

TECHSPEC<sup>®</sup> 50mm Dia., 5mm Thick, VIS-NIR Coated  $\lambda$ /10 Fused Silica Window



Stock **#84-458** 5 In Stock

-

1

+

A\$516<sup>.80</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | A\$516.80 each                |
| Qty 6-25       | A\$411.20 each                |
| Qty 26-49      | A\$385.60 each                |
| Need More?     | <a href="#">Request Quote</a> |

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General

Type:  
Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):  
40.00

Diameter (mm):  
50.00 +0.00/-0.20

|                      |                             |
|----------------------|-----------------------------|
| 5.00 ±0.10           | Thickness (mm):             |
| +0.00/-0.20          | Dimensional Tolerance (mm): |
| Protective as needed | Bevel:                      |
| 80                   | Clear Aperture (%):         |
| Fine Ground          | Edges:                      |
| <5                   | Parallelism (arcsec):       |
| 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> ): |
| 20-10                                                                                                              | Surface Quality:                       |
| λ/10                                                                                                               | 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

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

TECHSPEC® λ/10 UV Fused Silica Windows feature laser-grade surface quality and parallelism. In addition, these windows will limit the transmitted wavefront distortion to λ/10. The superior transmission characteristics, excellent thermal properties, and high tolerance manufacturing specifications make these windows an excellent choice for more demanding applications. TECHSPEC λ/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



UV FS Transmission Curve



| FUSED SILICA                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><p><b>Uncoated Fused Silica<br/>Typical Transmission</b></p></div>                     | <p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                                                                                                                                                                         |
| <div><p><b>Fused Silica with MgF<sub>2</sub> Coating<br/>Typical Transmission</b></p></div> | <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><math>R_{avg} \leq 1.75\% @ 400 - 700nm</math> (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                   |
| <div><p><b>Fused Silica with UV-AR Coating<br/>Typical Transmission</b></p></div>           | <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><math>R_{abs} \leq 1.0\% @ 250 - 425nm</math><br/><math>R_{avg} \leq 0.75\% @ 250 - 425nm</math><br/><math>R_{avg} \leq 0.5\% @ 370 - 420nm</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p> |



|                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div><div>Fused Silica with YAG-BBAR Coating</div><div>Typical Transmission</div></div></div> | <div><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><div><div><math>R_{abs} \leq 0.25\%</math> @ 532nm</div><div><math>R_{abs} \leq 0.25\%</math> @ 1064nm</div><div><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</div></div><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div>           |
| <div><div><div>Fused Silica with NIR I Coating</div><div>Typical Transmission</div></div></div>   | <div><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><div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</div></div><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                   |
| <div><div><div>Fused Silica with NIR II Coating</div><div>Typical Transmission</div></div></div> | <div><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><div><div><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</div><div><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</div><div><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</div></div><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div> |

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

