

TECHSPEC<sup>®</sup> 50.8mm Dia. 4mm Thick VIS 0° Coated, 1λ Fused Silica Window



TECHSPEC<sup>®</sup> 1λ UV Fused Silica Windows

Stock #25-283 5 In Stock

-

1

+

S\$240<sup>00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | S\$240.80 each                |
| Qty 6-25       | S\$191.80 each                |
| Qty 26-49      | S\$180.60 each                |
| Need More?     | <a href="#">Request Quote</a> |

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General

Protective Window

Type:

Physical & Mechanical Properties

Protective as needed

Bevel:

90

Clear Aperture (%):

|                   |                          |
|-------------------|--------------------------|
| 45.72             | Clear Aperture CA (mm):  |
| 50.80 +0.00/-0.20 | Diameter (mm):           |
| 4.00 ±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> ):         |
| VIS 0° (425-675nm)                   | Coating:                               |
| R <sub>avg</sub> ≤0.4% @ 425 - 675nm | Coating Specification:                 |
| 1.458                                | Index of Refraction (n <sub>d</sub> ): |
| Fused Silica (Corning 7980)          | Substrate:                             |
| 60-40                                | Surface Quality:                       |
| 1λ                                   | Transmitted Wavefront, P-V:            |
| 425 - 675                            | Wavelength Range (nm):                 |
| 5 J/cm² @ 532nm, 10ns                | Damage Threshold, Reference: □         |

|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| 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 |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant             | 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 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

### 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:

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

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

[Click Here to Download Data](#)

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p data-bbox="583 270 1075 371"><b>Fused Silica with UV-AR Coating</b><br/><b>Typical Transmission</b></p>        | <p data-bbox="1329 427 1856 474">Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p data-bbox="1335 489 1850 537">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 552 1709 626"><math>R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}</math><math>R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}</math><math>R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}</math></div> <p data-bbox="1344 638 1841 685">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 700 1709 721"><a href="#">Click Here to Download Data</a></p>           |
| <p data-bbox="575 946 1083 1047"><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1329 1104 1856 1151">Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p data-bbox="1335 1166 1850 1213">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1228 1709 1279"><math>R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}</math><math>R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}</math></div> <p data-bbox="1344 1314 1841 1362">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 1377 1709 1397"><a href="#">Click Here to Download Data</a></p>                                                              |
| <p data-bbox="569 1626 1077 1727"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1344 1807 1841 1855">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1335 1869 1850 1917">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1932 1709 1955"><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <p data-bbox="1344 1970 1841 2018">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2033 1709 2053"><a href="#">Click Here to Download Data</a></p>                                                                                                                          |
| <p data-bbox="575 2303 1083 2404"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1344 2445 1841 2493">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1335 2507 1850 2555">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 2570 1709 2644"><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></div> <p data-bbox="1344 2680 1841 2727">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2742 1709 2763"><a href="#">Click Here to Download Data</a></p> |



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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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:

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

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

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

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](#)



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:

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

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

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

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

[Click Here to Download Data](#)

# Coating Curves

## 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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