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**TECHSPEC® 20mm Dia. Ultra-Thin NIR II Coated, Fused Silica Window**



Stock #75-471 **NEW** 9 In Stock

- 1 + €212.<sup>00</sup>

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Volume Pricing	
Qty 1-5	€212,00 each
Qty 6+	€169,00 each
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Product Downloads

**General**

Protective Window **Type:**

**Physical & Mechanical Properties**

17.00 **Clear Aperture CA (mm):**

20.00 +0.00/-0.10 **Diameter (mm):**

Thickness (mm):  
0.20 ±0.025

Bevel:  
Protective as needed

Edges:  
Fine Ground

Parallelism (arcsec):  
<1

Poisson's Ratio:  
0.16

Young's Modulus (GPa):  
73

Knoop Hardness (kg/mm<sup>2</sup>):  
522.00

## Optical Properties

Coating:  
NIR II (750-1550nm)

Substrate:   
[Fused Silica](#) (Corning 7980)

Index of Refraction (n<sub>d</sub>):  
1.458

Surface Quality:  
60-40

Transmitted Wavefront, P-V:  
λ/2

Abbe Number (v<sub>d</sub>):  
64.17

Coating Specification:  
R<sub>abs</sub> ≤1.5% @ 750 - 800nm  
R<sub>abs</sub> ≤1.0% @ 800 - 1550nm  
R<sub>avg</sub> ≤0.7% @ 750 - 1550nm

Wavelength Range (nm):  
750 - 1550

Damage Threshold, Reference:   
8 J/cm<sup>2</sup> @ 1064nm, 10ns

## Material Properties

Density (g/cm<sup>3</sup>):  
2.2

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

## Regulatory Compliance

Certificate of Conformance:  
[View](#)

## Product Details

- Ultra-Thin 0.20mm Thickness
- UV Fused Silica Substrates
- Extremely Lightweight

TECHSPEC® Ultra-Thin Fused Silica Windows provide the benefits of fused silica including low thermal expansion, excellent chemical resistance, and UV transmission with a thickness less than 1/5th of our standard fused silica windows. Unlike traditional cover glass, these windows have polished surfaces to provide consistent transmitted wavefront distortion, making them advantageous for OEM applications. Their extremely thin designs make them ideal for both weight and size sensitive applications, especially those requiring broadband transmission from the UV to the NIR. TECHSPEC Ultra-Thin Fused Silica Windows are ideal for handheld medical devices, wearable technology, and portable UV lights.

## Technical Information



### Uncoated Fused Silica Typical Transmission



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

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### 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:

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

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:

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

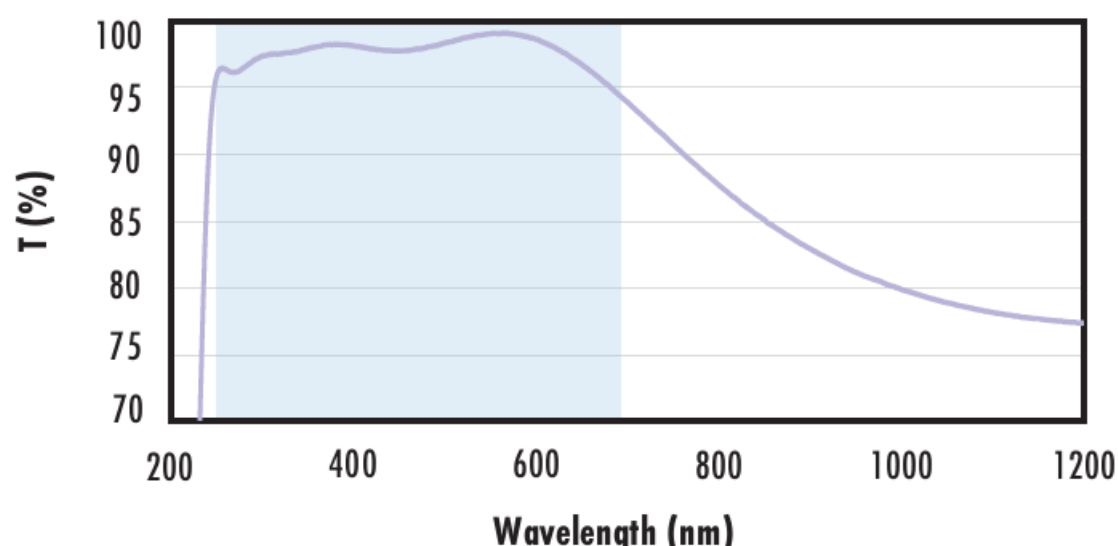
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

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

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.

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### 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.

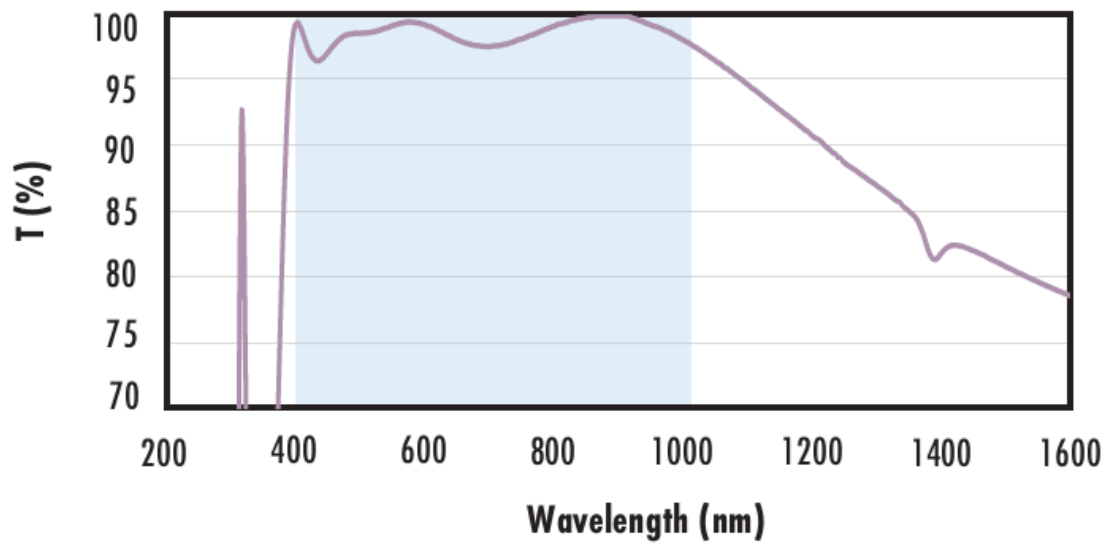
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

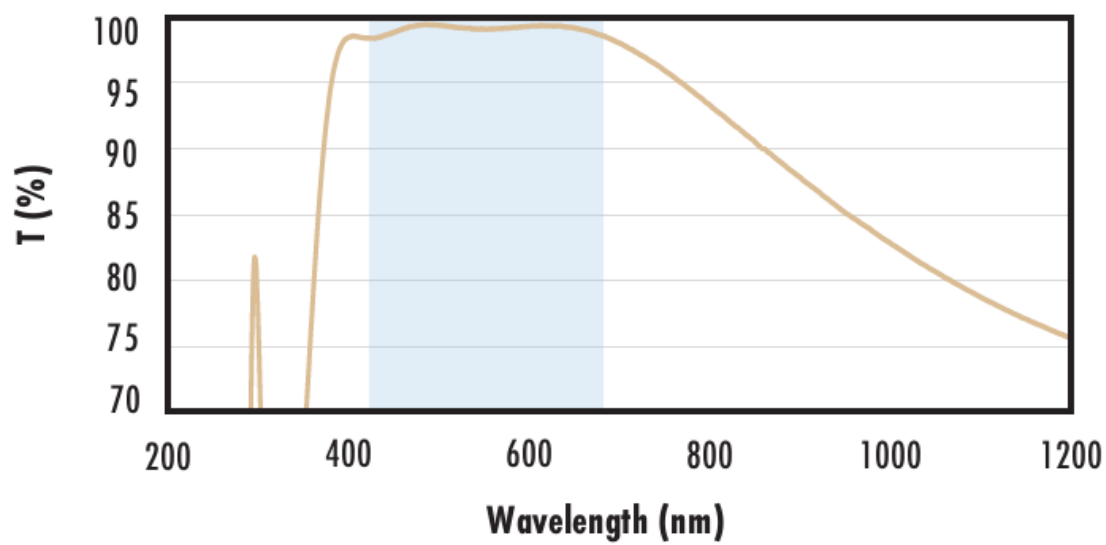
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

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

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

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### 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.

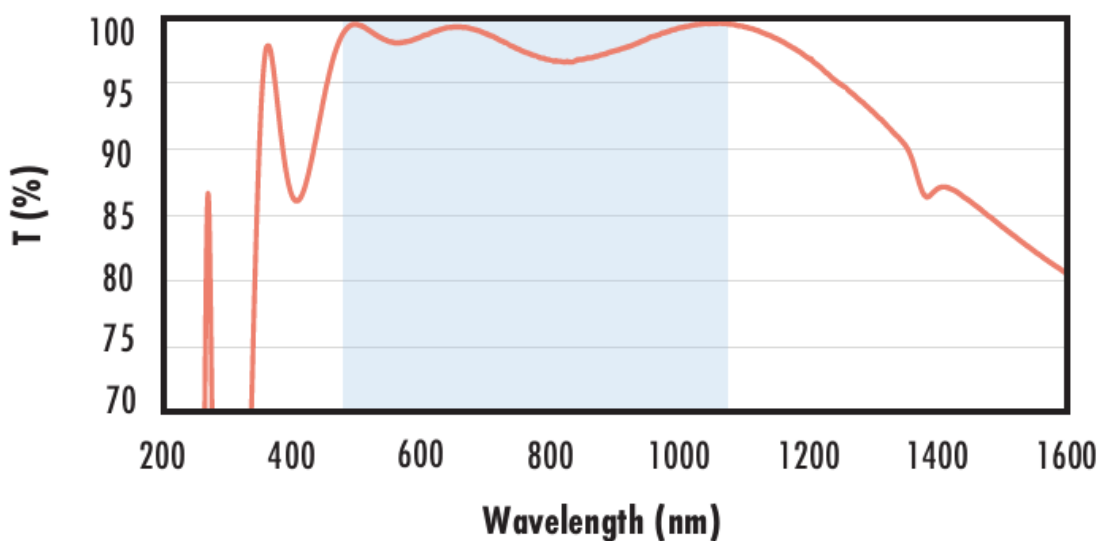
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

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

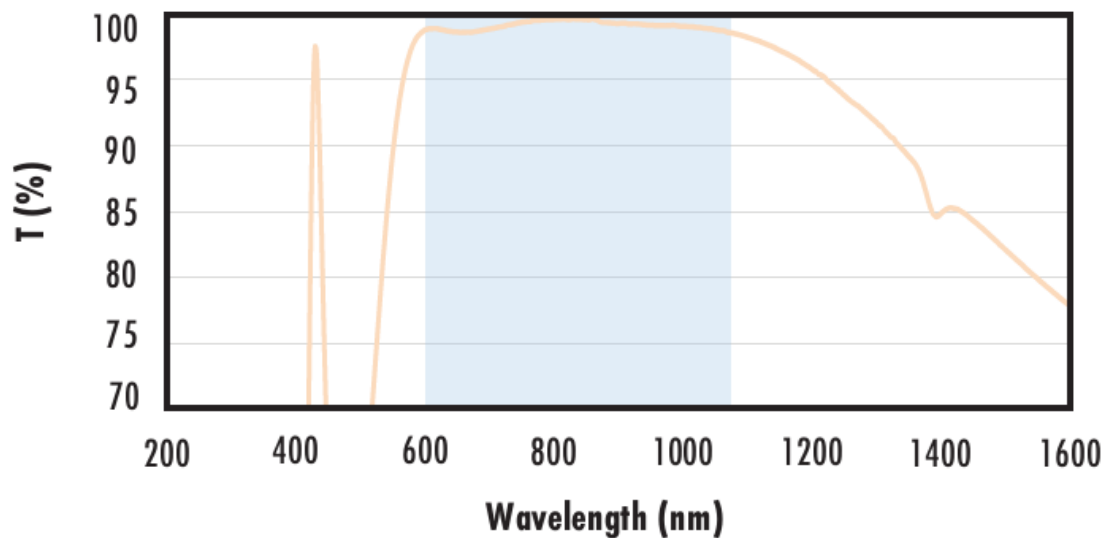
$$R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$$

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

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### 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.

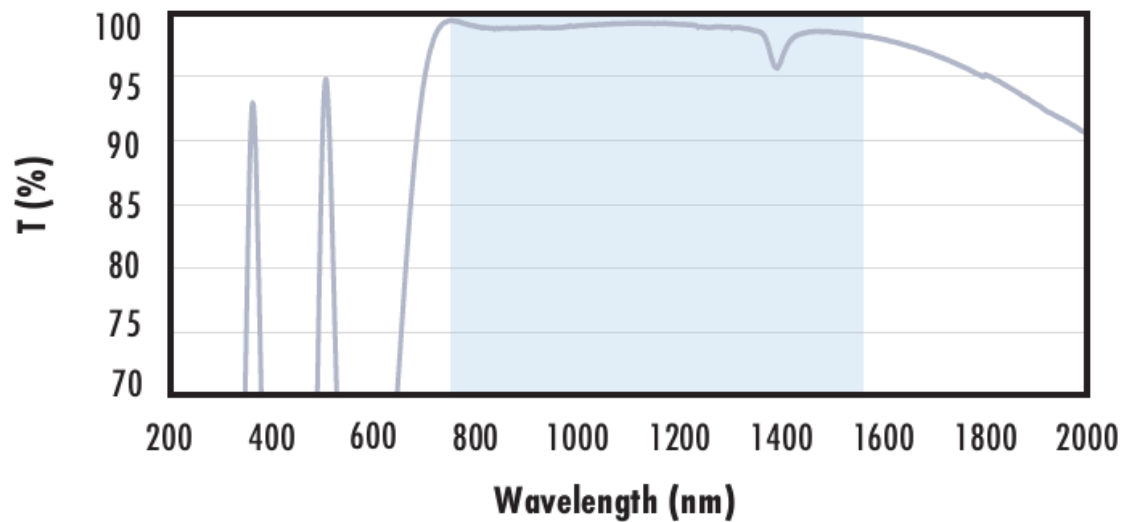
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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### 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.

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