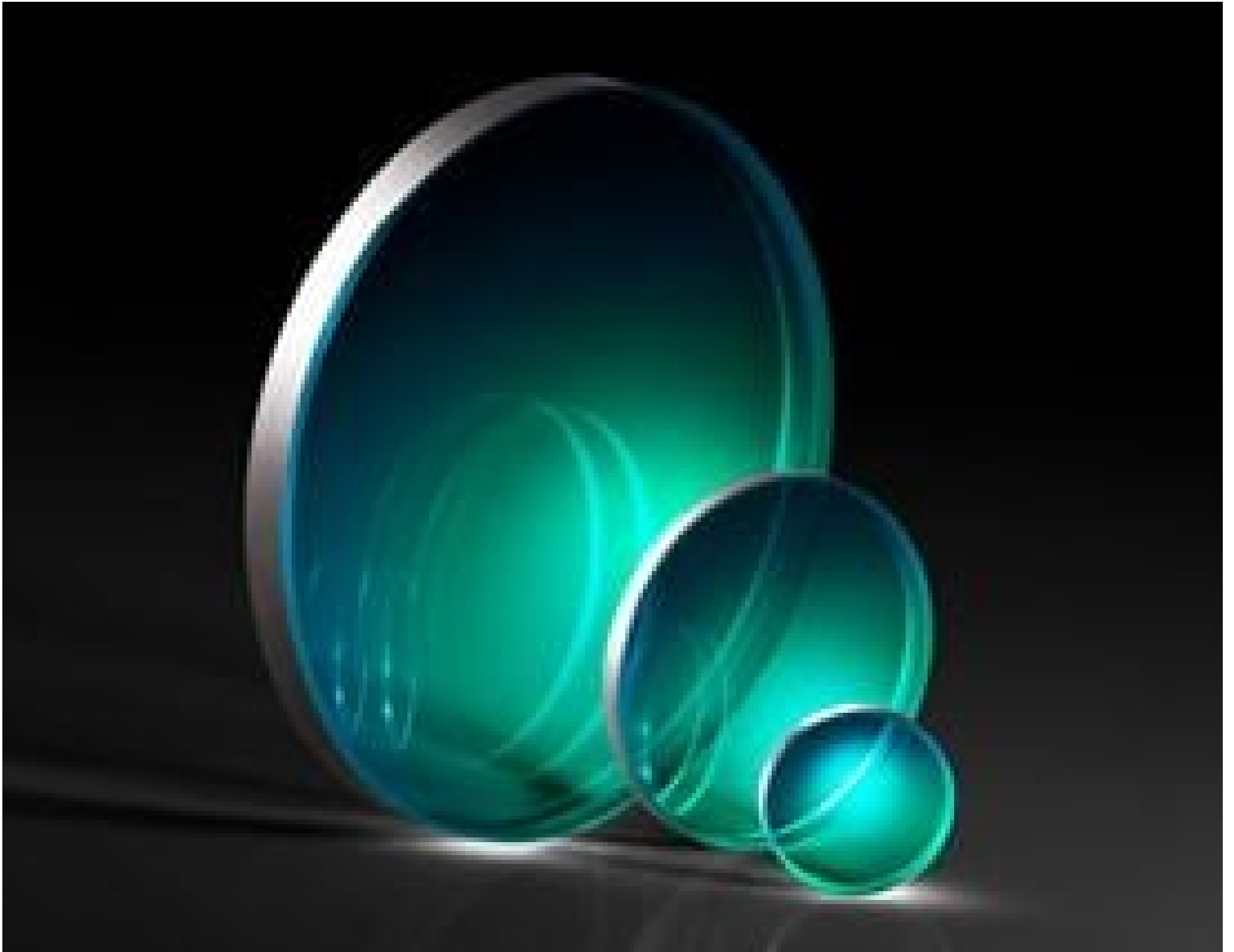


**TECHSPEC® 50mm Dia., 1mm Thick, NIR II Coated, λ/4 Fused Silica Window**



TECHSPEC® λ/4 UV Fused Silica Windows

Stock #72-405 **3 In Stock**

⊖ 1 ⊕ **\$307<sup>00</sup>**

**ADD TO CART**

Volume Pricing	
Qty 1-5	<b>\$307.66</b> each
Qty 6-25	<b>\$244.93</b> each
Qty 26-49	<b>\$229.25</b> each
Need More?	<a href="#">Request Quote</a>

Product Downloads

**SPECIFICATIONS**

**General**

Protective Window **Type:**

**Physical & Mechanical Properties**

Protective as needed	<b>Bevel:</b>
90	<b>Clear Aperture (%):</b>
45.00	<b>Clear Aperture CA (mm):</b>
50.00 +0.00/-0.10	<b>Diameter (mm):</b>
1.00 ±0.10	<b>Thickness (mm):</b>
Fine Ground	<b>Edges:</b>
522.00	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b>
<1	<b>Parallelism (arcmin):</b>
0.16	<b>Poisson's Ratio:</b>
73	<b>Young's Modulus (GPa):</b>

## Optical Properties

67.8	<b>Abbe Number (v<sub>d</sub>):</b>
NIR II (750-1550nm)	<b>Coating:</b>
<b>Coating Specification:</b>	
R <sub>abs</sub> ≤1.5% @ 750 - 800nm	
R <sub>abs</sub> ≤1.0% @ 800 - 1550nm	
R <sub>avg</sub> ≤0.7% @ 750 - 1550nm	
1.458	<b>Index of Refraction (n<sub>d</sub>):</b>
<a href="#">Fused Silica</a> (Corning 7980)	<b>Substrate:</b>
40-20	<b>Surface Quality:</b>
λ/4	<b>Transmitted Wavefront, P-V:</b>
750 - 1550	<b>Wavelength Range (nm):</b>
<b>Damage Threshold, Reference:</b> <input type="checkbox"/>	
8 J/cm <sup>2</sup> @ 1064nm, 10ns	

## Material Properties

<b>Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):</b>	
0.52 (+5 to +35°C)	
0.57 (0 to +200°C)	
0.48 (-100 to +200°C)	
2.20	<b>Density (g/cm<sup>3</sup>):</b>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>
<a href="#">Compliant</a>	<b>REACH 241:</b>

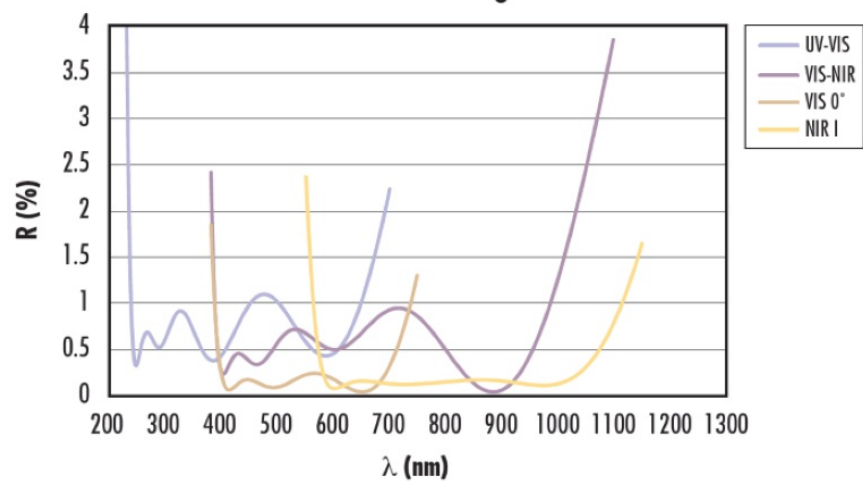
## PRODUCT DETAILS

- Available Uncoated or BBAR Coated for UV, Visible, and NIR
- Ideal for Imaging Applications
- Circular and Rectangular Sizes from 5 to 200mm
- [1λ](#) or [λ/10](#) UV Fused Silica Windows Also Available

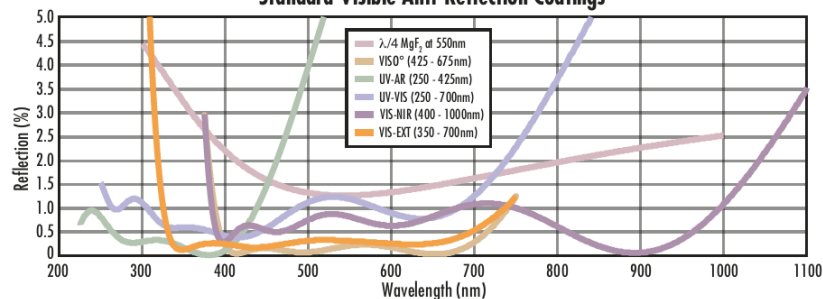
TECHSPEC® λ/4 UV Fused Silica Windows are manufactured with 40-20 surface quality and λ/4 transmitted wavefront error specifications, making them ideal for imaging applications. Featuring UV fused silica substrates, these windows provide high transmission from the ultraviolet (UV) through the visible and near-infrared (NIR). Broadband anti-reflection (BBAR) coating options are available to minimize reflection losses and increase transmission. TECHSPEC λ/4 UV Fused Silica Windows are used in optical imaging applications, in low to medium powered laser applications, and as protective windows, especially in applications requiring transmission of UV light.

## TECHNICAL INFORMATION

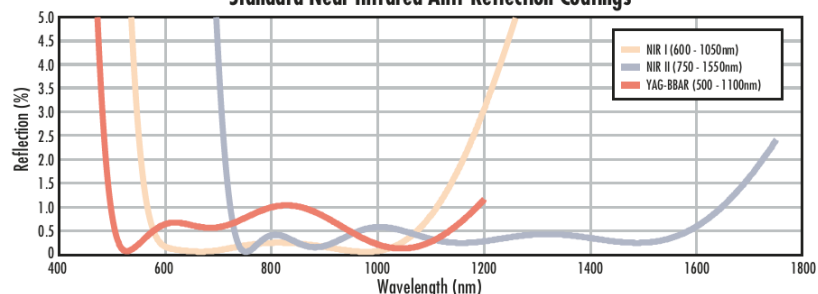
### Anti-Reflection Coating Curves



### Standard Visible Anti-Reflection Coatings

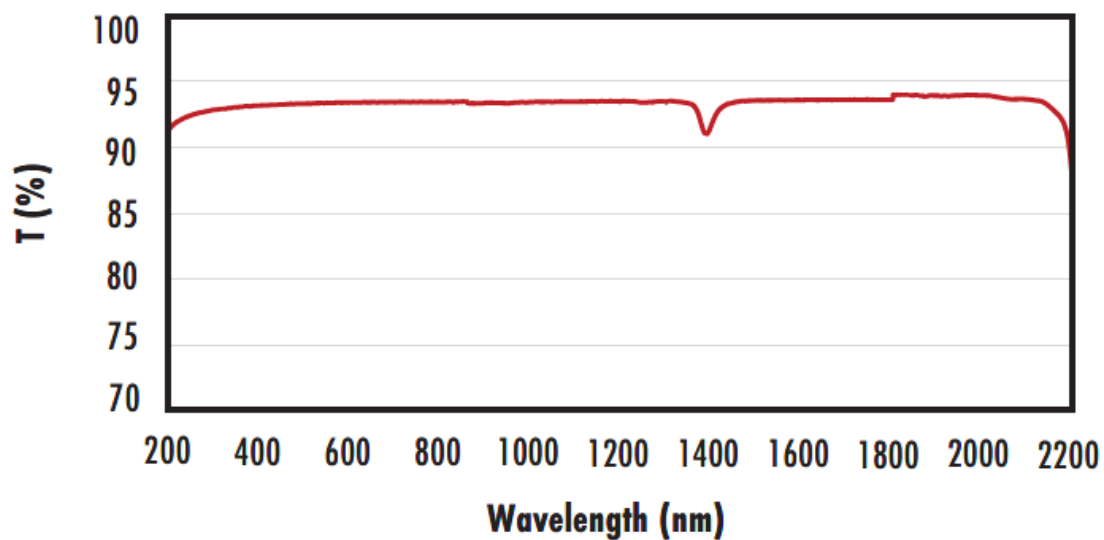


### Standard Near Infrared Anti-Reflection Coatings



## FUSED SILICA

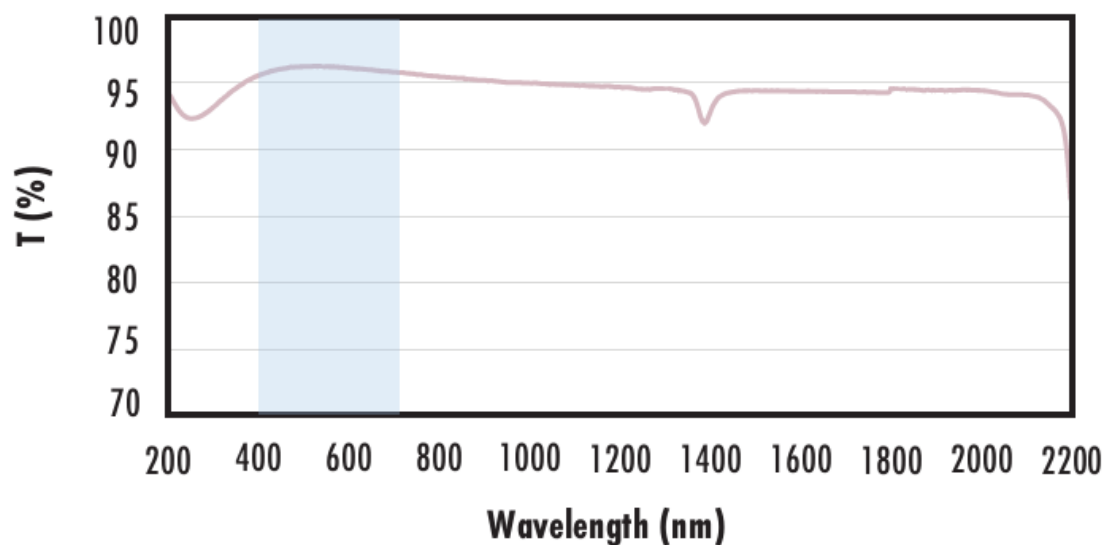
### Uncoated Fused Silica Typical Transmission



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

[Click Here to Download Data](#)

### Fused Silica with MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

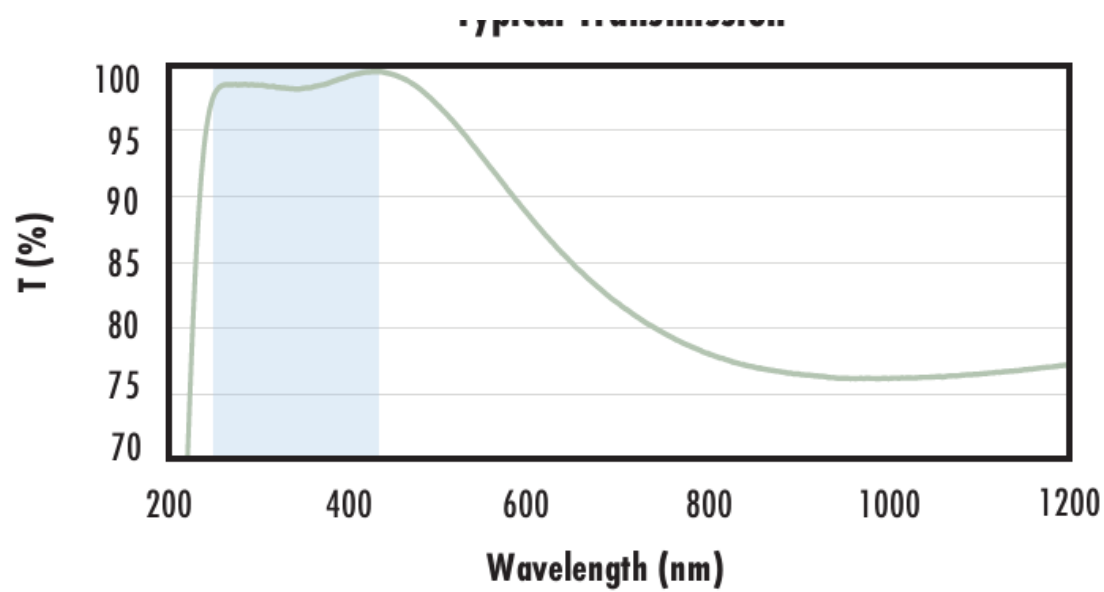
The blue shaded region indicates the coating design wavelength range, with the following specification:

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



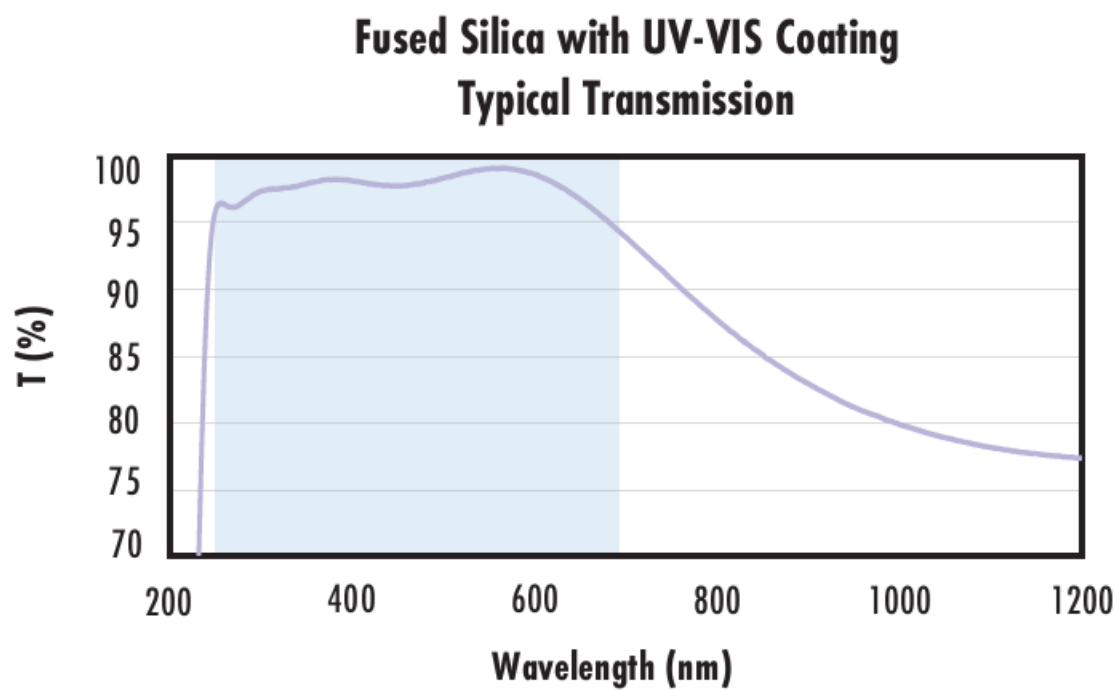
Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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

$R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$   
 $R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$   
 $R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$

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

[Click Here to Download Data](#)



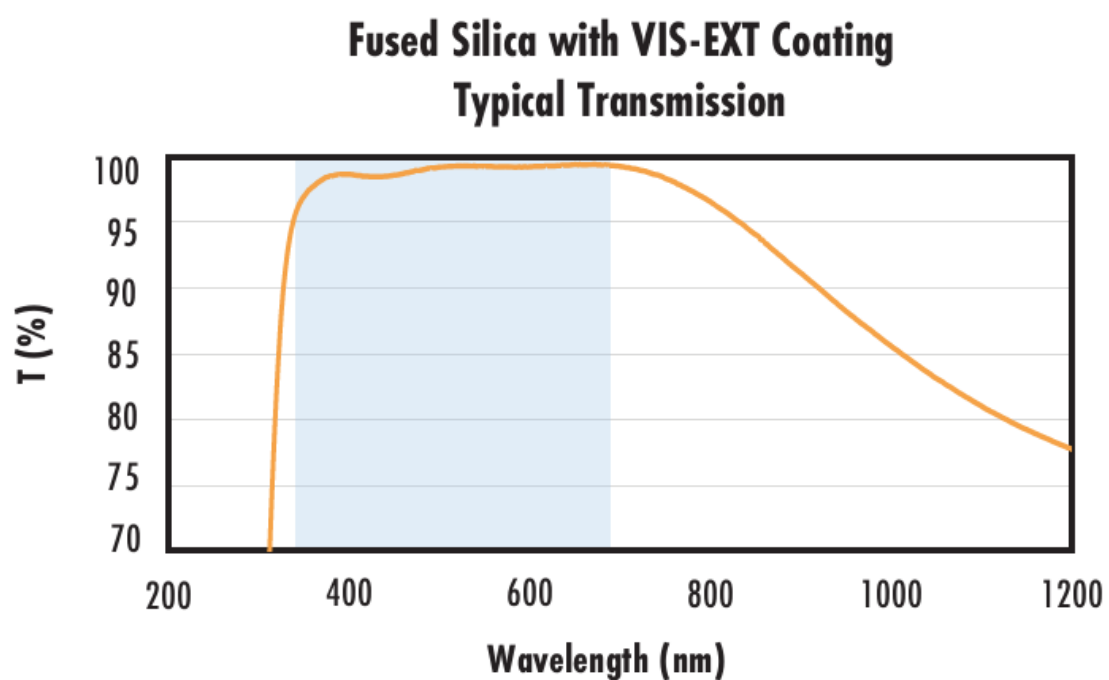
Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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

$R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$   
 $R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$

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

[Click Here to Download Data](#)



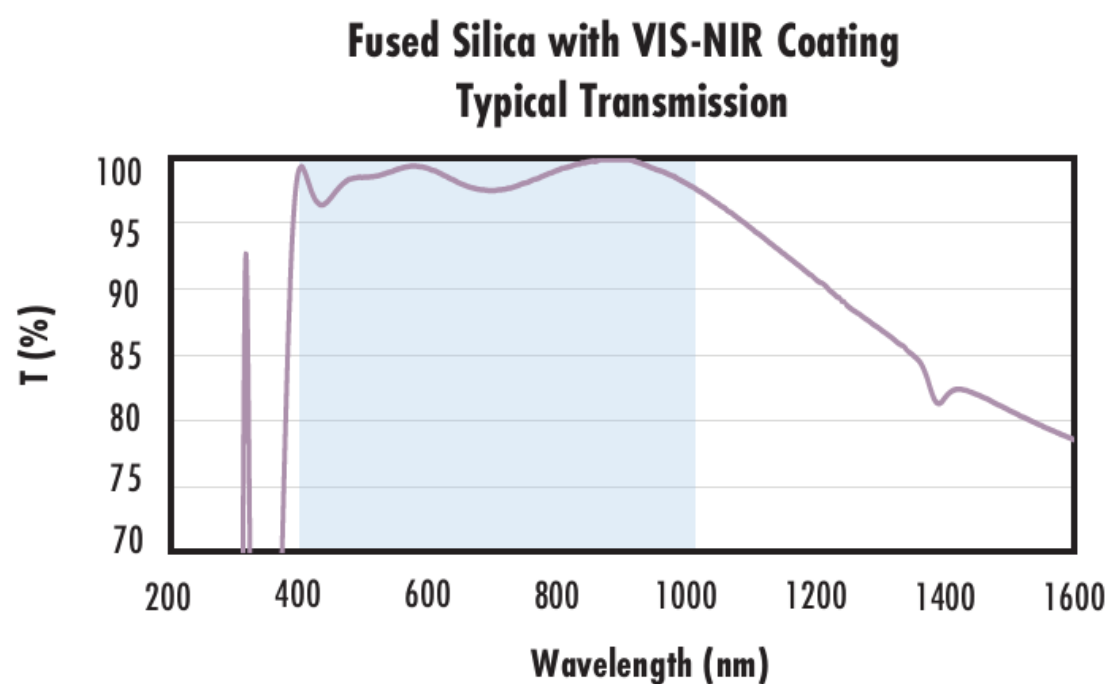
Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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

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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:

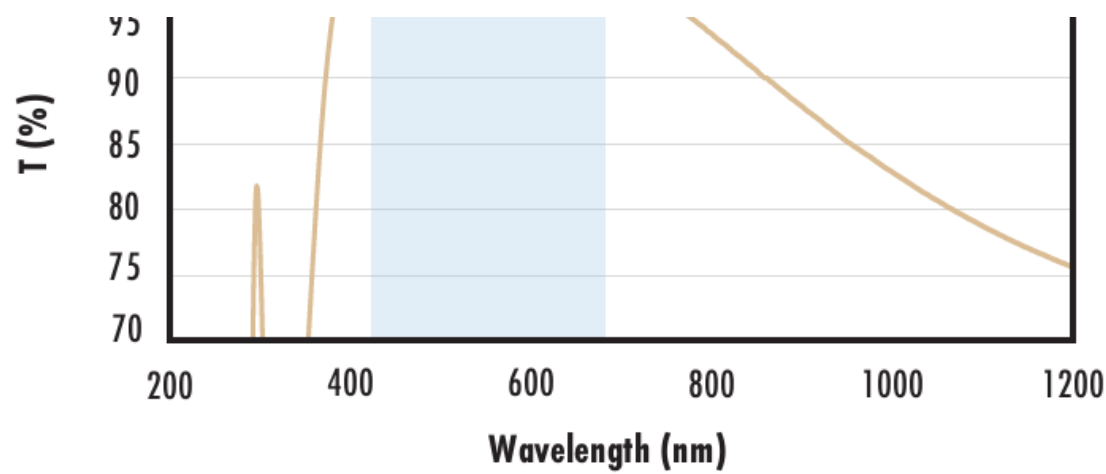
$R_{abs} \leq 0.25\% @ 880\text{nm}$   
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$   
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$

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

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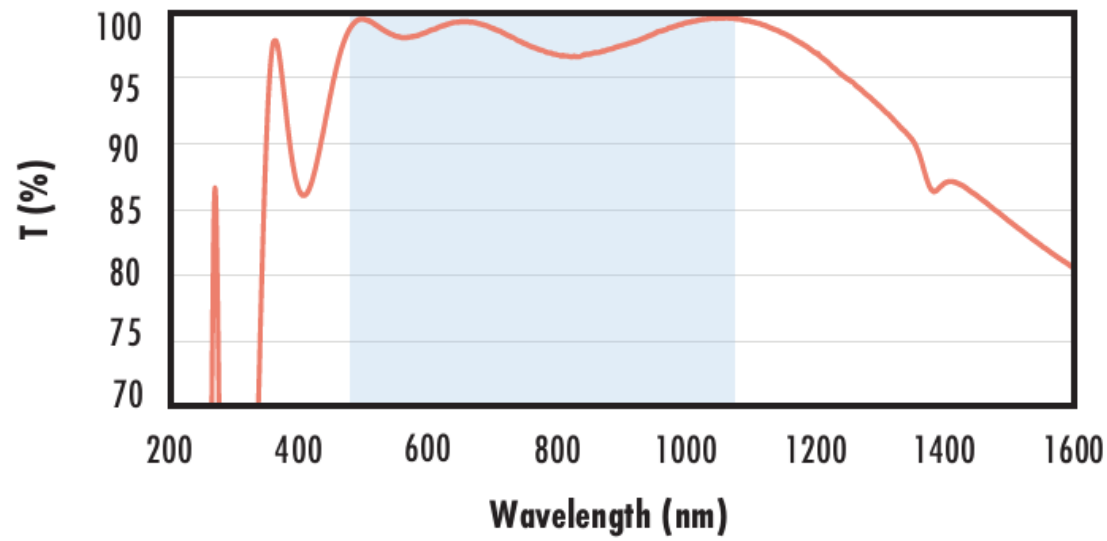


Typical transmission of a 3mm thick fused silica window with VIS



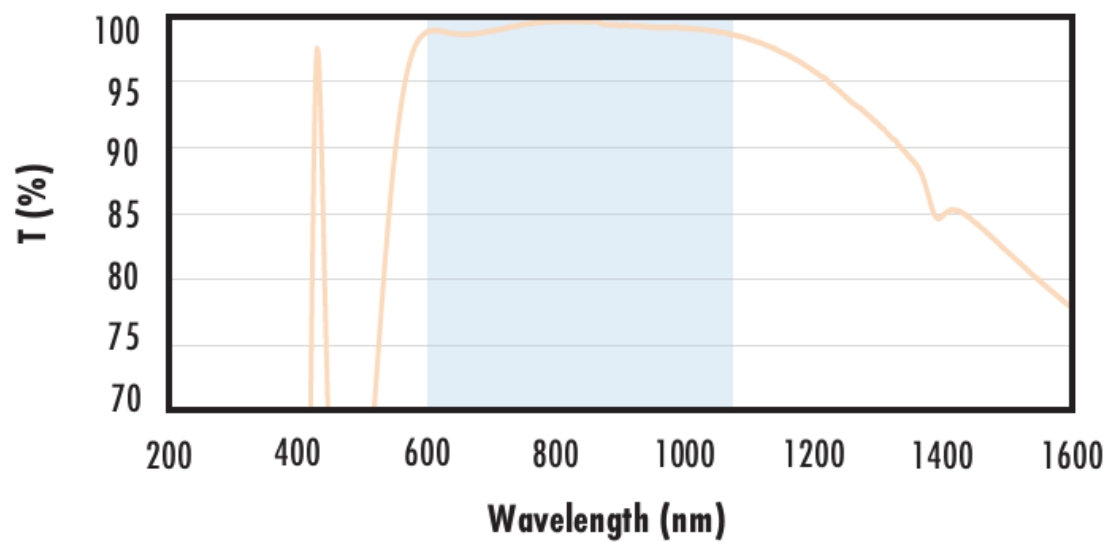
0° (425-675nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.4\% @ 425 - 675nm$   
 Data outside this range is not guaranteed and is for reference only.  
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### Fused Silica with YAG-BBAR Coating Typical Transmission



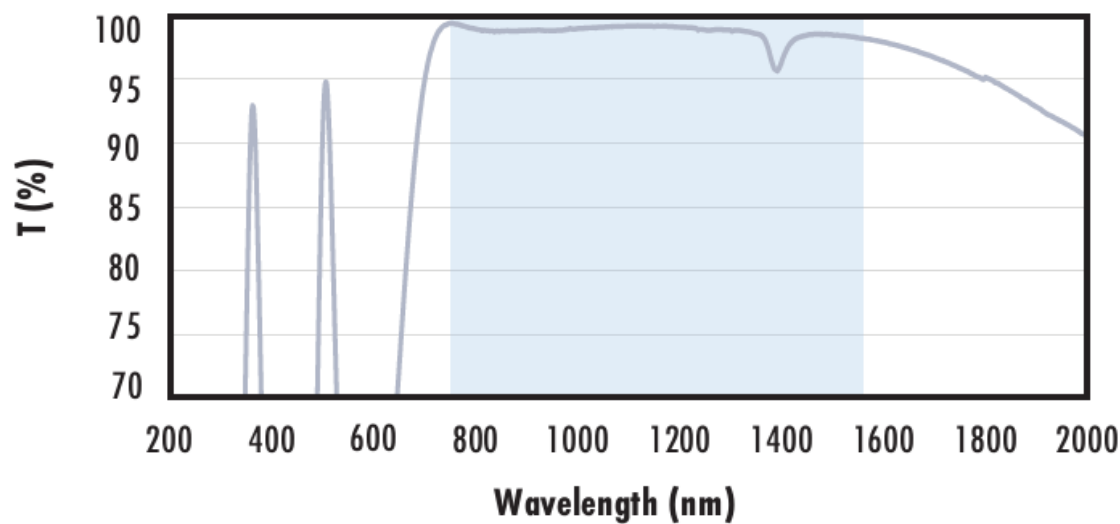
Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{abs} \leq 0.25\% @ 532nm$   
 $R_{abs} \leq 0.25\% @ 1064nm$   
 $R_{avg} \leq 1.0\% @ 500 - 1100nm$   
 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 window with NIR I (600 - 1050nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.5\% @ 600 - 1050nm$   
 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](#)

## CUSTOM

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](#).

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