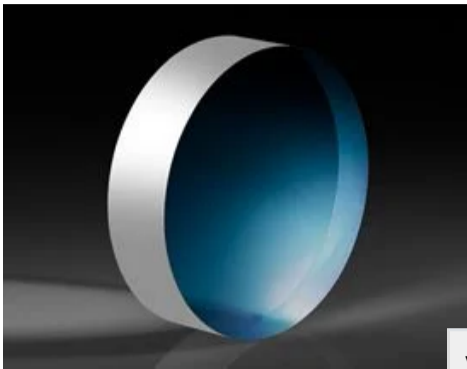


TECHSPEC®

50mm Dia., 1mm Thick MgF₂ Coated, 1λ Fused Silica Window



Stock #19-873 **1 In Stock**

1 **£123^{.20}**

ADD TO CART

Volume Pricing	
Qty 1-5	£123.20 each
Qty 6-25	£97.60 each
Qty 26-49	£92.00 each
Need More?	Request Quote

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

! Prices shown are exclusive of VAT/local taxes

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): 1.00 ±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: MgF ₂ (400-700nm)	Substrate: ^① 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} ≤1.75% @ 400 - 700nm	Wavelength Range (nm): 400 - 700
Damage Threshold, By Design: ^① 10 J/cm ² @ 532nm, 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		

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

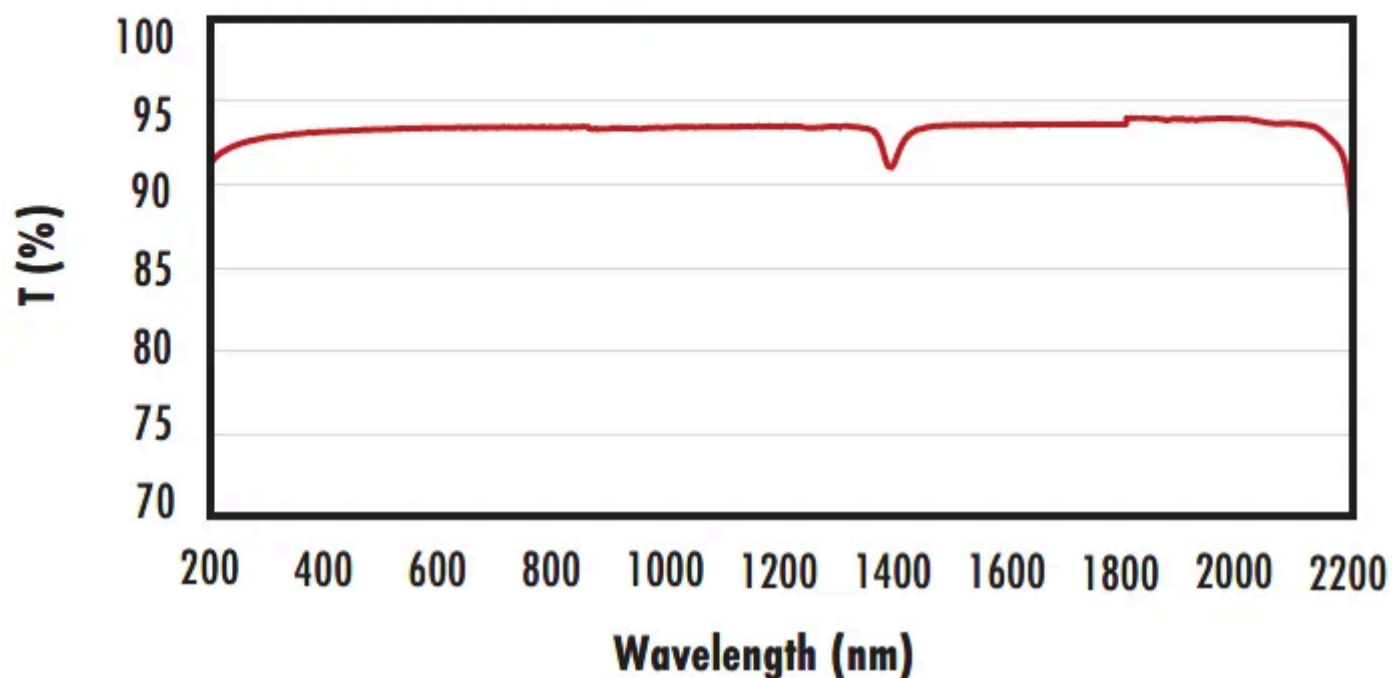
TECHSPEC® 1λ UV Fused Silica Windows are precision manufactured using UV-grade synthetic fused silica. In addition to superior transmission, the synthetic fused silica of these optical windows exhibits higher thermal properties, exceptional purity, and excellent environmental durability for demanding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

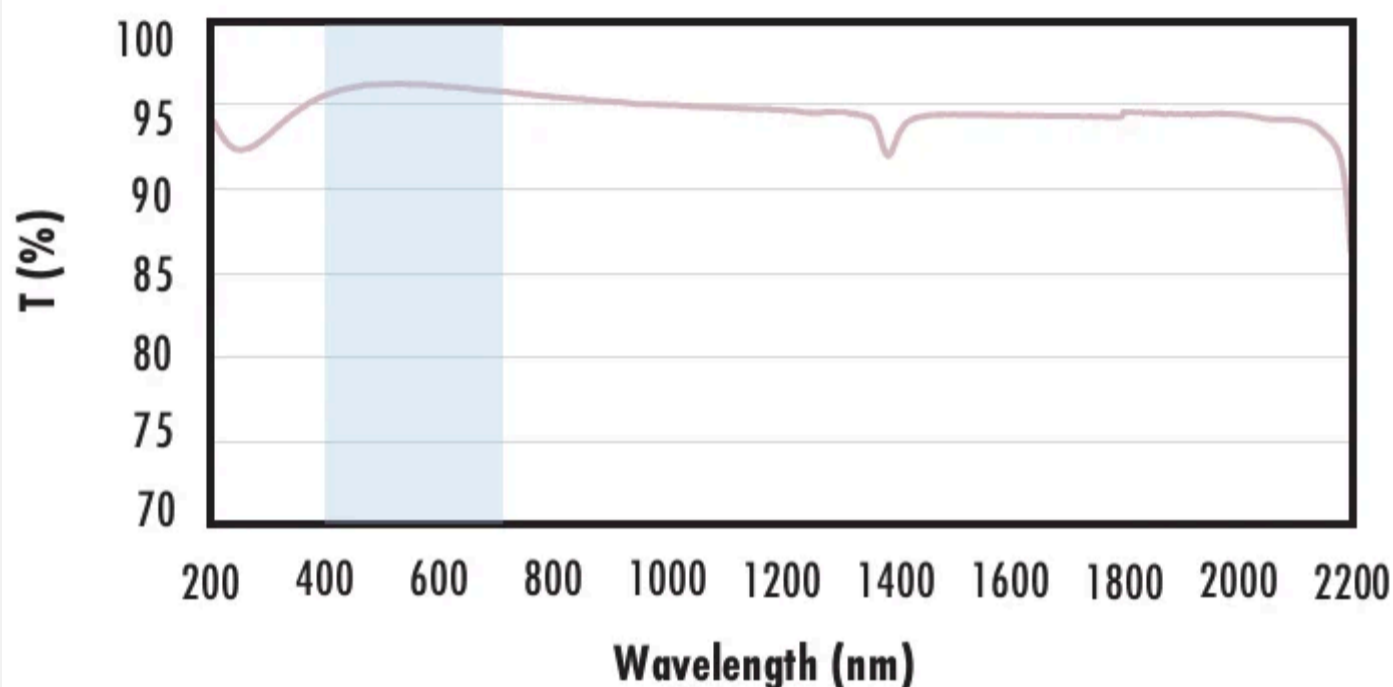
Uncoated Fused Silica Typical Transmission



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.

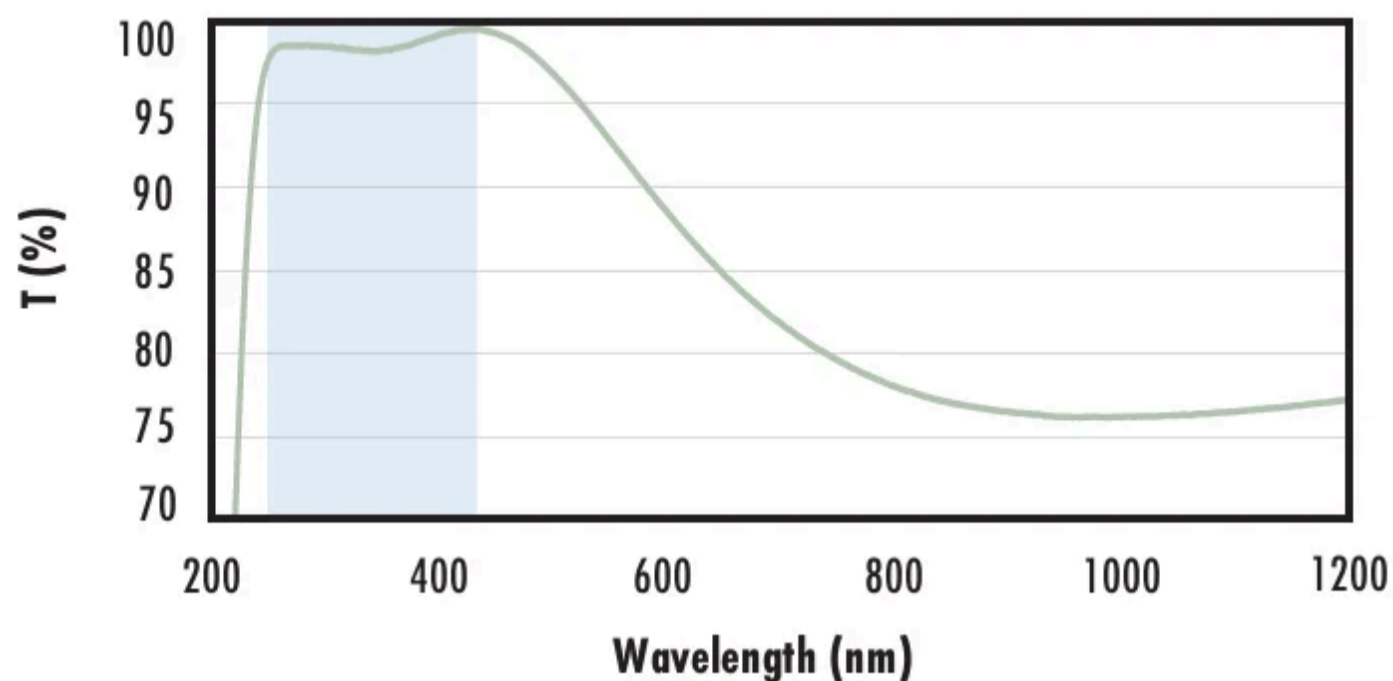
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

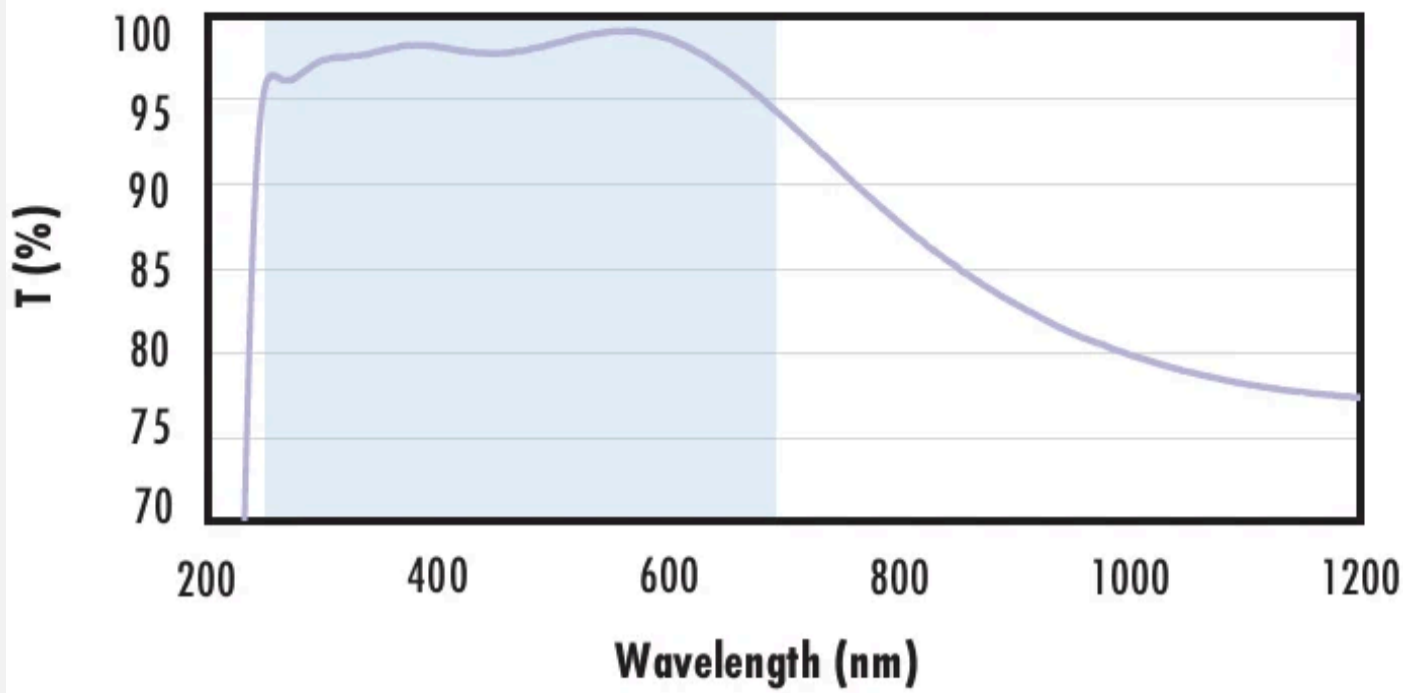
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

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

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

[Click Here to Download Data](#)

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:

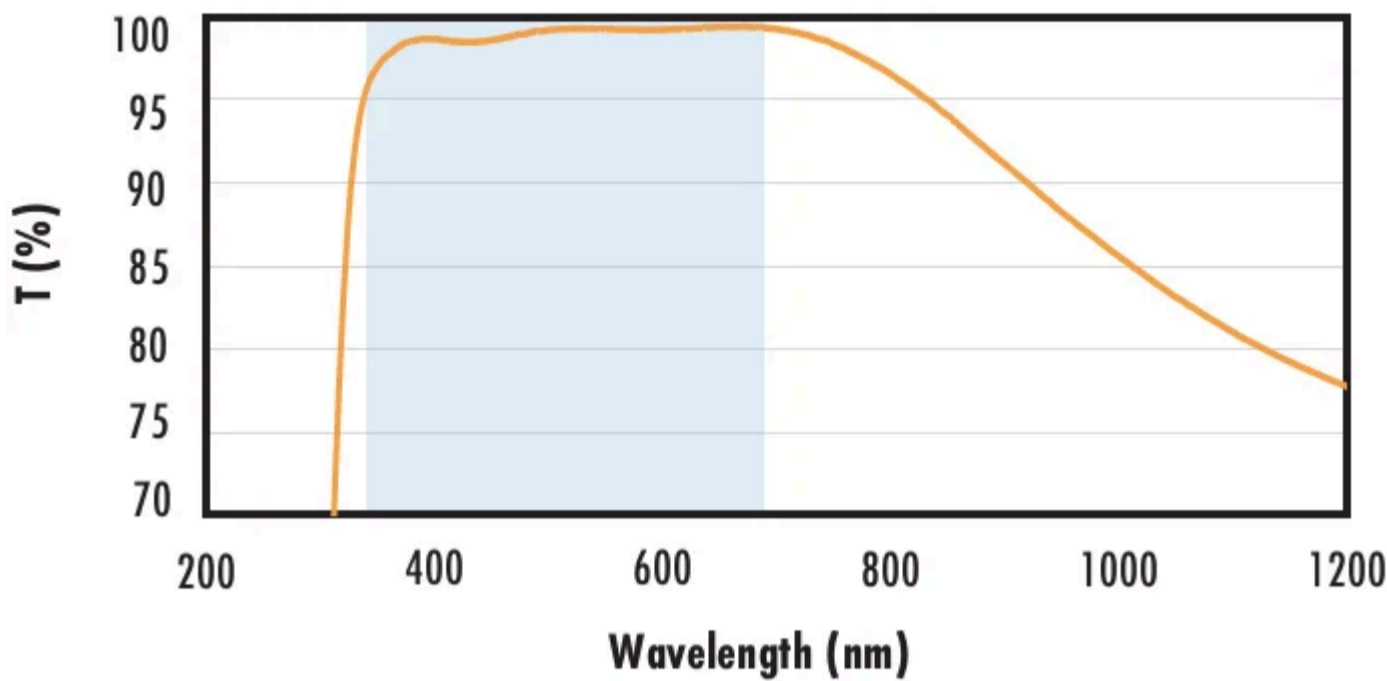
$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

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

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.

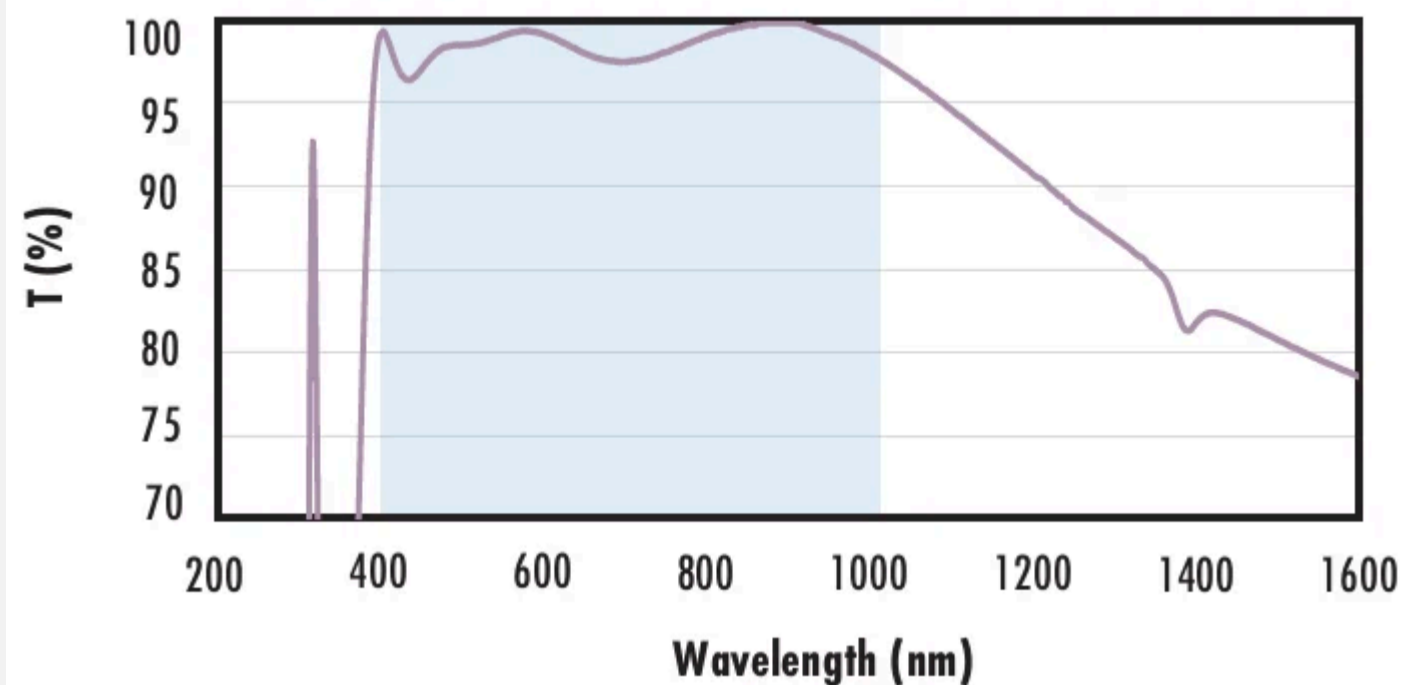
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

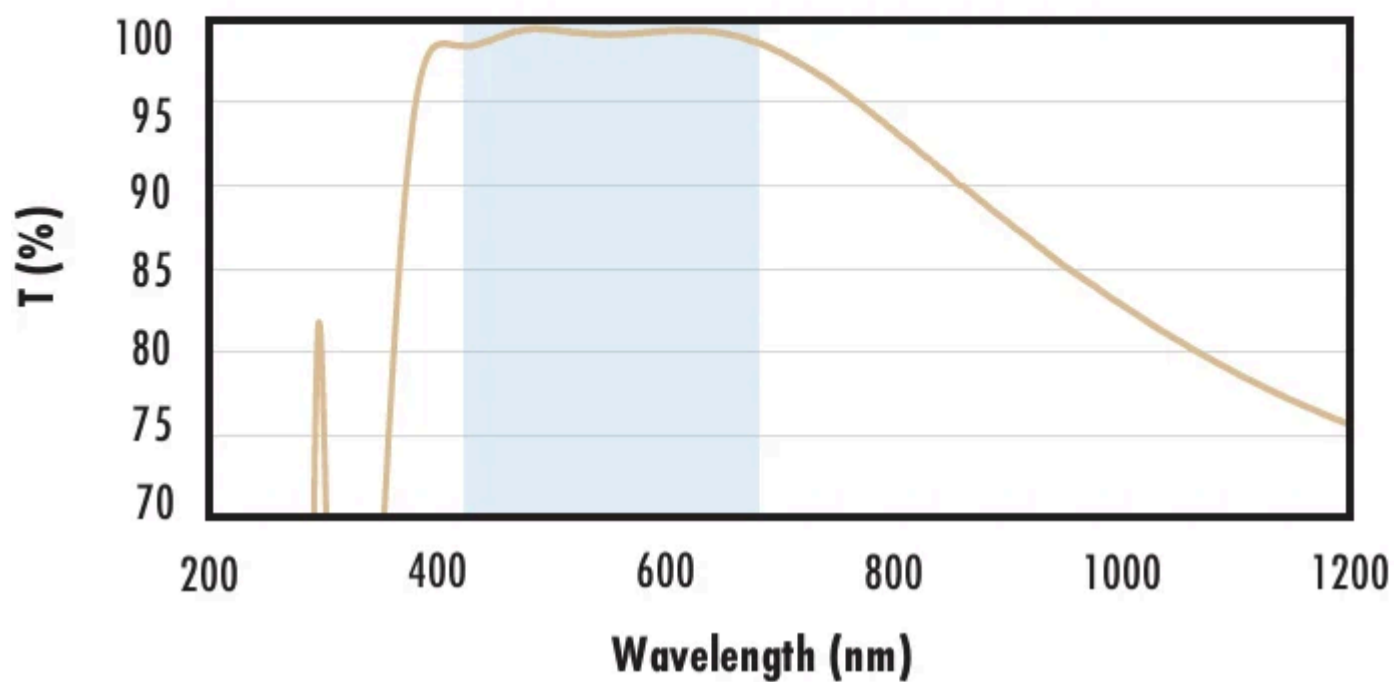
$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

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

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.

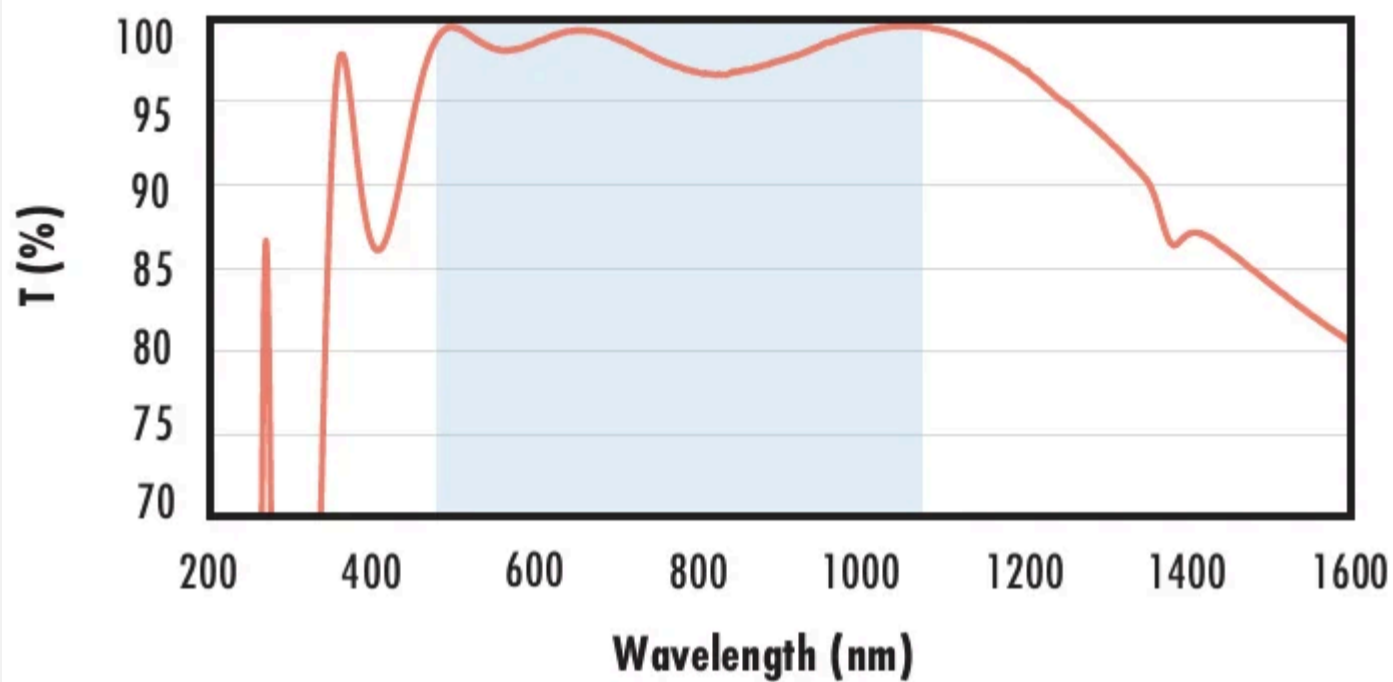
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

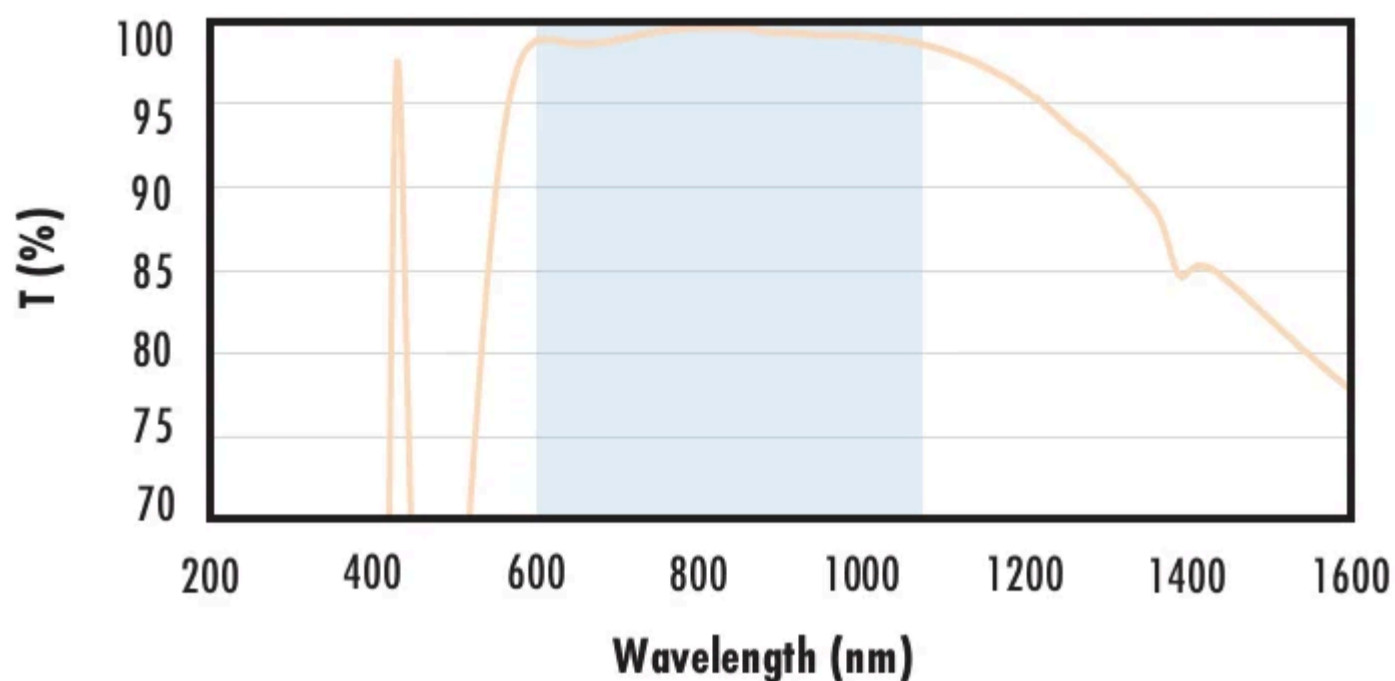
$$R_{abs} \leq 0.25\% @ 1064nm$$

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

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.

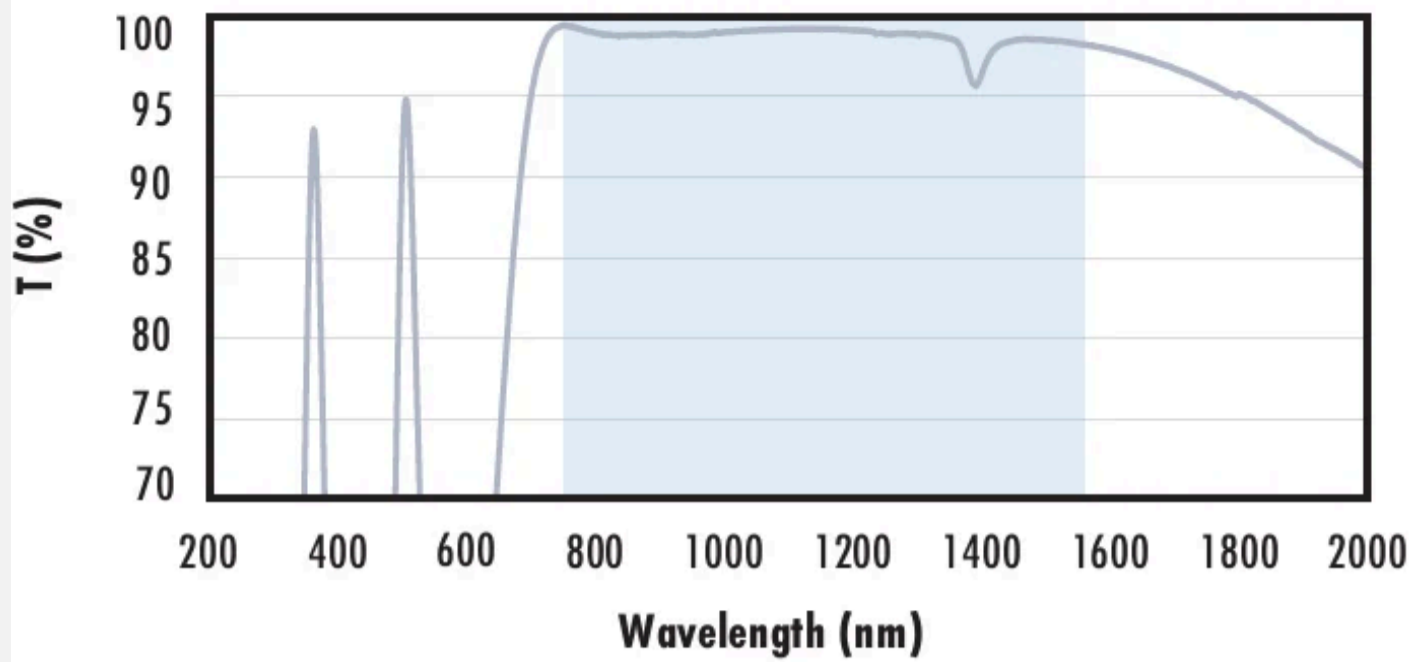
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

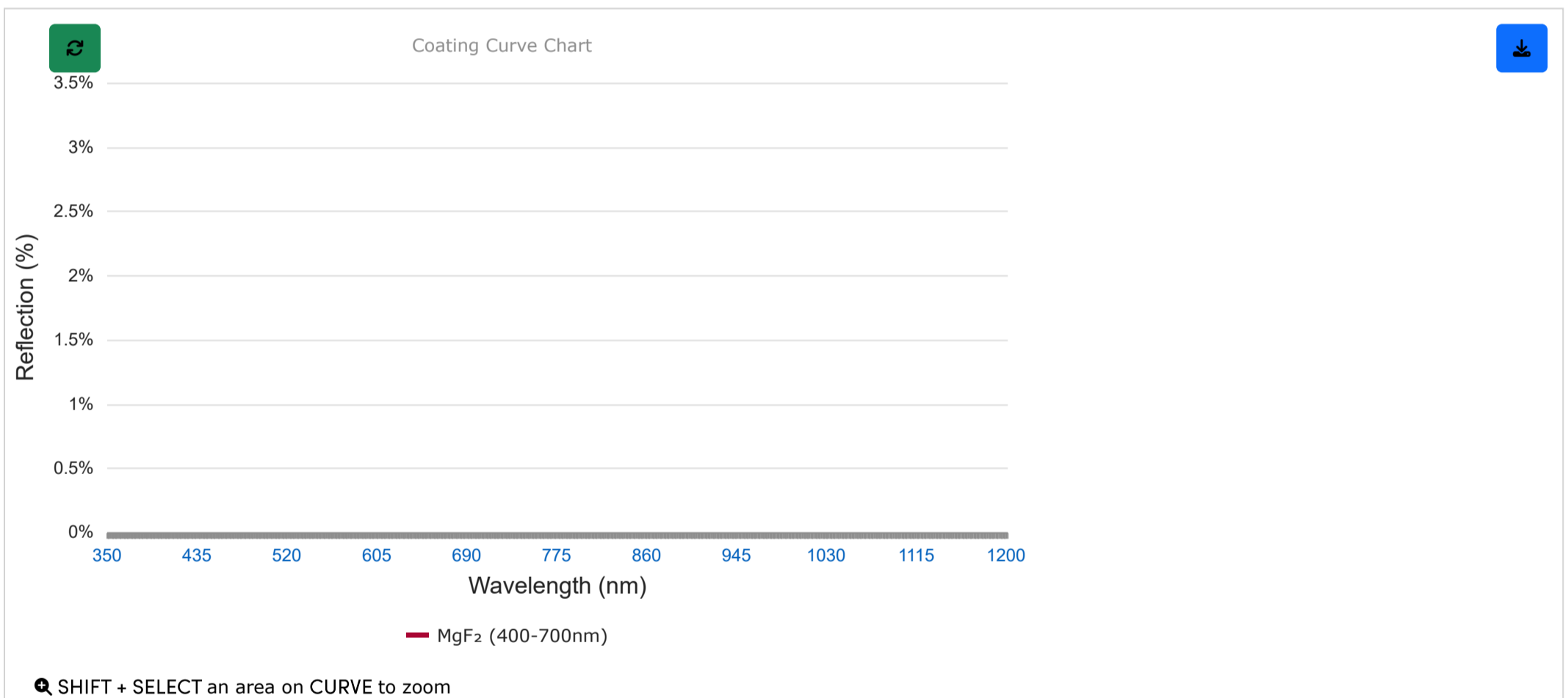
- $R_{abs} \leq 1.5\%$ @ 750 - 800nm
- $R_{abs} \leq 1.0\%$ @ 800 - 1550nm
- $R_{avg} \leq 0.7\%$ @ 750 - 1550nm

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

[Click Here to Download Data](#)

Coating Curves

MgF₂ (400-700nm)



Please note that coating performance outside each product's specified design range is theoretical and may vary.

Related Products



Cage System Optical Lens Mounts



C, S, and T-Mount Circular Optic Mounts

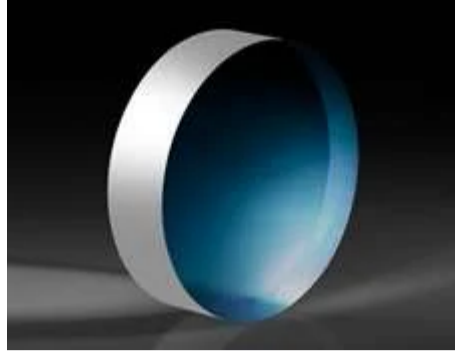


PUROSOL™ Optical Cleaner



A/10 UV Fused Silica Windows

Frequently Purchased Together



#11-921 - 15mm Dia. 2mm Thick MgF₂ Coated, 1λ Fused Silica Window
£74.40



#11-924 - 25 x 25mm, 2mm Thick MgF₂ Coated, 1λ Fused Silica Window
£83.20

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	50.0mm Optic Dia., Optic Mount	Fixed		#64-567	£39.40 Request Quote	2 In Stock <input type="text" value="1"/>
	50.0mm Optic Dia., Optic Mount	Fixed		#64-568	£39.40 Request Quote	7 In Stock <input type="text" value="1"/>
	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"/>
	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"/>
	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"/>
	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"/>
	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"/>
	5.0 - 100.0mm Optic Dia., Self- Centering Jaw Clamp	Fixed		#16-078	£328.00 Request Quote	CONTACT US <input type="text" value="1"/>
	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"/>
	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"/>
	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
- 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

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