

TECHSPEC<sup>®</sup> 20mm Dia. 2mm Thick NIR I, 1λ Fused Silica Window



Stock **#36-975** 12 In Stock

-

1

+

C\$145<sup>.30</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | C\$145.30 each                |
| Qty 6-25       | C\$115.77 each                |
| Qty 26-49      | C\$108.78 each                |
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SPECIFICATIONS

General

Type:  
Protective Window

Physical & Mechanical Properties

|                      |                          |
|----------------------|--------------------------|
| Protective as needed | Bevel:                   |
| 90                   | Clear Aperture (%):      |
| 18.00                | Clear Aperture CA (mm):  |
| 20.00 +0.00/-0.20    | Diameter (mm):           |
| 2.00 ±0.38           | Thickness (mm):          |
| Fine Ground          | Edges:                   |
| 522.00               | Knoop Hardness (kg/mm²): |
| <5                   | Parallelism (arcmin):    |
| 0.16                 | Poisson's Ratio:         |
| 73                   | Young's Modulus (GPa):   |

### Optical Properties

|                                             |                                                       |
|---------------------------------------------|-------------------------------------------------------|
| 67.8                                        | Abbe Number (v <sub>d</sub> ):                        |
| NIR I (600-1050nm)                          | Coating:                                              |
| R <sub>avg</sub> ≤0.5% @ 600 - 1050nm       | Coating Specification:                                |
| 1.458                                       | Index of Refraction (n <sub>d</sub> ):                |
| <a href="#">Fused Silica</a> (Corning 7980) | Substrate:                                            |
| 1λ                                          | Surface Flatness (P-V):                               |
| 60-40                                       | Surface Quality:                                      |
| 600 - 1050                                  | Wavelength Range (nm):                                |
| 7 J/cm² @ 1064nm, 10ns                      | Damage Threshold, Reference: <input type="checkbox"/> |

### Material Properties

|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| 0.52 (+5 to +35°C)<br>0.57 (0 to +200°C)<br>0.48 (-100 to +200°C) | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |
| 2.20                                                              | Density (g/cm³):                                             |

### Regulatory Compliance

|                           |                             |
|---------------------------|-----------------------------|
| <a href="#">Compliant</a> | RoHS 2015:                  |
| <a href="#">View</a>      | Certificate of Conformance: |
| <a href="#">Compliant</a> | Reach 235:                  |

## 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 Wndows 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



## 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](#)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>2004006008001000120014001600180020002200</div><div>Wavelength (nm)</div><div><div>Fused Silica with MgF<sub>2</sub> Coating</div><div>Typical Transmission</div><div><div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div><div>1800</div><div>2000</div><div>2200</div></div><div>Wavelength (nm)</div></div></div></div> | <div><div>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div><div><div><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</div></div><div>Data outside this range is not guaranteed and is for reference only.</div><div><a href="#">Click Here to Download Data</a></div></div>                                                                                                 |
| <div><div>20040060080010001200</div><div>Wavelength (nm)</div><div><div>Fused Silica with UV-AR Coating</div><div>Typical Transmission</div><div><div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div></div><div>Wavelength (nm)</div></div></div></div>                                                                                                          | <div><div>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div><div><div><math>R_{abs} \leq 1.0\% @ 250 - 425\text{nm}</math><br/><math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math><br/><math>R_{avg} \leq 0.5\% @ 370 - 420\text{nm}</math></div></div><div>Data outside this range is not guaranteed and is for reference only.</div><div><a href="#">Click Here to Download Data</a></div></div> |
| <div><div>20040060080010001200</div><div>Wavelength (nm)</div><div><div>Fused Silica with UV-VIS Coating</div><div>Typical Transmission</div><div><div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div></div><div>Wavelength (nm)</div></div></div></div>                                                                                                         | <div><div>Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div><div><div><math>R_{abs} \leq 1.0\% @ 350 - 450\text{nm}</math><br/><math>R_{avg} \leq 1.5\% @ 250 - 700\text{nm}</math></div></div><div>Data outside this range is not guaranteed and is for reference only.</div><div><a href="#">Click Here to Download Data</a></div></div>                                                          |
| <div><div>20040060080010001200</div><div>Wavelength (nm)</div><div><div>Fused Silica with VIS-EXT Coating</div><div>Typical Transmission</div><div><div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div></div><div>Wavelength (nm)</div></div></div></div>                                                                                                        | <div><div>Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div><div><div><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></div></div><div>Data outside this range is not guaranteed and is for reference only.</div><div><a href="#">Click Here to Download Data</a></div></div>                                                                                                                  |



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:

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

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 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.

[Click Here to Download Data](#)



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:

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

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:

$$\begin{aligned} R_{\text{abs}} &\leq 1.5\% @ 750 - 800\text{nm} \\ R_{\text{abs}} &\leq 1.0\% @ 800 - 1550\text{nm} \\ R_{\text{avg}} &\leq 0.7\% @ 750 - 1550\text{nm} \end{aligned}$$

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](#).

## COMPATIBLE MOUNTS