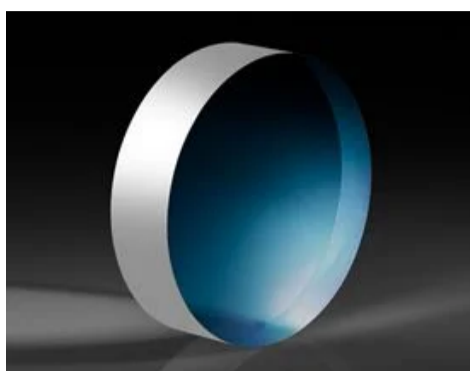


TECHSPEC®

50mm Dia., 5mm Thick NIR I Coated, 1λ Fused Silica Window



Stock #19-899 **1 In Stock**

1 MRP ₹17,353

Price inclusive of all taxes

ADD TO CART

Volume Pricing	
Qty 1-5	₹17,353 each
Qty 6-25	₹13,823 each
Qty 26-49	₹13,015 each
Need More?	Request Quote

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
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Physical & Mechanical Properties

Clear Aperture CA (mm): 45.00	Diameter (mm): 50.00 +0.00/-0.20
Thickness (mm): 5.00 ±0.38	Parallelism (arcmin): <5
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
Transmitted Wavefront, P-V: 1λ	Abbe Number (v_d): 67.8
Coating Specification: R _{avg} ≤0.5% @ 600 - 1050nm	Wavelength Range (nm): 600 - 1050
Damage Threshold, Reference: 7 J/cm ² @ 1064nm, 10ns	

Material Properties

Density (g/cm³):	2.20	Coefficient of Thermal Expansion CTE (10⁻⁶/°C):	0.52 (+5 to +35°C) 0.57 (0 to +200°C) 0.48 (-100 to +200°C)
Fused Silica Grade:	7980 0G		

Regulatory Compliance

RoHS 2015:	Compliant	Certificate of Conformance:	View
Reach 235:	Compliant		
Country of Origin:	Vietnam	Imported By:	Edmund Optics India Private Limited 267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038 Phone: +91- 80-6845 0000

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
- **λ/4** or **λ/10** UV Fused Silica Windows Also Available

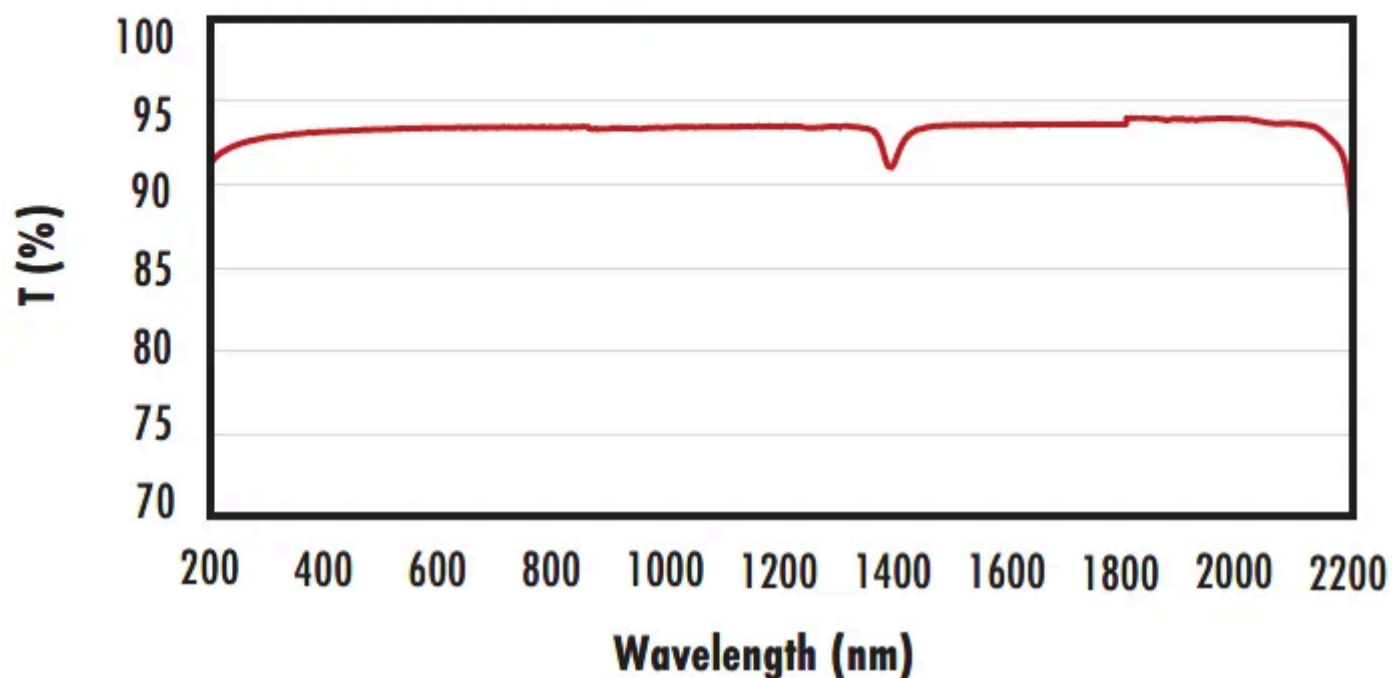
TECHSPEC® 1λ UV Fused Silica Windows are precision manufactured using UV-grade synthetic fused silica. In addition to superior transmission, the synthetic fused silica of these optical windows exhibits higher thermal properties, exceptional purity, and excellent environmental durability for demanding 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. **λ/4** or **λ/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

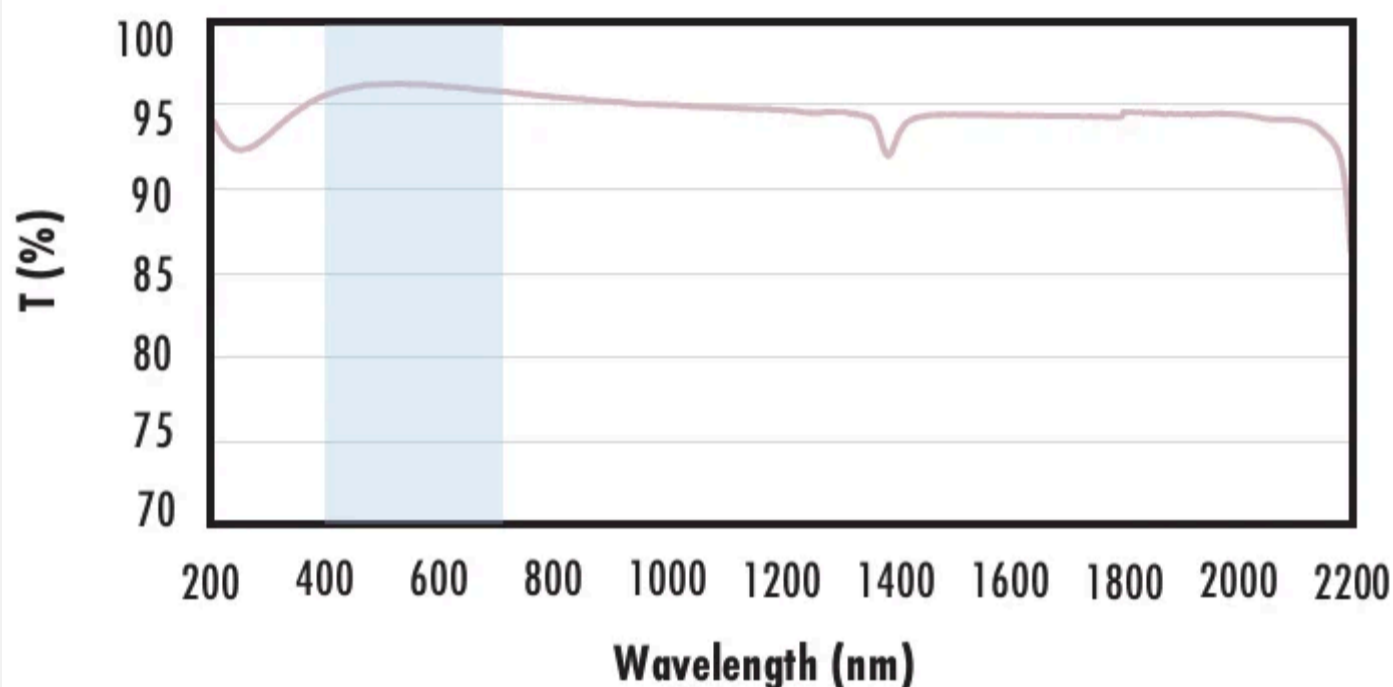
Uncoated Fused Silica Typical Transmission



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.

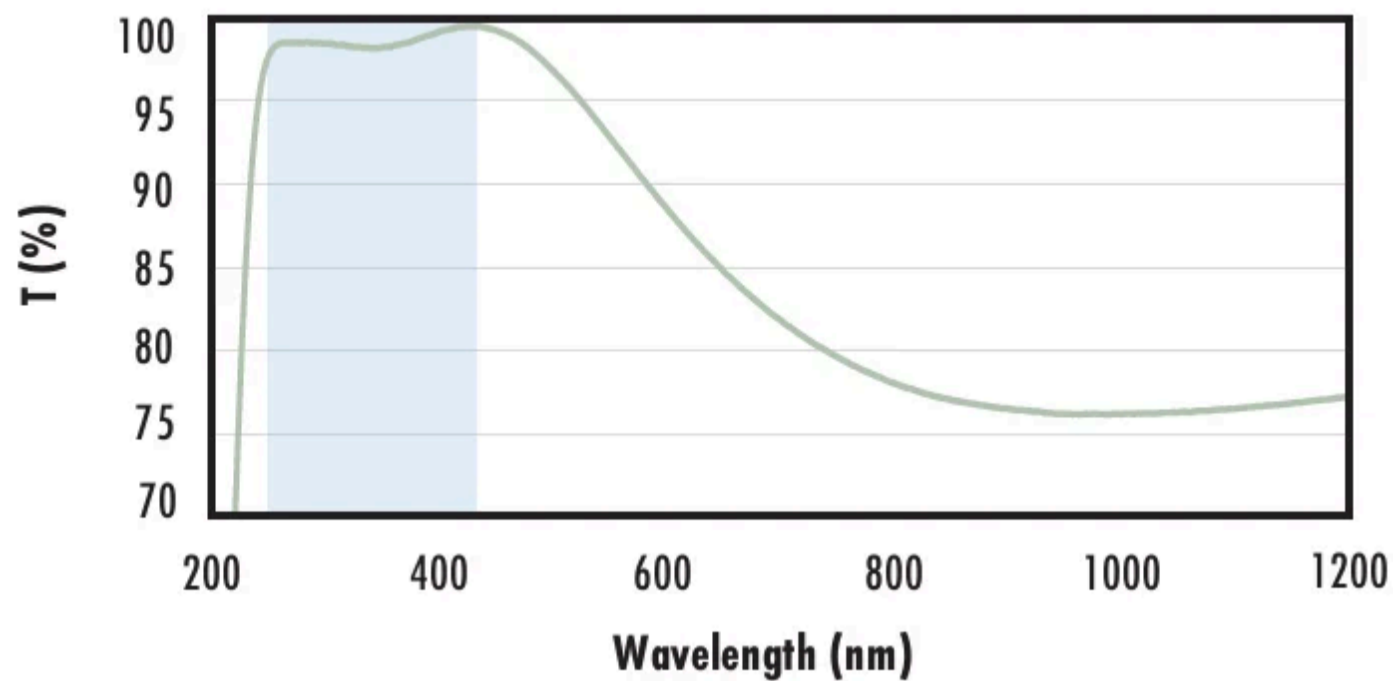
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

[Click Here to Download Data](#)

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:

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

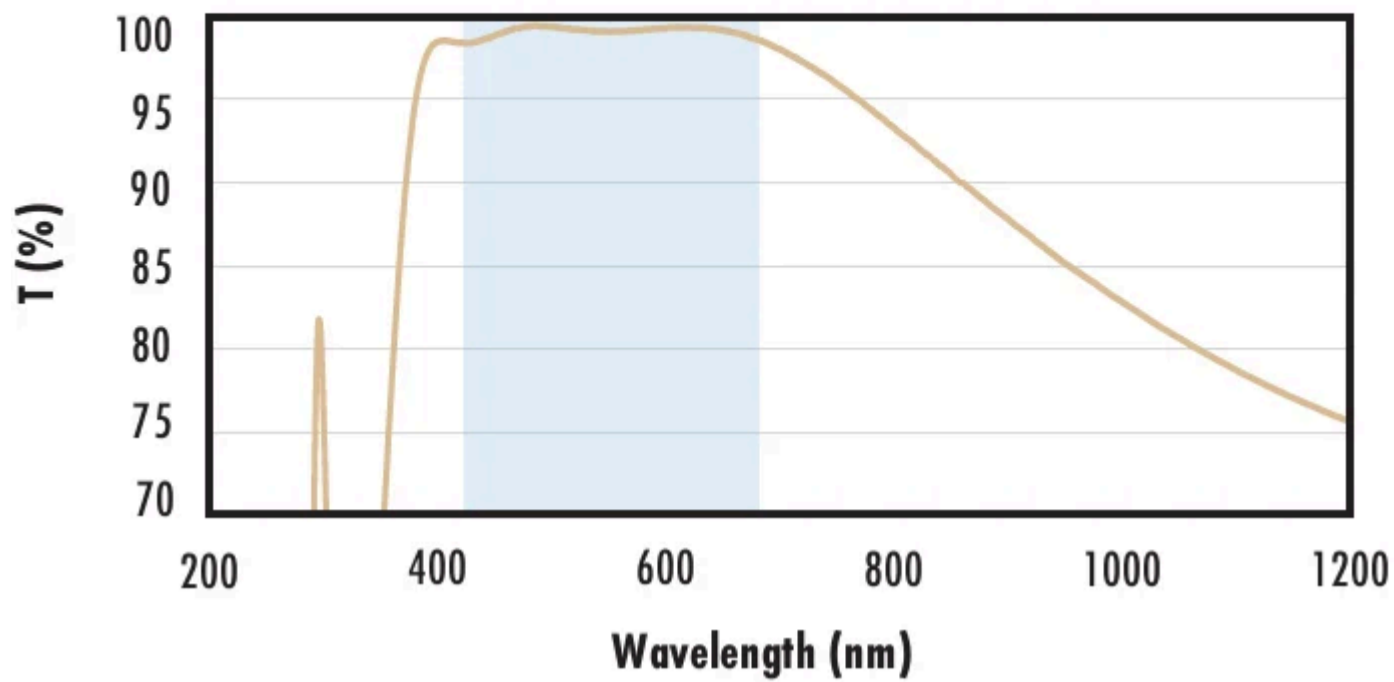
$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

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

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

[Click Here to Download Data](#)

Fused Silica with VIS 0° Coating Typical Transmission



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

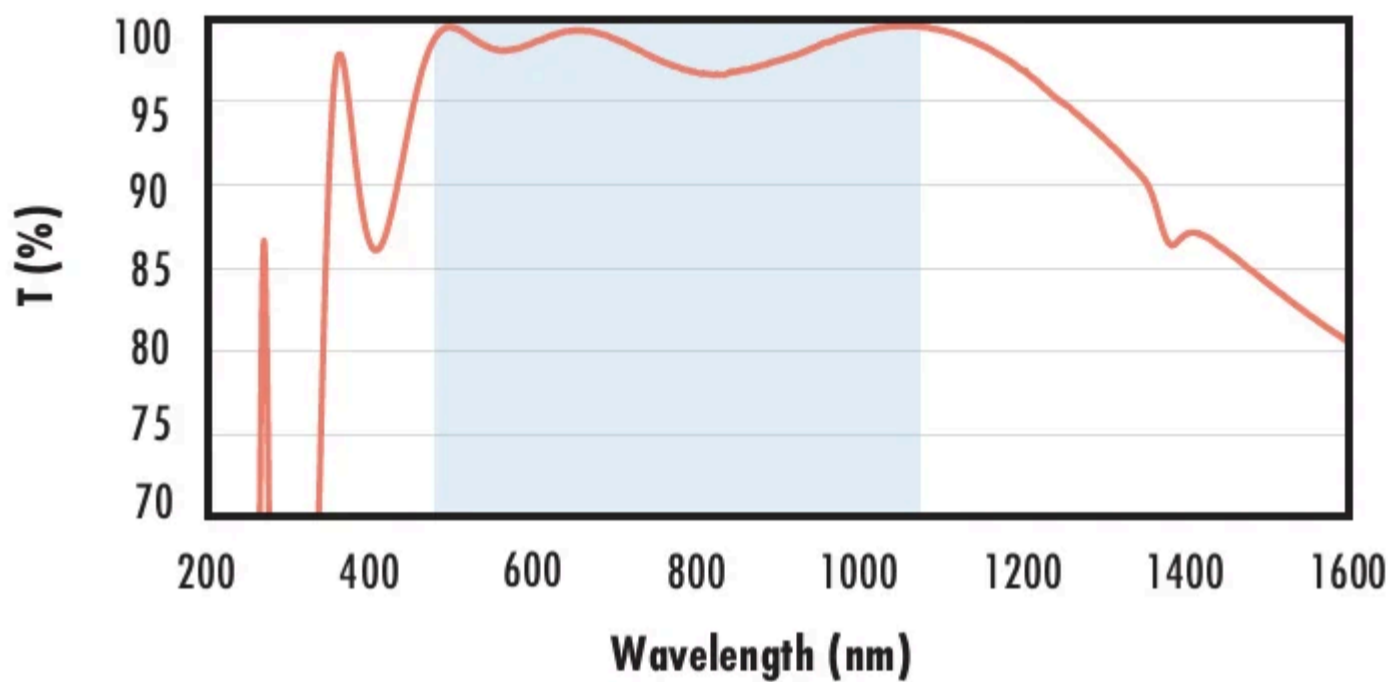
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with YAG-BBAR Coating Typical Transmission



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

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

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

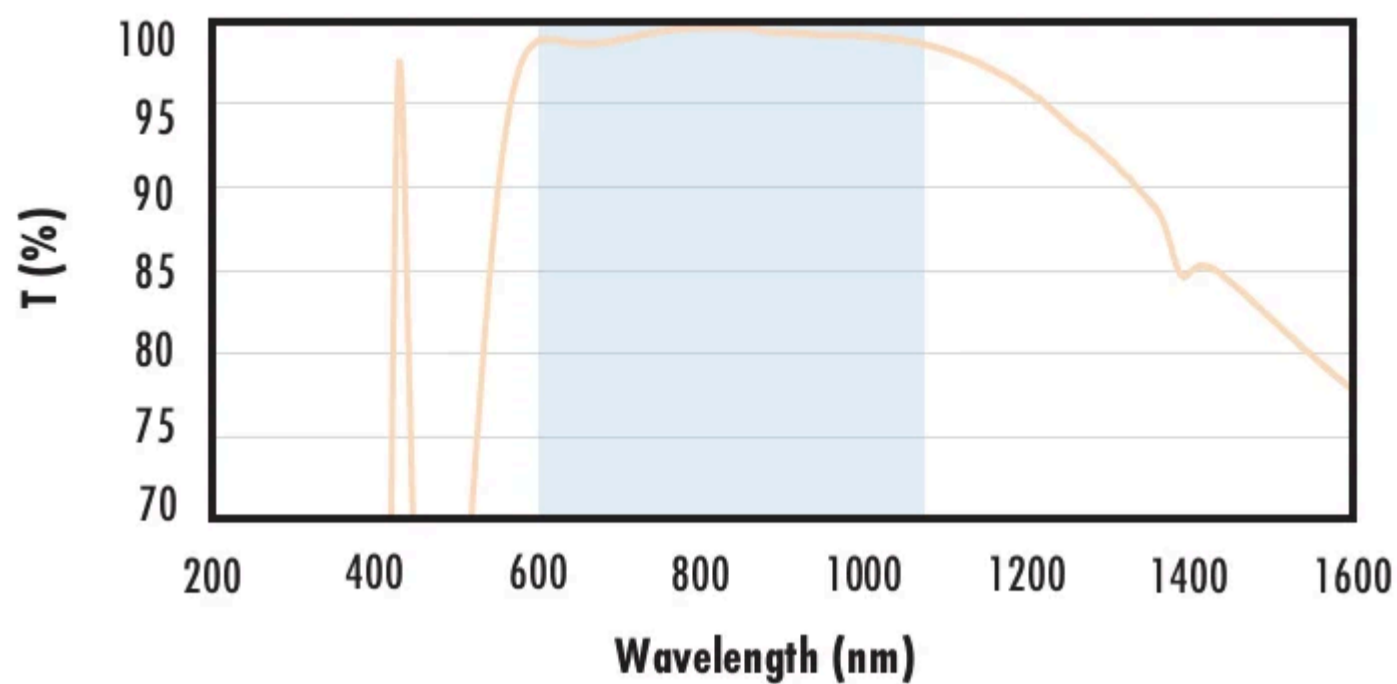
$$R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$$

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

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 wind with NIR I (600 - 1050nm) coating at 0° AOI.

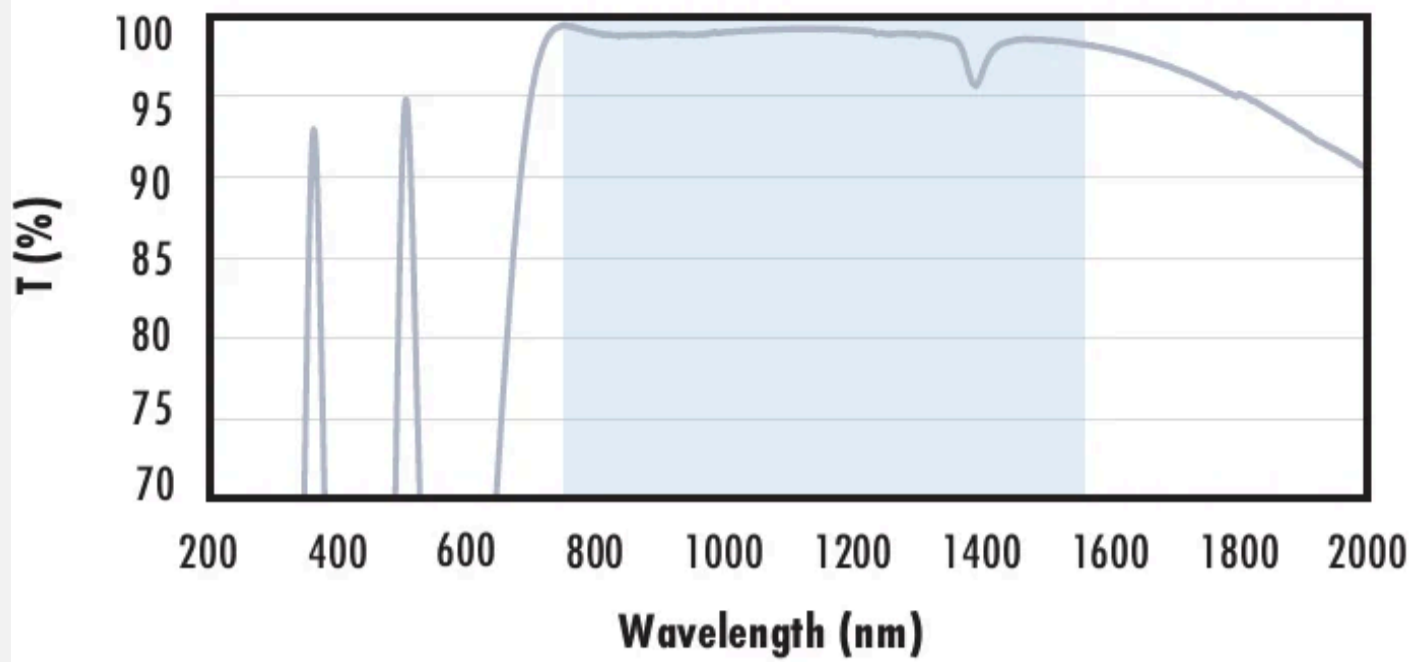
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with NIR II Coating Typical Transmission



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



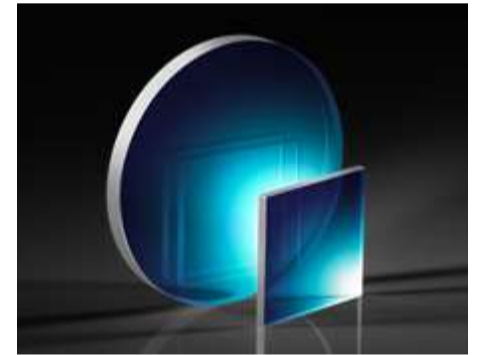
Cage System Optical Lens Mounts



C, S, and T-Mount Circular Optic Mounts



PUROSOL™ Optical Cleaner



λ/10 UV Fused Silica Windows

Frequently Purchased Together



#48-724 - 6.0mm Dia. x 72.0mm FL, NIR I Coated, Plano-Convex Lens
₹4,288

Qty



#67-170 - 6.0mm Dia. x 60.0mm FL, NIR I Coated, Plano-Convex Lens
₹4,288

Qty



#88-279 - 1.3 OD 50mm Dia UV-NIR ND Filter
₹31,074

Qty





















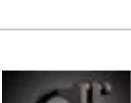













#39-556 - 25.4mm Dia x 50.8mm FL, 355nm V-Coat, High Precision Laser Grade Aspheric Lens
₹83,739







Qty



Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	50.0mm Optic Dia., Optic Mount	Fixed		#64-567	₹4,969 Request Quote	3 In Stock <input type="text" value="1"/>

	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	50.0mm Optic Dia., Optic Mount	Fixed		#64-568	₹4,969 Request Quote	7 In Stock <input type="text" value="1"/> 
MORE+ 	9.5 - 73.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#36-605	₹8,374 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., E-Series Kinematic Mount	Adjustable - Tip-Tilt		#15-867	₹9,685 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	₹10,896 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	19.5 - 108.0mm Optic Dia., Three-Screw Adjustable Ring Mount	Fixed		#03-670	₹11,501 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	₹11,703 Request Quote	6 In Stock <input type="text" value="1"/> 
MORE+ 	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	₹12,107 Request Quote	10 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 CLEARANCE	₹12,739 Request Quote	2 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Kinematic Mount, 2-Screws	Adjustable - Tip-Tilt		#58-852	₹13,621 Request Quote	5 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Kinematic Mount, 3-Screws	Adjustable - Tip-Tilt		#58-855	₹15,840 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	₹24,819 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	₹27,039 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	₹31,074 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	50.0/50.8mm Optic Dia., Kinematic Mirror Mount	Adjustable - Tip-Tilt		#55-005	₹36,422 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	₹39,045 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	₹41,365 Request Quote	CONTACT US <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	50.0/50.8mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#55-000	₹51,454 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	₹61,039 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	₹84,748 Request Quote	10 In Stock <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

UV vs. IR Grade Fused Silica

 APPLICATION NOTE

Understanding Optical Windows

 VIDEO

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