

TECHSPEC<sup>®</sup> 50mm Dia., 3mm Thick, VIS-NIR Coated, λ/4 Fused Silica Window



TECHSPEC<sup>®</sup> λ/4 UV Fused Silica Windows

Stock **#72-419** 4 In Stock

-

1

+

₹15,477

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | ₹15,477 each                  |
| Qty 6-25       | ₹12,323 each                  |
| Qty 26-49      | ₹11,553 each                  |
| Need More?     | <a href="#">Request Quote</a> |

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SPECIFICATIONS

General

Type:  
Protective Window

Physical & Mechanical Properties

|                                                              |                                        |
|--------------------------------------------------------------|----------------------------------------|
|                                                              |                                        |
| Protective as needed                                         | Bevel:                                 |
| 90                                                           | Clear Aperture (%):                    |
|                                                              |                                        |
| 45.00                                                        | Clear Aperture CA (mm):                |
|                                                              |                                        |
| 50.00 +0.00/-0.10                                            | Diameter (mm):                         |
|                                                              |                                        |
| 3.00 ±0.10                                                   | Thickness (mm):                        |
|                                                              |                                        |
| Fine Ground                                                  | Edges:                                 |
|                                                              |                                        |
| 522.00                                                       | Knoop Hardness (kg/mm²):               |
|                                                              |                                        |
| <1                                                           | Parallelism (arcmin):                  |
|                                                              |                                        |
| 0.16                                                         | Poisson's Ratio:                       |
|                                                              |                                        |
| 73                                                           | Young's Modulus (GPa):                 |
|                                                              |                                        |
| Optical Properties                                           |                                        |
|                                                              |                                        |
| 67.8                                                         | Abbe Number (v <sub>d</sub> ):         |
|                                                              |                                        |
| VIS-NIR (400-1000nm)                                         | Coating:                               |
|                                                              |                                        |
| Coating Specification:                                       |                                        |
| R <sub>abs</sub> ≤0.25% @ 880nm                              |                                        |
| R <sub>avg</sub> ≤1.25% @ 400 - 870nm                        |                                        |
| R <sub>avg</sub> ≤1.25% @ 890 - 1000nm                       |                                        |
|                                                              |                                        |
| 1.458                                                        | Index of Refraction (n <sub>d</sub> ): |
|                                                              |                                        |
| Fused Silica (Corning 7980)                                  | Substrate:                             |
|                                                              |                                        |
| 40-20                                                        | Surface Quality:                       |
|                                                              |                                        |
| λ/4                                                          | Transmitted Wavefront, P-V:            |
|                                                              |                                        |
| 400 - 1000                                                   | Wavelength Range (nm):                 |
|                                                              |                                        |
| Damage Threshold, Reference: □                               |                                        |
| 5 J/cm² @ 532nm, 10ns                                        |                                        |
| Material Properties                                          |                                        |
|                                                              |                                        |
| Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |                                        |
| 0.52 (+5 to +35°C)                                           |                                        |
| 0.57 (0 to +200°C)                                           |                                        |
| 0.48 (-100 to +200°C)                                        |                                        |
|                                                              |                                        |
| 2.20                                                         | Density (g/cm³):                       |
|                                                              |                                        |
| Regulatory Compliance                                        |                                        |
|                                                              |                                        |
| Compliant                                                    | RoHS 2015:                             |
|                                                              |                                        |
| View                                                         | Certificate of Conformance:            |
|                                                              |                                        |
| Compliant                                                    | REACH 241:                             |
|                                                              |                                        |

## PRODUCT DETAILS

- Available Uncoated or BBAR Coated for UV, Visible, and NIR
- Ideal for Imaging Applications
- Circular and Rectangular Sizes from 5 to 200mm
- [1λ](#) or [λ/10](#) UV Fused Silica Windows Also Available

TECHSPEC® λ/4 UV Fused Silica Windows are manufactured with 40-20 surface quality and λ/4 transmitted wavefront error specifications, making them ideal for imaging applications. Featuring UV fused silica substrates, these windows provide high transmission from the ultraviolet (UV) through the visible and near-infrared (NIR). Broadband anti-reflection (BBAR) coating options are available to minimize reflection losses and increase transmission. TECHSPEC λ/4 UV Fused Silica Windows are used in optical imaging applications, in low to medium powered laser applications, and as protective windows, especially in applications requiring transmission of UV light.

## 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.

[Click Here to Download Data](#)

### 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:

$R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$   
 $R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$   
 $R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$

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 UV-VIS (250-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$   
 $R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$

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-EXT (350-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

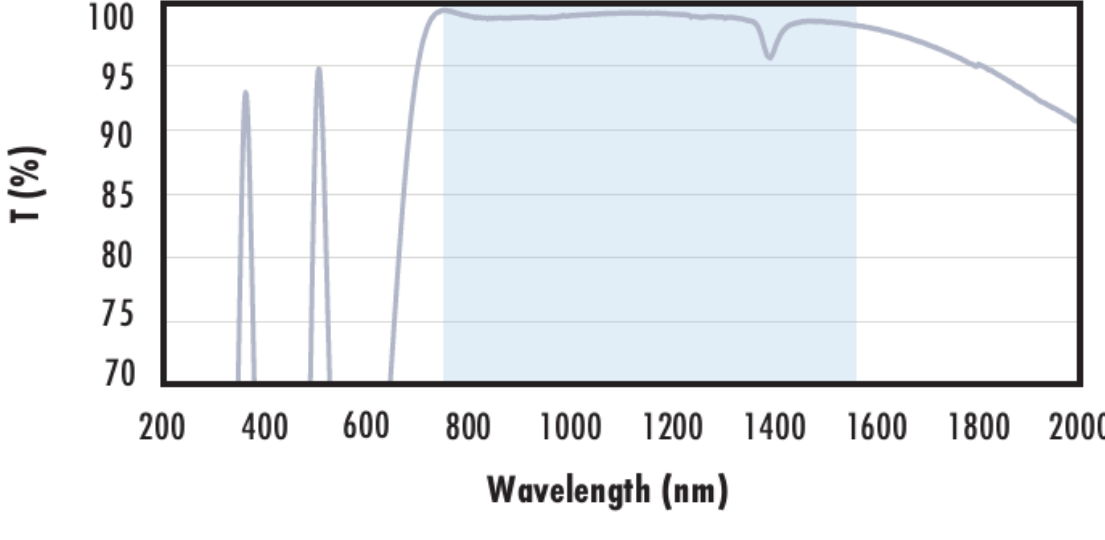
$R_{abs} \leq 0.25\% @ 880\text{nm}$   
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$   
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$

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

|                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                        | <p>0° (425-675nm) 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 0.4\% @ 425 - 675\text{nm}</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>                                                                                                                                                                                         |
| <p><b>Fused Silica with YAG-BBAR Coating</b></p> <p><b>Typical Transmission</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><math>R_{abs} \leq 0.25\% @ 532\text{nm}</math><br/><math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math><br/><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><a href="#">Click Here to Download Data</a></p>           |
| <p><b>Fused Silica with NIR I Coating</b></p> <p><b>Typical Transmission</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><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><a href="#">Click Here to Download Data</a></p>                                                                                                                     |
| <p><b>Fused Silica with NIR II Coating</b></p> <p><b>Typical Transmission</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><math>R_{abs} \leq 1.5\% @ 750 - 800\text{nm}</math><br/><math>R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}</math><br/><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><a href="#">Click Here to Download Data</a></p> |

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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