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TECHSPEC® 50mm Dia., 1mm Thick, NIR I Coated, $\lambda/4$ Fused Silica Window



TECHSPEC® $\lambda/4$ UV Fused Silica Windows

Stock **#72-404** **5 In Stock**

MRP ₹23,810

Price inclusive of all taxes

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Volume Pricing	
Qty 1-5	₹23,810 each
Qty 6-25	₹18,967 each
Qty 26-49	₹17,757 each
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General

Protective Window **Type:**

Physical & Mechanical Properties

45.00 **Clear Aperture CA (mm):**

Diameter (mm):

50.00 +0.00/-0.10

1.00 ±0.10 **Thickness (mm):**

<1 **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

NIR I (600-1050nm) **Coating:**

[Fused Silica](#) (Corning 7980) **Substrate:**

1.458 **Index of Refraction (n_d):**

40-20 **Surface Quality:**

λ/4 **Transmitted Wavefront, P-V:**

67.8 **Abbe Number (v_d):**

R_{avg} ≤0.5% @ 600 - 1050nm **Coating Specification:**

600 - 1050 **Wavelength Range (nm):**

7 J/cm² @ 1064nm, 10ns **Damage Threshold, Reference:**

Material Properties

2.20 **Density (g/cm³):**

Coefficient of Thermal Expansion CTE (10⁻⁶/°C):
0.52 (+5 to +35°C)
0.57 (0 to +200°C)
0.48 (-100 to +200°C)

Regulatory Compliance

[Compliant](#) **RoHS 2015:**

[View](#) **Certificate of Conformance:**

[Compliant](#) **REACH 241:**

Vietnam **Country of Origin:**

Imported By:
Edmund Optics India Private Limited
267, Greystone Building, Second Floor,
6th Cross Rd, Binnamangala,
Stage 1, Indiranagar, Bengaluru,
Karnataka, India 560038
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Need different specs or modifications?

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](#).

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 $\lambda/10$ UV Fused Silica Windows Also Available

TECHSPEC® $\lambda/4$ UV Fused Silica Windows are manufactured with 40-20 surface quality and $\lambda/4$ 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 $\lambda/4$ 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_2 Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with MgF_2 (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.

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Wavelength (nm)

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:

$$R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$$

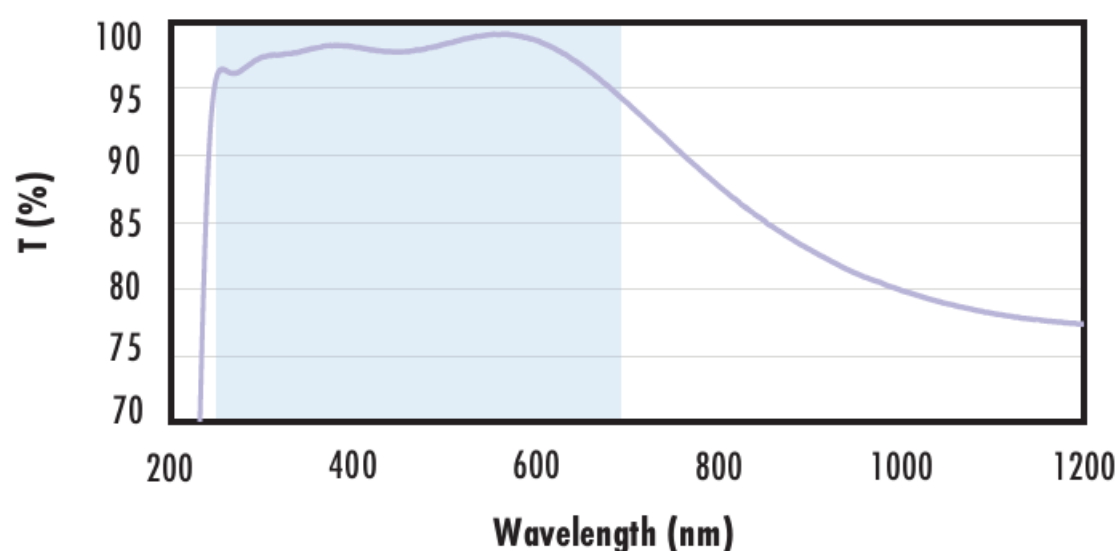
$$R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$$

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

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Fused Silica with UV-VIS Coating Typical Transmission



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:

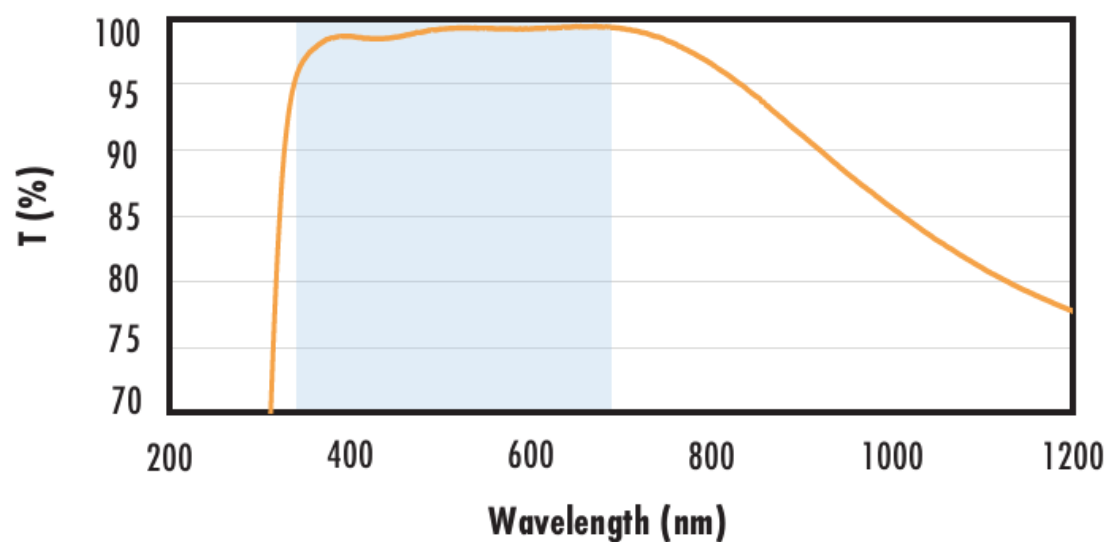
$$R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$$

$$R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$$

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

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Fused Silica with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

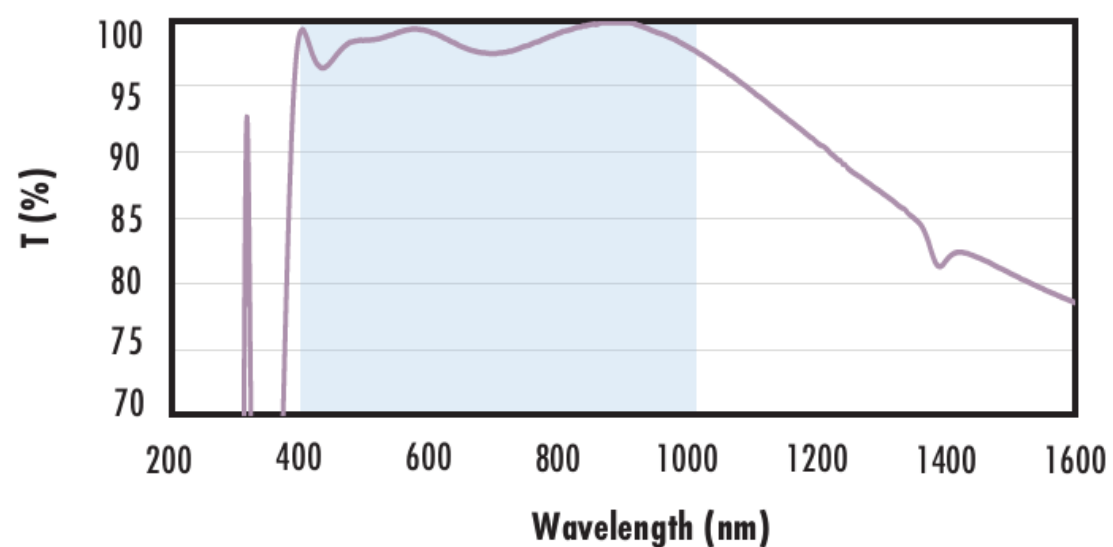
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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Fused Silica with VIS-NIR Coating Typical Transmission



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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Fused Silica with VIS 0° Coating

Typical Transmission



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:

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

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

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Fused Silica with YAG-BBAR Coating Typical Transmission



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.

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Fused Silica with NIR I Coating Typical Transmission



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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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:

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

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

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

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

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