

TECHSPEC<sup>®</sup> 50mm Dia., 5mm Thick VIS-NIR Coated, 1λ Fused Silica Window



Stock **#19-898** 5 In Stock

-

1

+

S\$249<sup>.20</sup>

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| Qty 1-5        | S\$249.20 each                |
| Qty 6-25       | S\$198.80 each                |
| Qty 26-49      | S\$186.20 each                |
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General

|                   |       |
|-------------------|-------|
| Protective Window | Type: |
|-------------------|-------|

Physical & Mechanical Properties

|       |                         |
|-------|-------------------------|
| 45.00 | Clear Aperture CA (mm): |
|-------|-------------------------|

|                      |                          |
|----------------------|--------------------------|
| 50.00 +0.00/-0.20    | Diameter (mm):           |
| 5.00 ±0.38           | Thickness (mm):          |
| <5                   | Parallelism (arcmin):    |
| Protective as needed | Bevel:                   |
| 90                   | Clear Aperture (%):      |
| Fine Ground          | Edges:                   |
| 0.16                 | Poisson's Ratio:         |
| 73                   | Young's Modulus (GPa):   |
| 522.00               | Knoop Hardness (kg/mm²): |

|                                                                                                                    |                                        |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Optical Properties                                                                                                 |                                        |
| VIS-NIR (400-1000nm)                                                                                               | Coating:                               |
| Fused Silica (Corning 7980)                                                                                        | Substrate: □                           |
| 1.458                                                                                                              | Index of Refraction (n <sub>d</sub> ): |
| 60-40                                                                                                              | Surface Quality:                       |
| 1λ                                                                                                                 | Transmitted Wavefront, P-V:            |
| 67.8                                                                                                               | Abbe Number (v <sub>d</sub> ):         |
| R <sub>abs</sub> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm | Coating Specification:                 |
| 400 - 1000                                                                                                         | Wavelength Range (nm):                 |

|                       |                              |
|-----------------------|------------------------------|
| 5 J/cm² @ 532nm, 10ns | Damage Threshold, Reference: |
|-----------------------|------------------------------|

|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| Material Properties                                               |                                                              |
| 2.20                                                              | Density (g/cm³):                                             |
| 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): |
| 7980 0G                                                           | Fused Silica Grade:                                          |

|                       |                             |
|-----------------------|-----------------------------|
| 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.

[Click Here to Download Data](#)

### 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.

[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 1276"><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 1952"><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <p data-bbox="1344 1967 1841 2015">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2030 1709 2050"><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 2677 1841 2724">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2739 1709 2760"><a href="#">Click Here to Download Data</a></p> |



Typical transmission of a 3mm thick fused silica window with MS  
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](#)

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.

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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:

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

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

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

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](#).

# Compatible Mounts