

**TECHSPEC® 20mm Dia. 2mm Thick Uncoated, 1λ Fused Silica Window**



Stock #45-464 **20+ In Stock**

⊖ 1 ⊕ C\$113<sup>40</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-5	C\$113.40 each
Qty 6-25	C\$90.30 each
Qty 26-49	C\$84.70 each
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**General**

Protective Window **Type:**  
Glass **Type of Window:**

**Physical & Mechanical Properties**

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

20.00 +0.00/-0.20	<b>Diameter (mm):</b>
2.00 ±0.38	<b>Thickness (mm):</b>
<5	<b>Parallelism (arcmin):</b>
+0.00/-0.20	<b>Dimensional Tolerance (mm):</b>
Protective as needed	<b>Bevel:</b>
90	<b>Clear Aperture (%):</b>
Fine Ground	<b>Edges:</b>
0.16	<b>Poisson's Ratio:</b>
73	<b>Young's Modulus (GPa):</b>
522.00	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b>

## Optical Properties

Uncoated	<b>Coating:</b>
<a href="#">Fused Silica</a> (Corning 7980)	<b>Substrate:</b> <input type="checkbox"/>
1.458	<b>Index of Refraction (n<sub>d</sub>):</b>
60-40	<b>Surface Quality:</b>
67.8	<b>Abbe Number (v<sub>d</sub>):</b>
200 - 2200	<b>Wavelength Range (nm):</b>
1λ	<b>Surface Flatness (P-V):</b>

## Material Properties

2.20	<b>Density (g/cm<sup>3</sup>):</b>
0.52 (+5 to +35°C) 0.57 (0 to +200°C) 0.48 (-100 to +200°C)	<b>Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):</b>
7980 0G	<b>Fused Silica Grade:</b>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">Compliant</a>	<b>Reach 219:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>

## 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
- [N/4](#) or [N/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. [N/4](#) or [N/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

FUSED SILICA	
<p style="text-align: center;"><b>Uncoated Fused Silica Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick uncoated fused silica window. The y-axis is Transmittance (T) in percent, ranging from 70 to 100. The x-axis is Wavelength in nanometers, ranging from 200 to 2200. The transmission is high, starting at ~92% at 200nm, rising to ~94% by 400nm, and remaining stable until 2200nm, with a small dip at ~1400nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with MgF<sub>2</sub> Coating Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick fused silica window with MgF<sub>2</sub> coating. The y-axis is Transmittance (T) in percent, ranging from 70 to 100. The x-axis is Wavelength in nanometers, ranging from 200 to 2200. A blue shaded region indicates the coating design wavelength range from approximately 400nm to 700nm. The transmission is high, starting at ~92% at 200nm, rising to ~96% by 400nm, and remaining stable until 2200nm, with a small dip at ~1400nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;"><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with UV-AR Coating Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick fused silica window with UV-AR coating. The y-axis is Transmittance (T) in percent, ranging from 70 to 100. The x-axis is Wavelength in nanometers, ranging from 200 to 1200. A blue shaded region indicates the coating design wavelength range from approximately 250nm to 425nm. The transmission is high, starting at ~92% at 200nm, rising to ~98% by 250nm, and remaining stable until 425nm, then gradually decreasing to ~75% at 1200nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;"><math>R_{abs} \leq 1.0\% @ 250 - 425\text{nm}</math>  <math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math>  <math>R_{avg} \leq 0.5\% @ 370 - 420\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with UV VIS Coating</b></p>	

**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:

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

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

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:

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

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:

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

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

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

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 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.

[Click Here to Download Data](#)

**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:

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

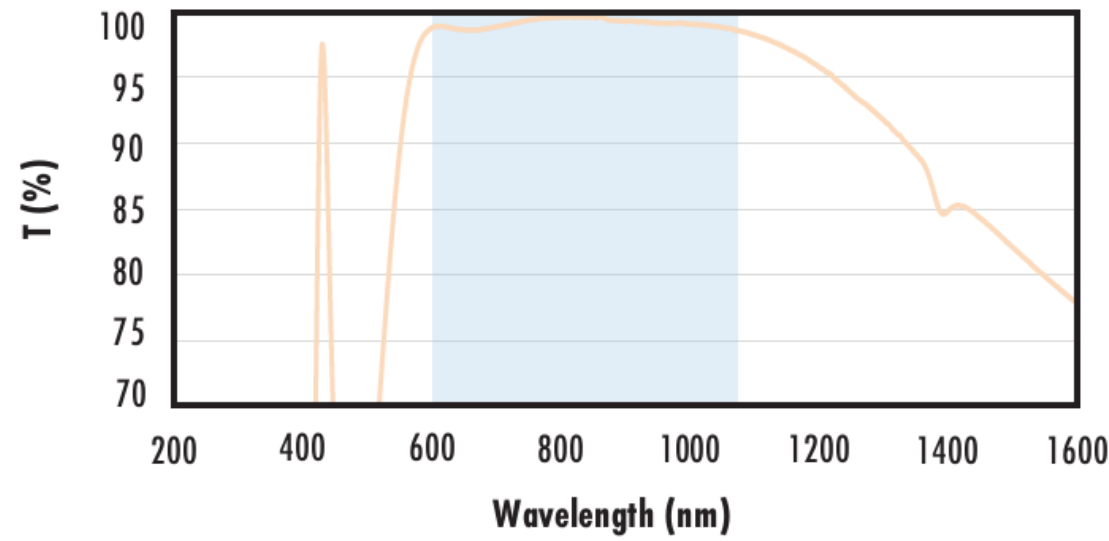
$$R_{\text{abs}} \leq 0.25\% @ 1064\text{nm}$$

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

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.

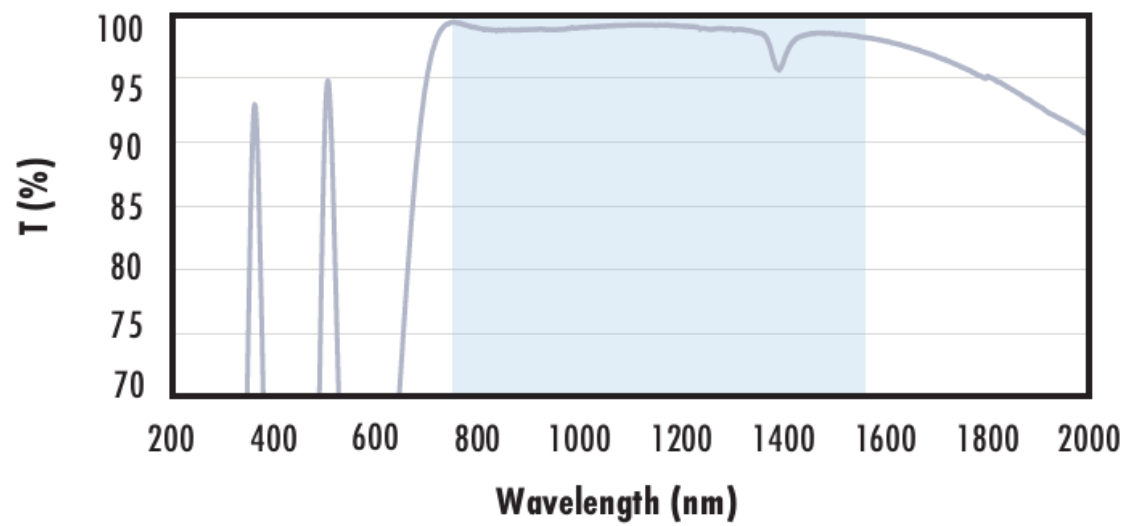
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{\text{abs}} \leq 1.5\% @ 750 - 800\text{nm}$$

$$R_{\text{abs}} \leq 1.0\% @ 800 - 1550\text{nm}$$

$$R_{\text{avg}} \leq 0.7\% @ 750 - 1550\text{nm}$$

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

[Click Here to Download Data](#)

### Compatible Mounts