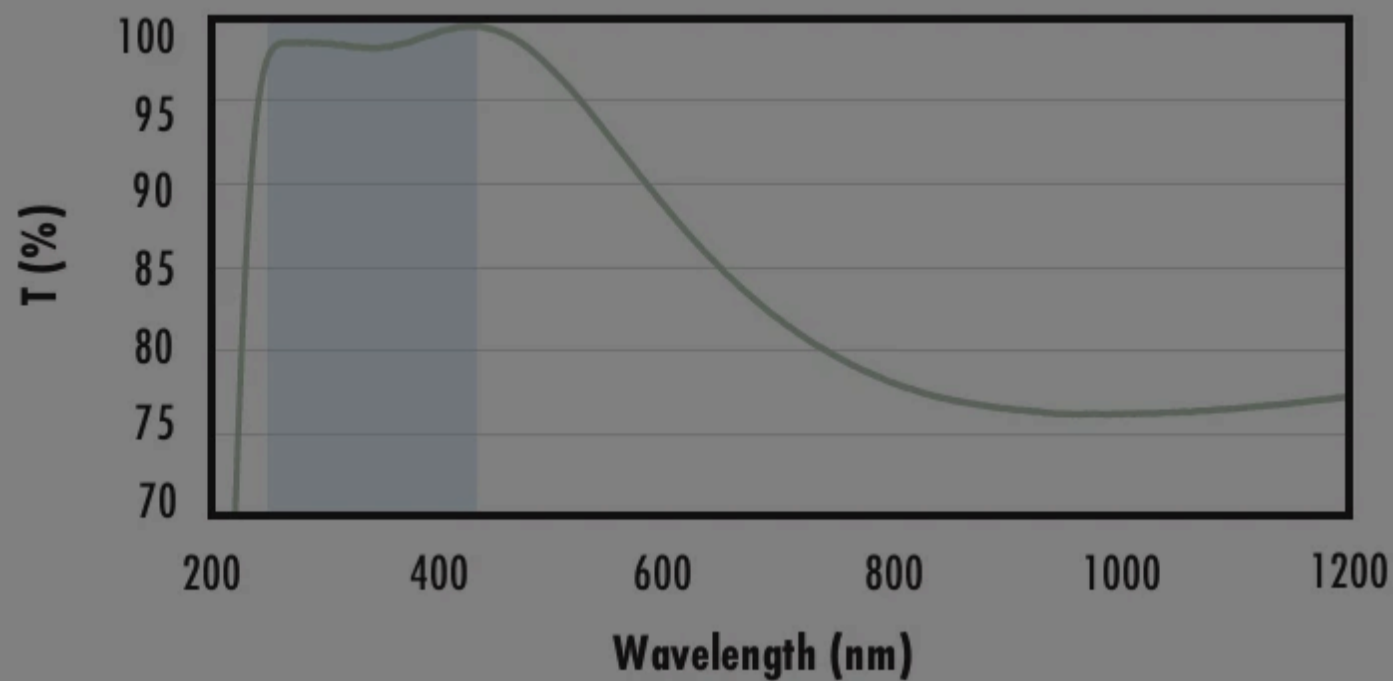
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

Fused Silica with UV-AR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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Fused Silica with UV-VIS Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

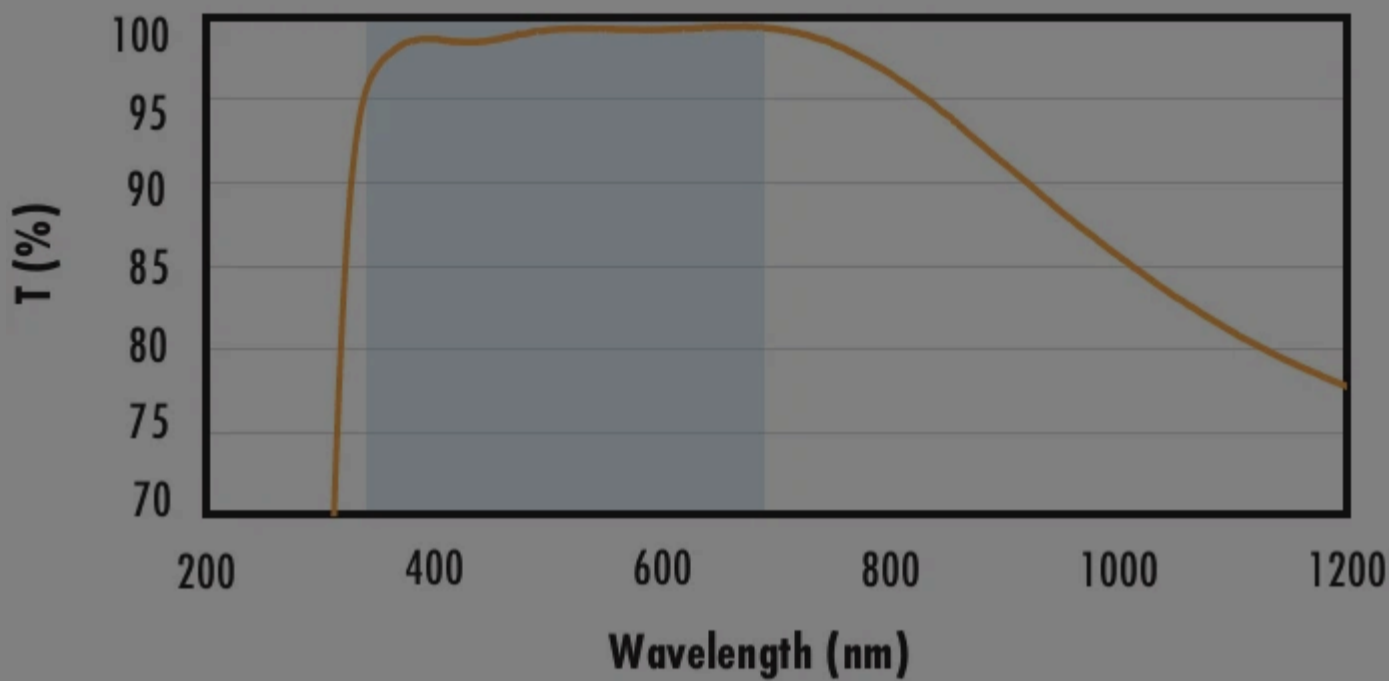
$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

$$R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

Fused Silica with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

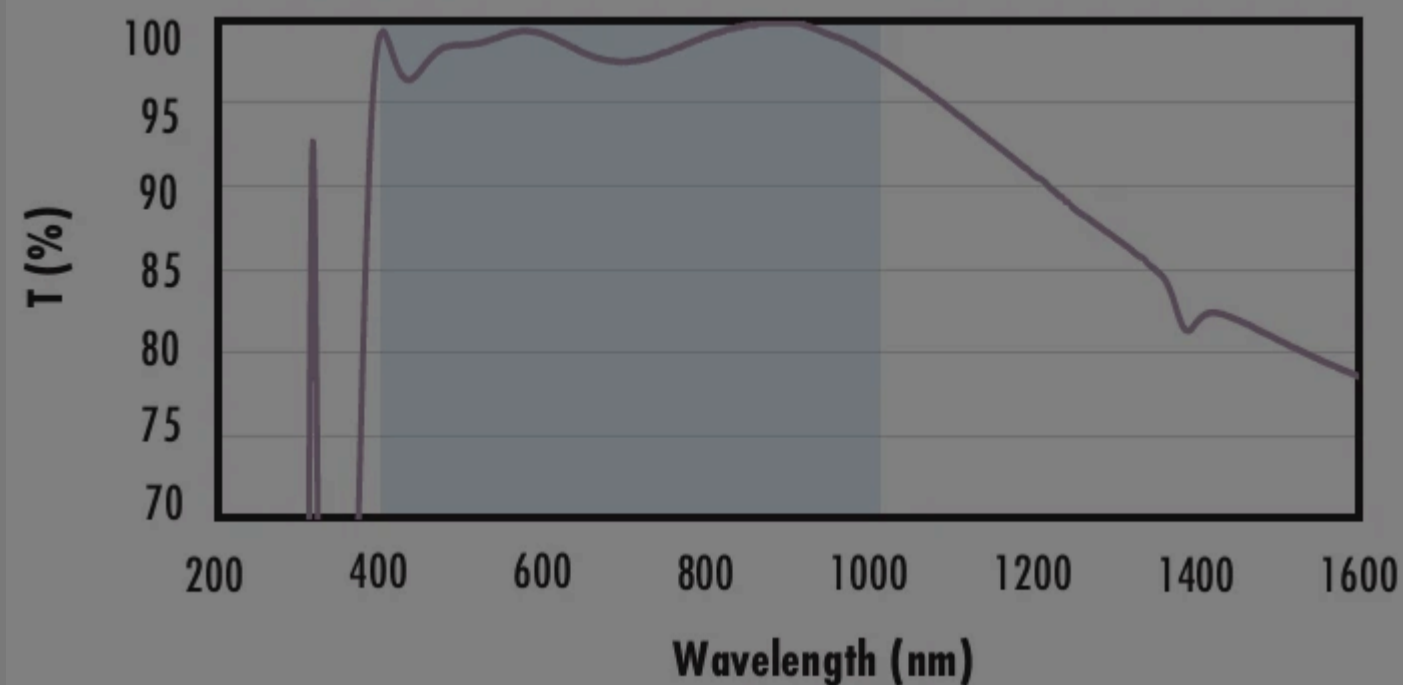
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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Fused Silica with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}$$

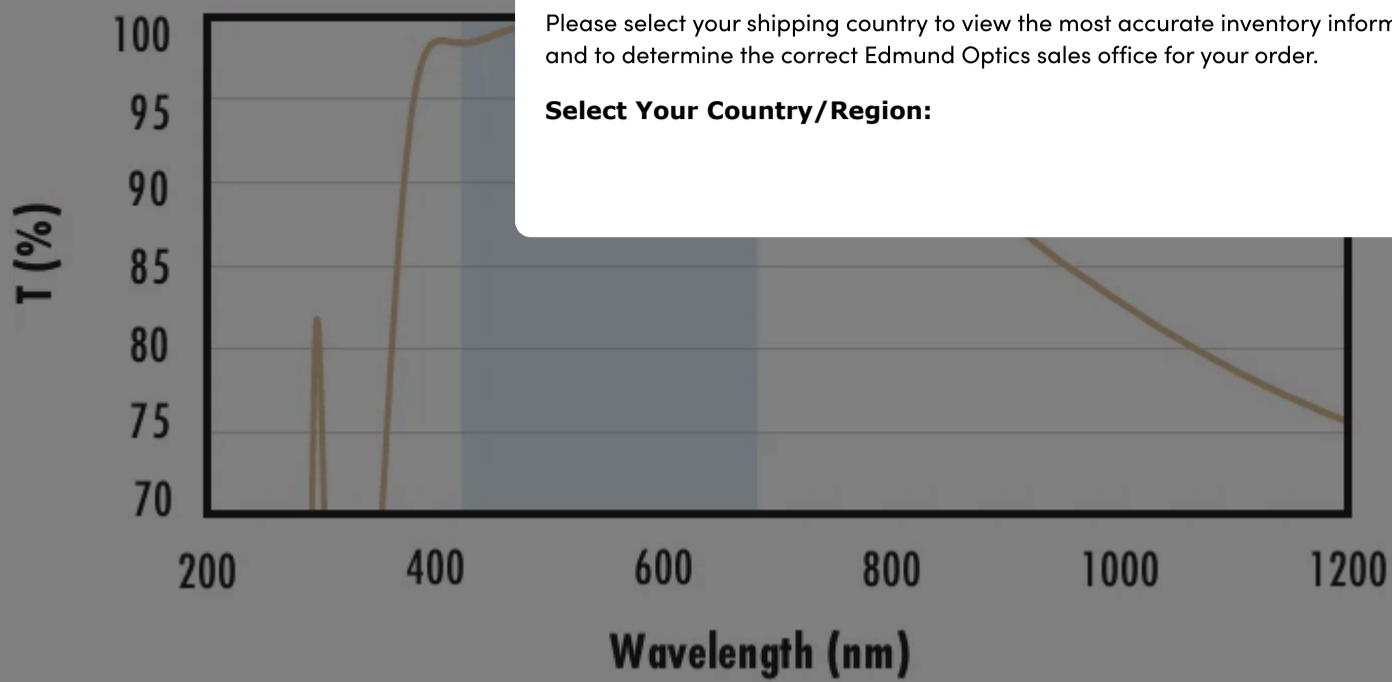
$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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Fused Silica with VIS 0° Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS 0° (425–675nm) coating at 0° AOI.

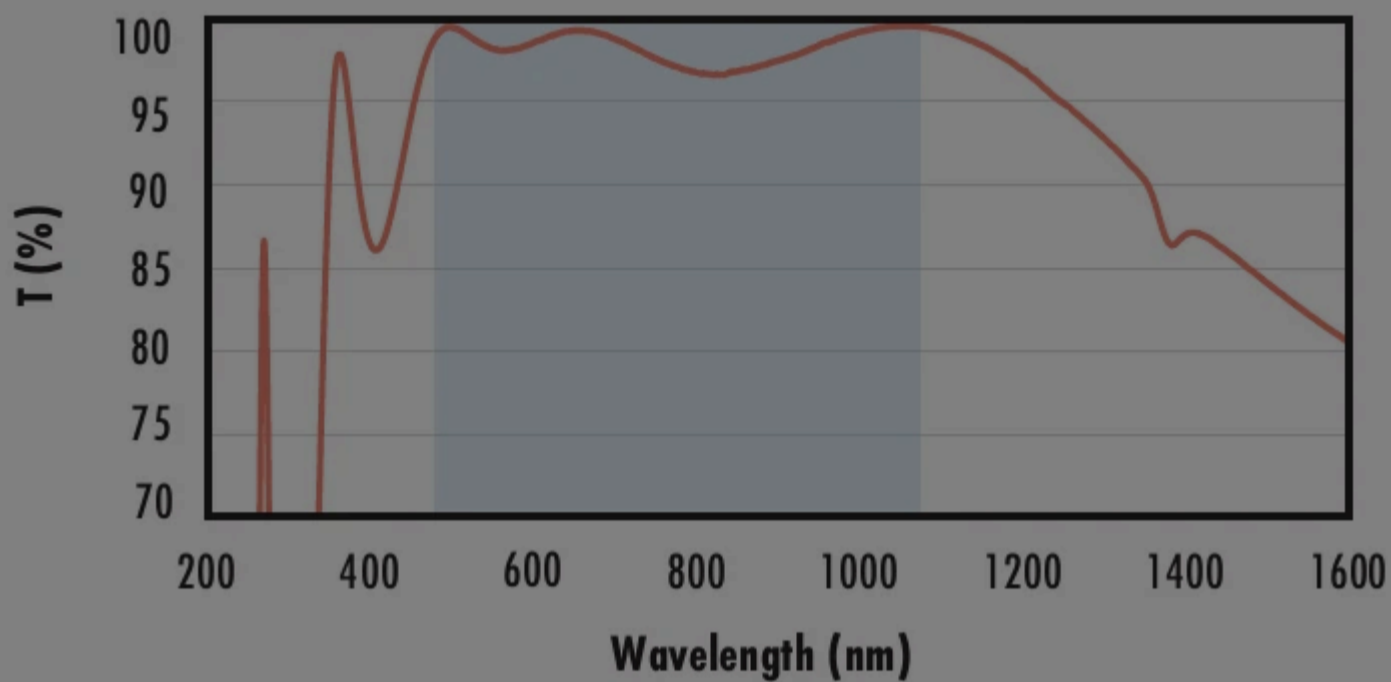
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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Fused Silica with YAG-BBAR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500–1100nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}$$

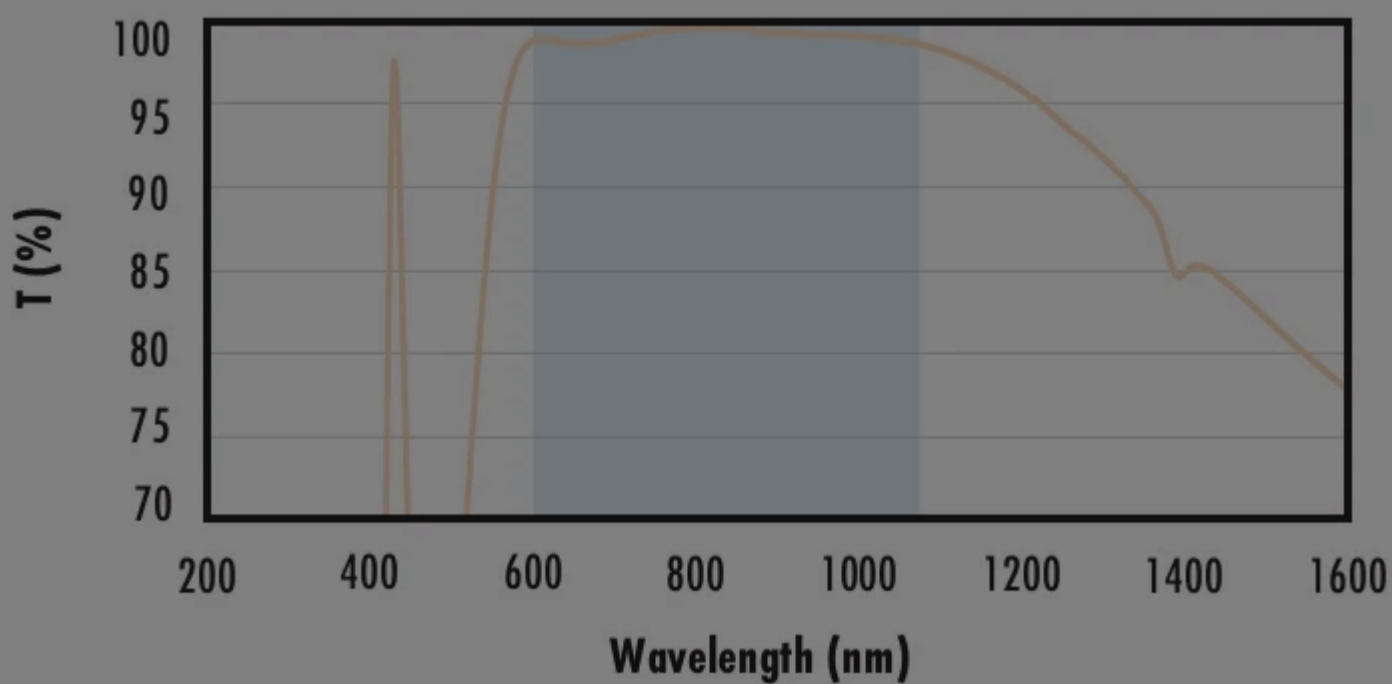
$$R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$$

$$R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

Fused Silica with NIR I Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with NIR I (600 – 1050nm) coating at 0° AOI.

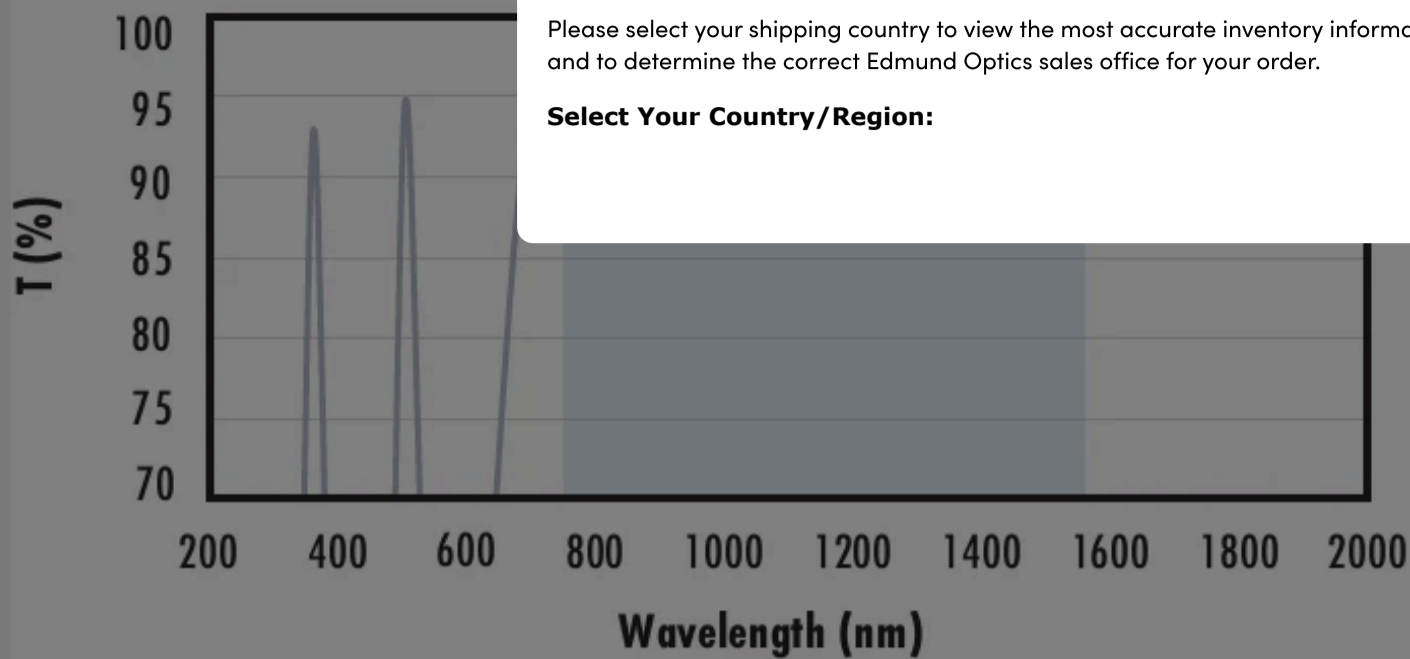
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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Fused Silica with NIR II Coating Typical Transmission



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Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 1.5\%$ @ 750 - 800nm
- $R_{abs} \leq 1.0\%$ @ 800 - 1550nm
- $R_{avg} \leq 0.7\%$ @ 750 - 1550nm

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

Related Products



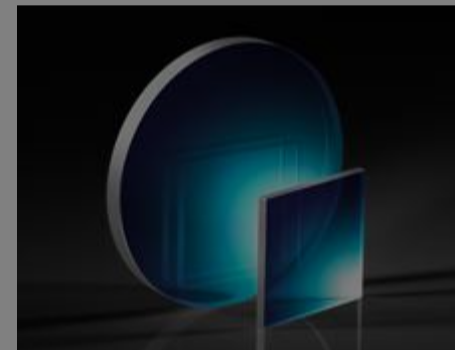
Cage System Optical Lens Mounts



C, S, and T-Mount Circular Optic Mounts

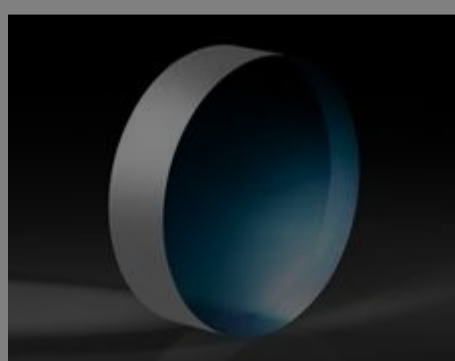


PUROSOL™ Optical Cleaner



1/10 UV Fused Silica Windows

Frequently Purchased Together



#45-569 - 30mm Dia. 3mm Thick Uncoated, 1λ Fused Silica Window
€101,00

Qty



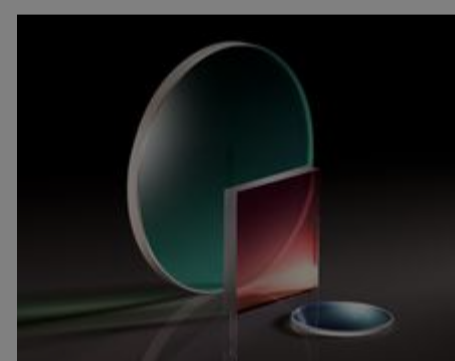
#53-984 - 4" x 4" Cloth Cleaning Wipes
€36,25

Qty



#60-375 - 7.75" x 4" Sheets, Industrial Grade Lens Tissue
€39,50

Qty





















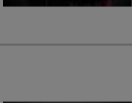













#64-453 - 0° AOI, 12.5mm Diameter, Hot Mirror
€51,50

Qty







Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	50.0mm Optic Dia., Optic Mount	Fixed		#64-567	€49,25 Request Quote	2 In Stock <input type="text" value="1"/>

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	 50.0mm Optic Dia., Optic Holder				€49,25	8 In Stock <input type="text" value="1"/> 
MORE+	 9.5 - 73.0mm Optic Dia., Three-Screw Adjustable Ring Mount					20+ In Stock <input type="text" value="1"/> 
MORE+	 50.0/50.8mm Optic Dia., E-Series Kinematic Mount	Adjustable - Tip-Tilt		#15-867	€96,00 Request Quote	5 In Stock <input type="text" value="1"/> 
MORE+	 10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	€108,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+	 19.5 - 108.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#03-670	€114,00 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+	 7.0 - 67.0mm Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	€116,00 Request Quote	20+ In Stock <input type="text" value="1"/> 
MORE+	 50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 CLEARANCE	€119,95 Request Quote	2 In Stock <input type="text" value="1"/> 
MORE+	 8.0 - 118.0mm Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	€120,00 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	€135,00 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	€157,00 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	€246,00 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	€268,00 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	€308,00 Request Quote	3 In Stock <input type="text" value="1"/> 
MORE+	 50.0/50.8mm Optic Dia., Kinematic Mirror Mount	Adjustable - Tip-Tilt		#55-005	€361,00 Request Quote	6 In Stock <input type="text" value="1"/> 
MORE+	 50.0/50.8mm Optic Dia., Kinematic Mirror Mount with Micrometer	Adjustable - Tip-Tilt		#56-326	€387,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+	 5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	€410,00 Request Quote	CONTACT US <input type="text" value="1"/> 

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	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	50.0/50.8mm Optic Dia., Precision Gimbal Mount				€510,00	7 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Translating Mount					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	€840,00 Request Quote	10 In Stock <input type="text" value="1"/> 

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

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Media Type

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- Video
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- FAQ

APPLICATION NOTE

Anti-Reflection (AR) Coatings

APPLICATION NOTE

An Introduction to Optical Coatings

TECHNICAL TOOL

Beam Displacement Calculator

APPLICATION NOTE

UV vs. IR Grade Fused Silica

APPLICATION NOTE

Understanding Optical Windows

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