

**TECHSPEC® 50mm Dia., 5mm Thick, NIR II Coated  $\lambda/10$  Fused Silica Window**



Stock #11-909 **1 In Stock**

- 1 + £253<sup>.60</sup>

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Volume Pricing	
Qty 1-5	£253.60 each
Qty 6-25	£201.60 each
Qty 26-49	£189.60 each
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! Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Protective Window **Type:**

Glass **Type of Window:**

**Physical & Mechanical Properties**

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

50.00 +0.00/-0.20	<b>Diameter (mm):</b>
5.00 ±0.10	<b>Thickness (mm):</b>
+0.00/-0.20	<b>Dimensional Tolerance (mm):</b>
Protective as needed	<b>Bevel:</b>
80	<b>Clear Aperture (%):</b>
Fine Ground	<b>Edges:</b>
<5	<b>Parallelism (arcsec):</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

NIR II (750-1550nm)	<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>
20-10	<b>Surface Quality:</b>
M10	<b>Transmitted Wavefront, P-V:</b>
67.8	<b>Abbe Number (v<sub>d</sub>):</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	<b>Coating Specification:</b>
750 - 1550	<b>Wavelength Range (nm):</b>
8 J/cm <sup>2</sup> @ 1064nm, 10ns	<b>Damage Threshold, By Design:</b> <input type="checkbox"/>

## 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="#">View</a>	<b>Certificate of Conformance:</b>
<a href="#">Compliant</a>	<b>Reach 235:</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

- UV, Visible, and NIR Anti-Reflection Coated Versions Available
- $\lambda/10$  Transmitted Wavefront Distortion
- Circular and Square Sizes from 2mm to 150mm
- $1\lambda$  or  $\lambda/4$  UV Fused Silica Windows Also Available

TECHSPEC®  $\lambda/10$  UV Fused Silica Windows feature laser-grade surface quality and parallelism. In addition, these windows will limit the transmitted wavefront distortion to  $\lambda/10$ . The superior transmission characteristics, excellent thermal properties, and high tolerance manufacturing specifications make these windows an excellent choice for more demanding applications. TECHSPEC  $\lambda/10$  UV Fused Silica Windows are available for purchase in circular and square sizes ranging from 2mm to 150mm. These windows are offered uncoated or with anti-reflection coatings optimized for the UV or visible spectrum.

## Technical Information



### FUSED SILICA

#### 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:

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

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

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#### 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 - 425nm

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

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

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:

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

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:

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

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

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

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

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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:

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

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

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<p style="text-align: center;"><b>Wavelength (nm)</b></p> <p style="text-align: center;"><b>Fused Silica with YAG-BBAR Coating Typical Transmission</b></p>  <p style="text-align: center;"><b>Wavelength (nm)</b></p>	<p>Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) 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 0.25\% @ 532\text{nm}</math>  <math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math>  <math>R_{avg} \leq 1.0\% @ 500 - 1100\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>Wavelength (nm)</b></p> <p style="text-align: center;"><b>Fused Silica with NIR I Coating Typical Transmission</b></p>  <p style="text-align: center;"><b>Wavelength (nm)</b></p>	<p>Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) 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 0.5\% @ 600 - 1050\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>Wavelength (nm)</b></p> <p style="text-align: center;"><b>Fused Silica with NIR II Coating Typical Transmission</b></p>  <p style="text-align: center;"><b>Wavelength (nm)</b></p>	<p>Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) 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 1.5\% @ 750 - 800\text{nm}</math>  <math>R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}</math>  <math>R_{avg} \leq 0.7\% @ 750 - 1550\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>

**Compatible Mounts**