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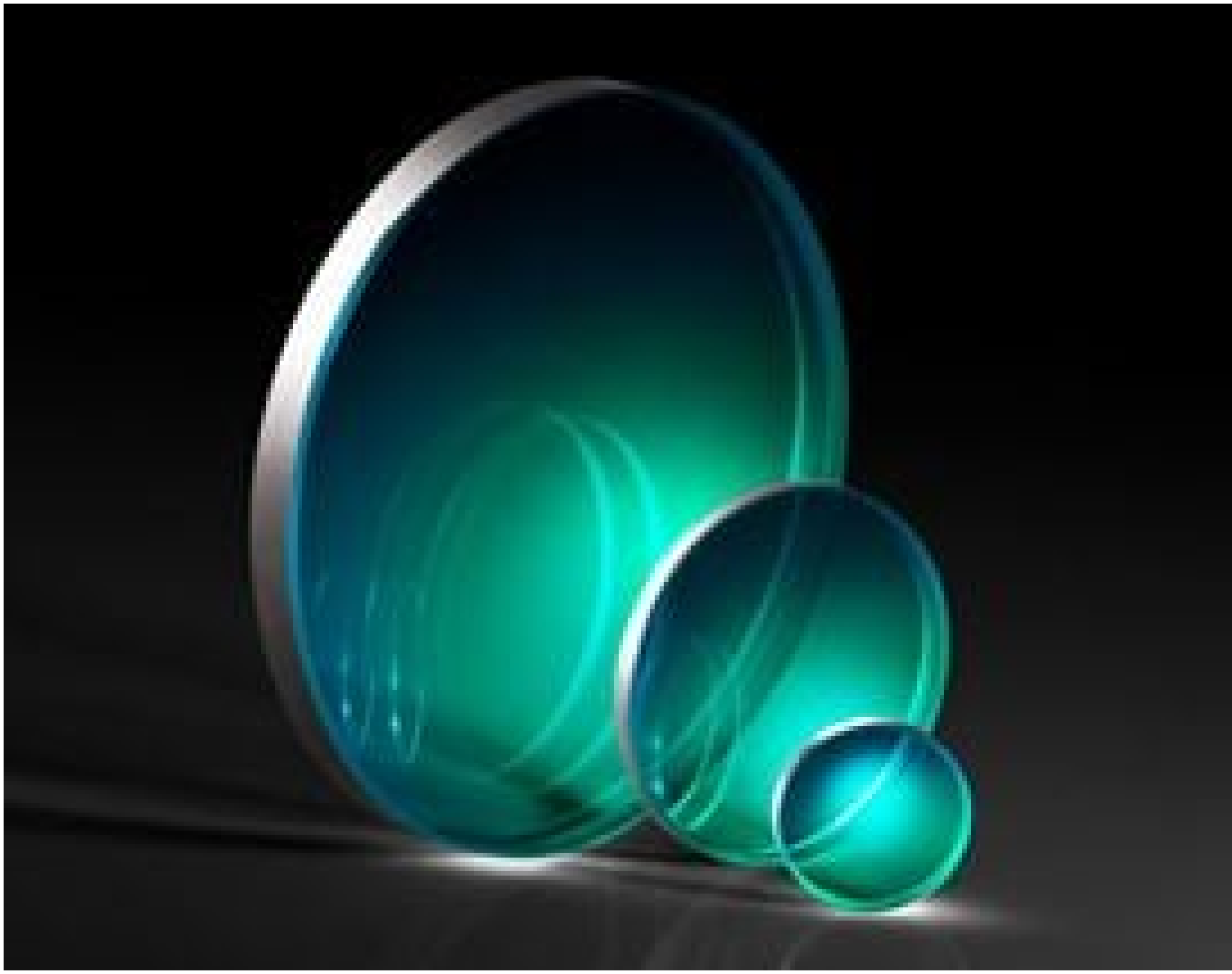
# TECHSPEC® 50mm Dia., 4mm Thick, VIS 0° Coated, λ/4 Fused Silica Window



TECHSPEC® λ/4 UV Fused Silica Windows

Stock **#18-331** **5 In Stock**

- 1 + A$377.60

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| Volume Pricing | |
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| Qty 1-5 | **A$377.60** each |
| Qty 6-25 | **A$300.80** each |
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## General

**Type:**
Protective Window

**Type of Window:**
Glass

## Physical & Mechanical Properties

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

**Diameter (mm):**
50.00 +0.00/-0.10

**Thickness (mm):**
4.00 ±0.10

**Parallelism (arcmin):**
<1

**Bevel:**
Protective as needed

**Clear Aperture (%):**
90

**Edges:**
Fine Ground

**Poisson's Ratio:**
0.16

**Young's Modulus (GPa):**
73

**Knoop Hardness (kg/mm$^2$):**
522.00

## Optical Properties

**Coating:**
VIS 0° (425-675nm)

**Substrate:**
Fused Silica (Corning 7980)

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

**Surface Quality:**
40-20

**Transmitted Wavefront, P-V:**
λ/4

**Abbe Number ($v_d$):**
67.8

**Coating Specification:**
$R_{avg}$ ≤0.4% @ 425 - 675nm

**Wavelength Range (nm):**
425 - 675

**Damage Threshold, Reference:**
5 J/cm$^2$ @ 532nm, 10ns

## Material Properties

**Density (g/cm$^3$):**
2.20

**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)

**Fused Silica Grade:**
7980 0G

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Certificate of Conformance:**
View

**REACH 241:**
Compliant

## 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

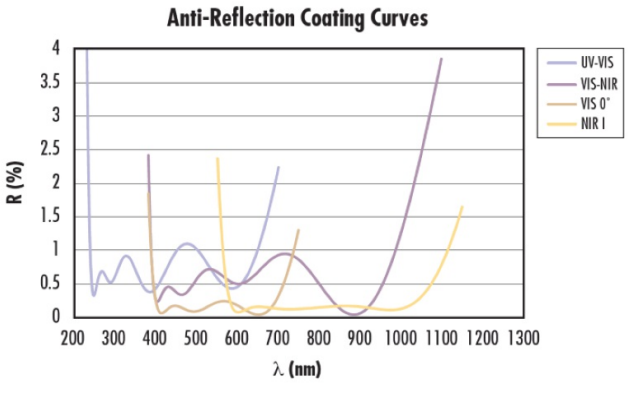
Learn more about our custom manufacturing capabilities or submit an inquiry here.

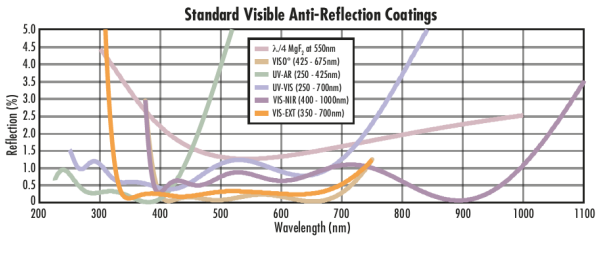
# Product Details

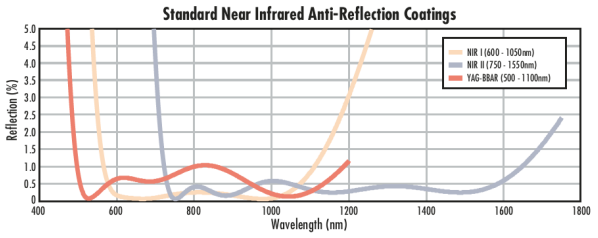
- Available Uncoated or BBAR Coated for UV, Visible, and NIR
- Ideal for Imaging Applications
- Circular and Rectangular Sizes from 5 to 200mm
- 1λ or λ/10 UV Fused Silica Windows Also Available

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.

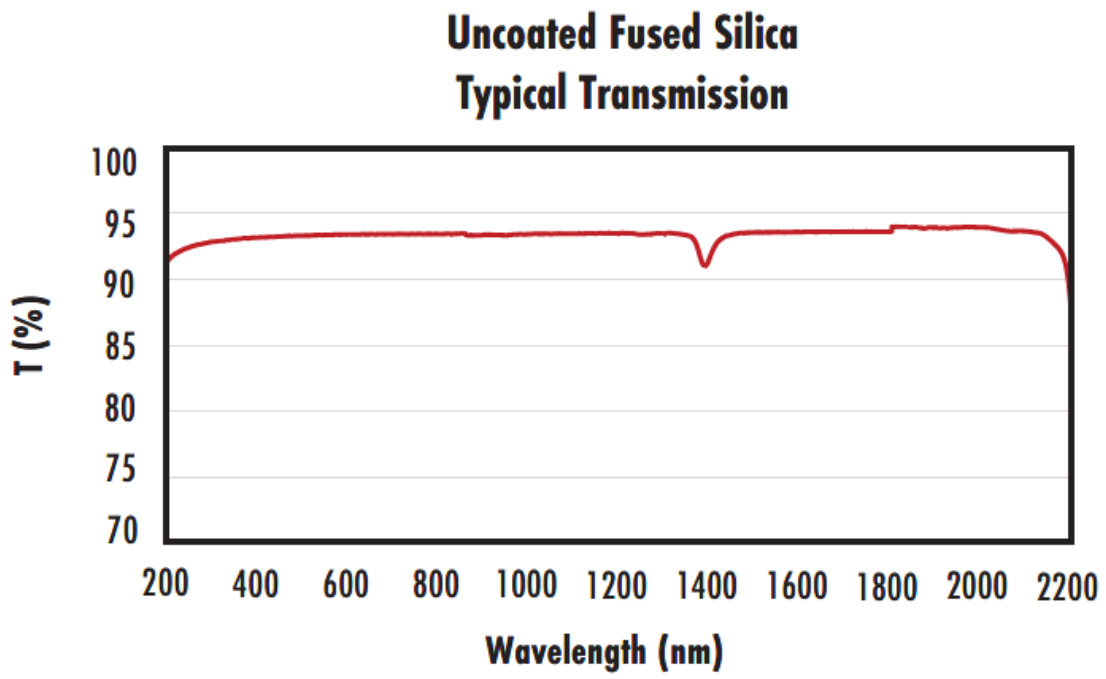
# Technical Information




## FUSED SILICA




Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.

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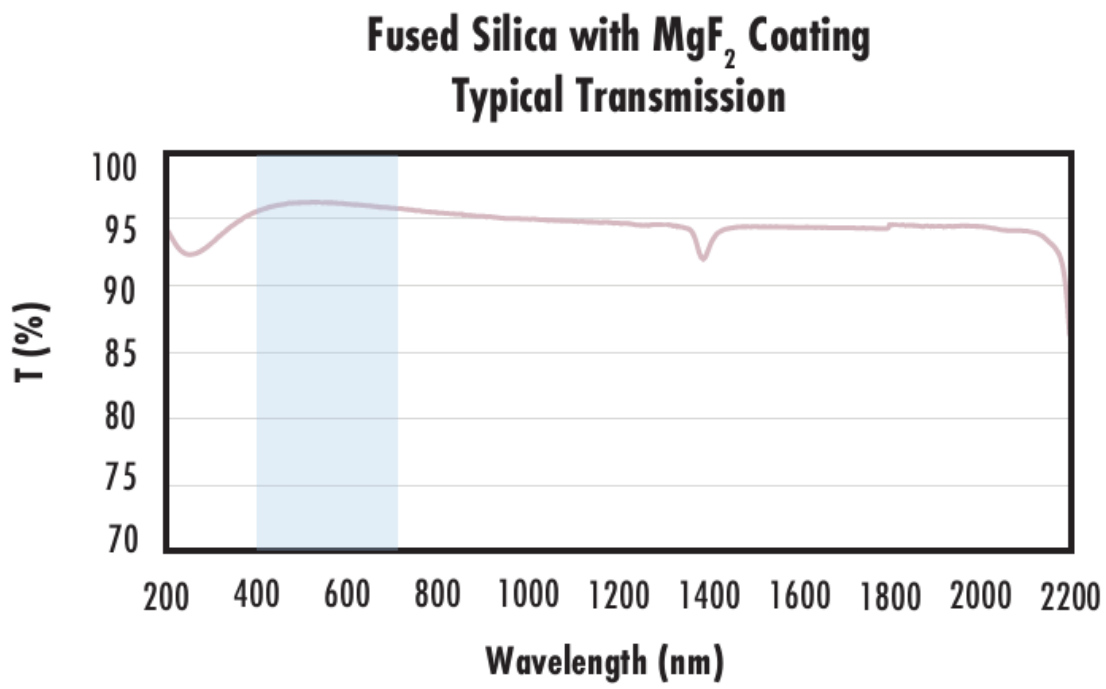


Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh 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.

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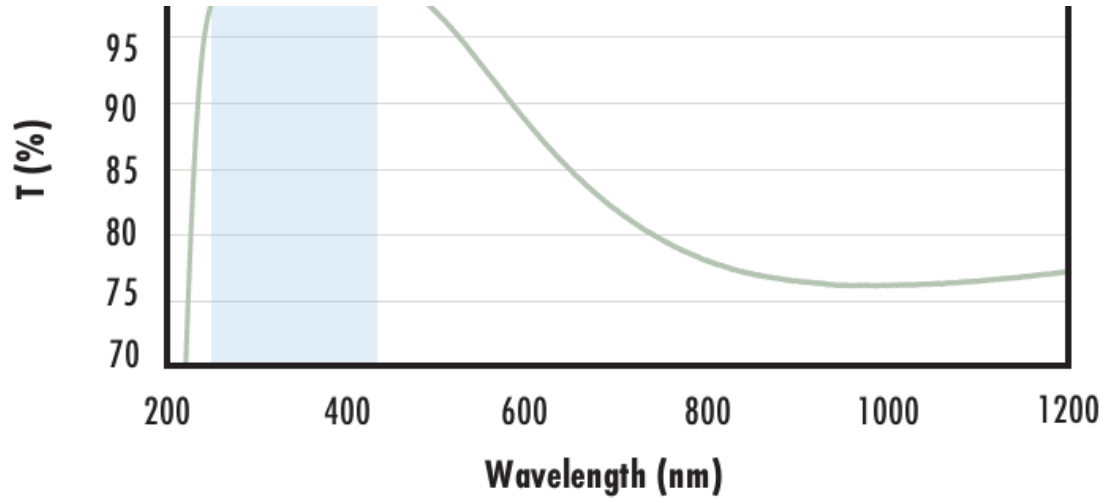


Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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

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

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

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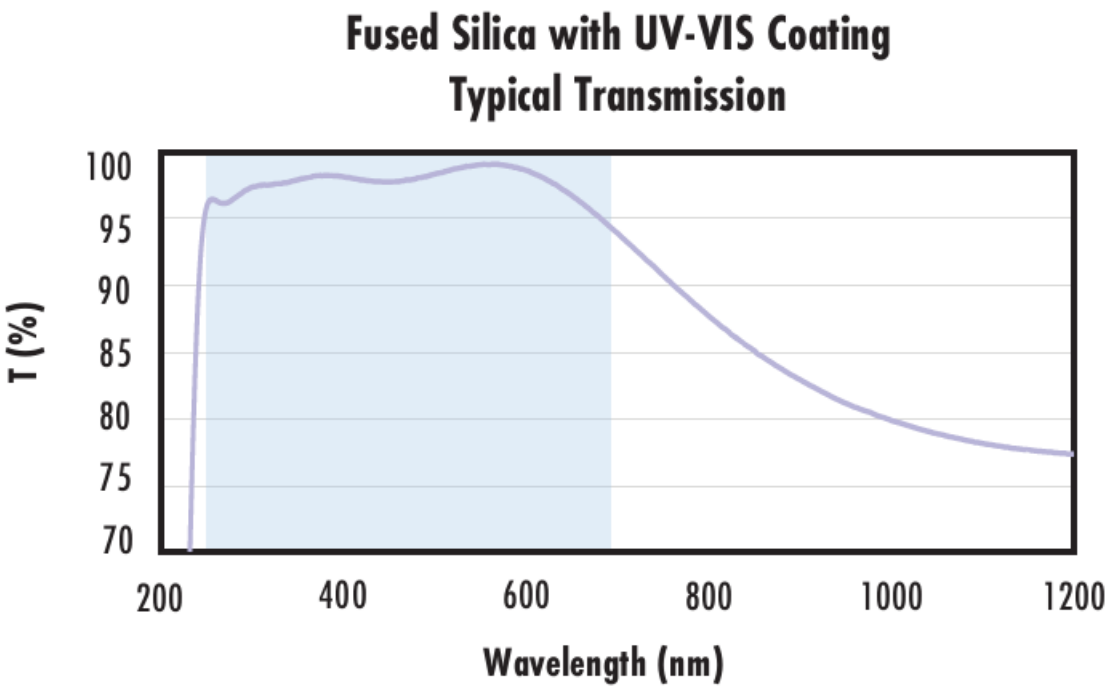


Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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

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

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

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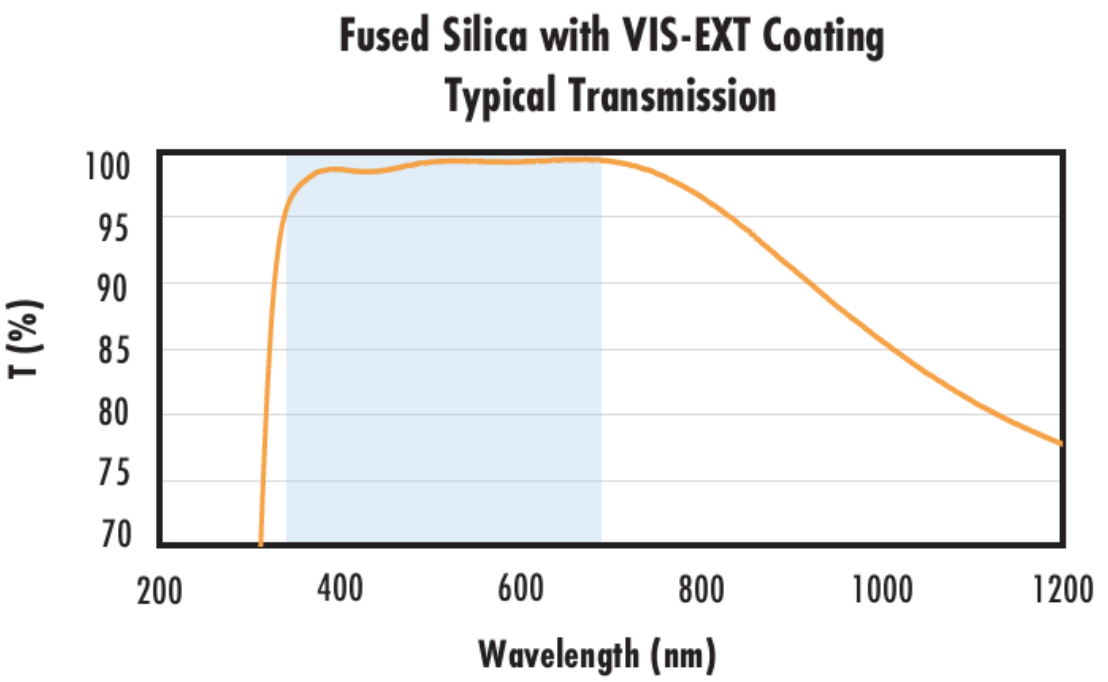


Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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

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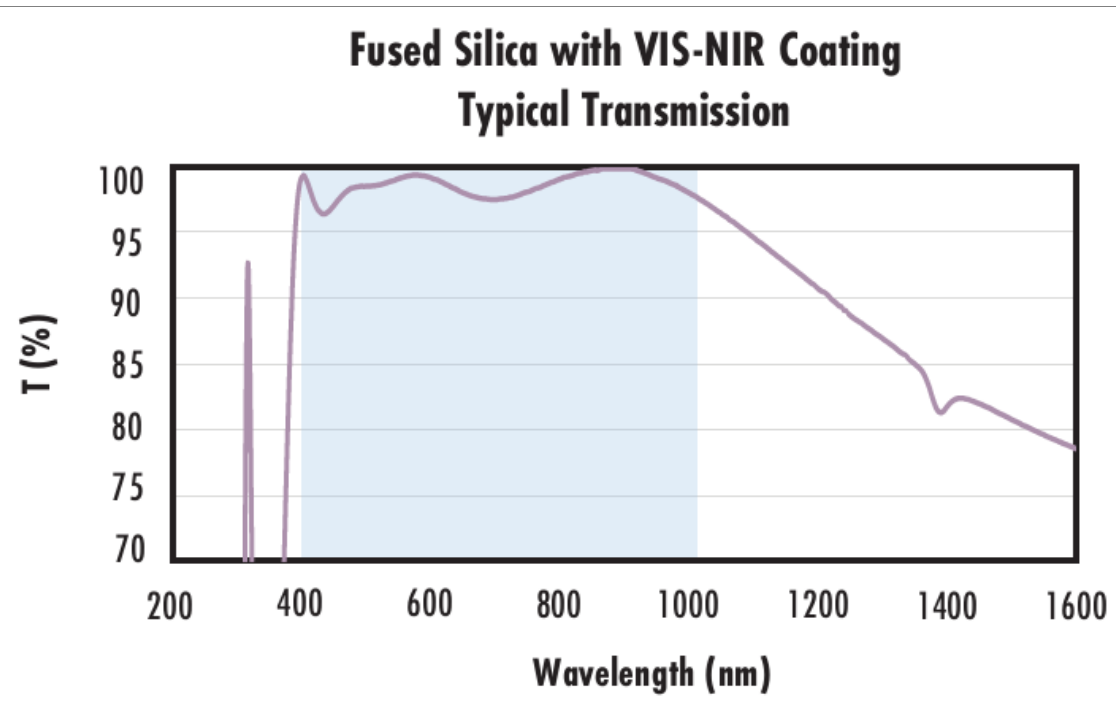


Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

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

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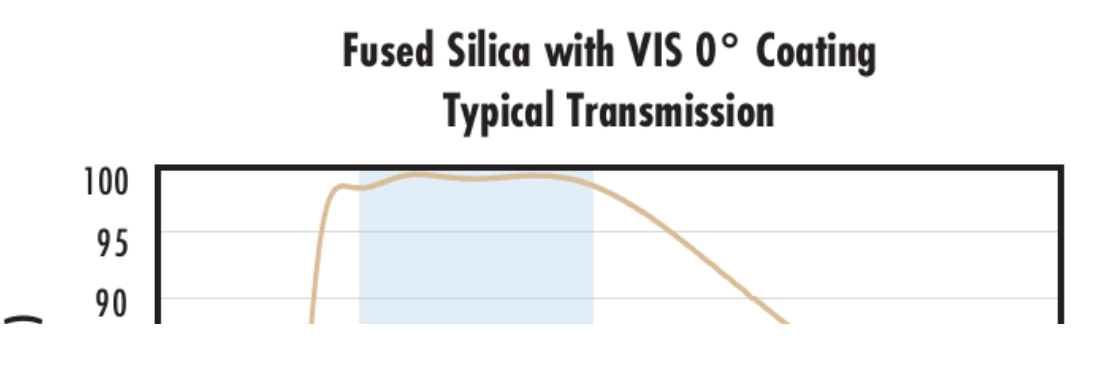
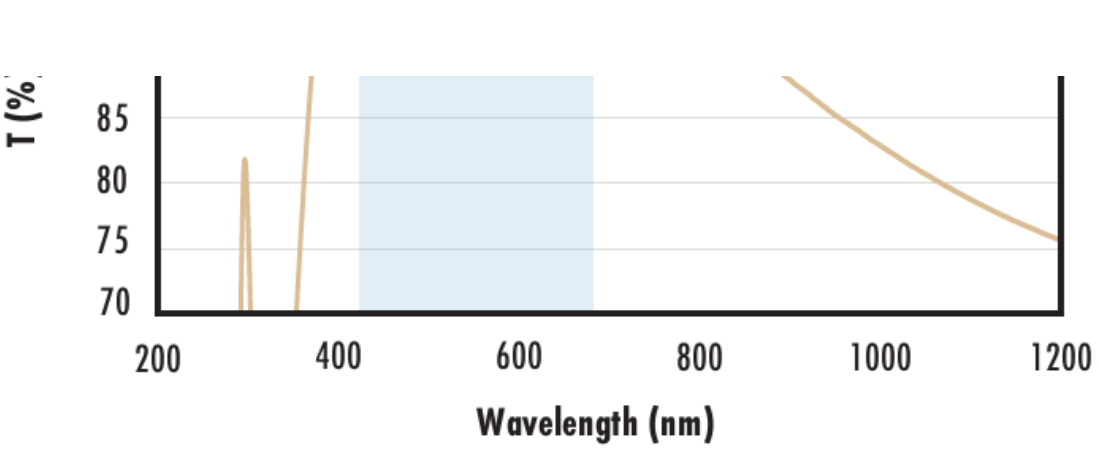



Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh 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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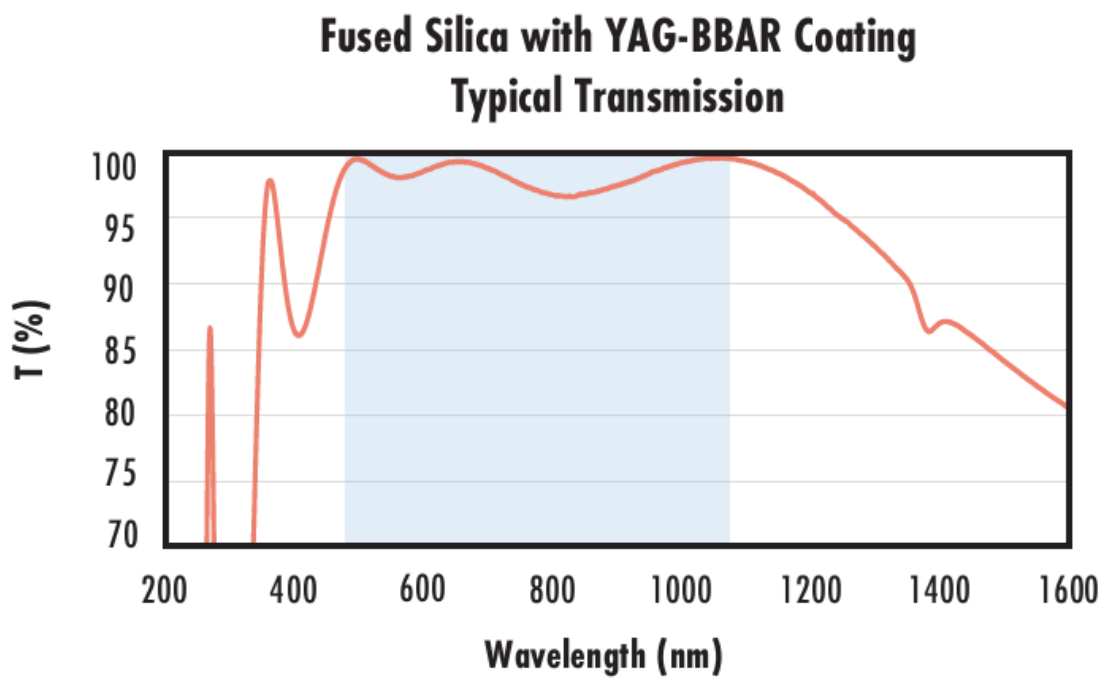


Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

$R_{abs} \leq 0.25\%$ @ 532nm
$R_{abs} \leq 0.25\%$ @ 1064nm
$R_{avg} \leq 1.0\%$ @ 500 - 1100nm

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

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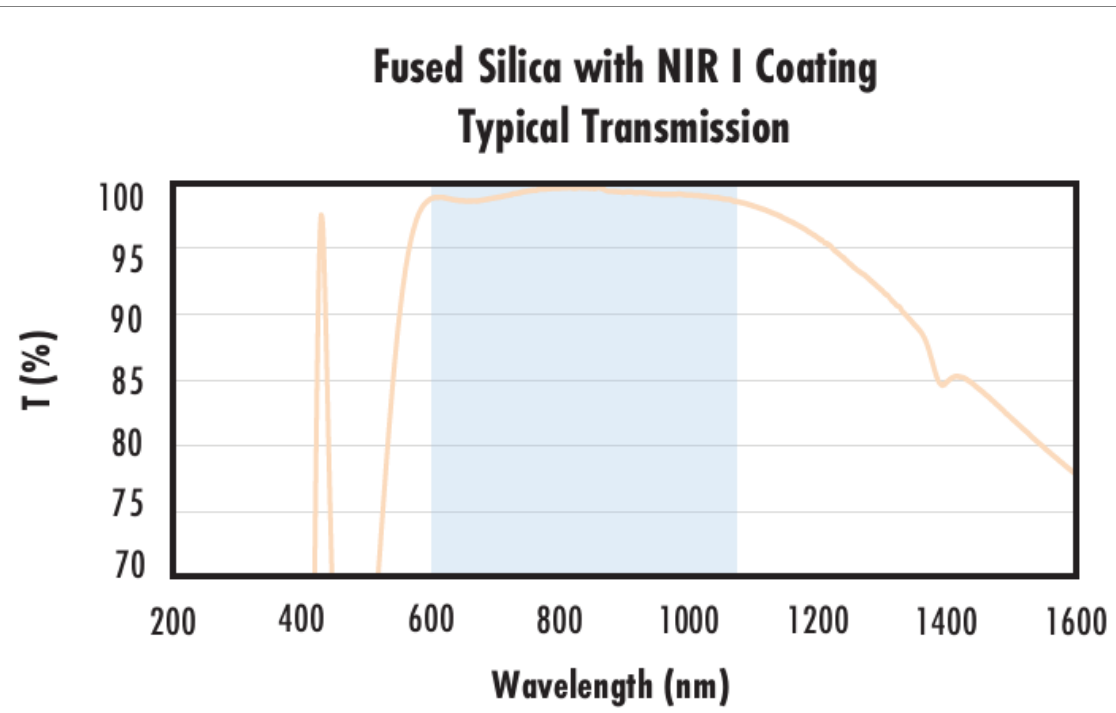


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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

$R_{avg} \leq 0.5\%$ @ 600 - 1050nm

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

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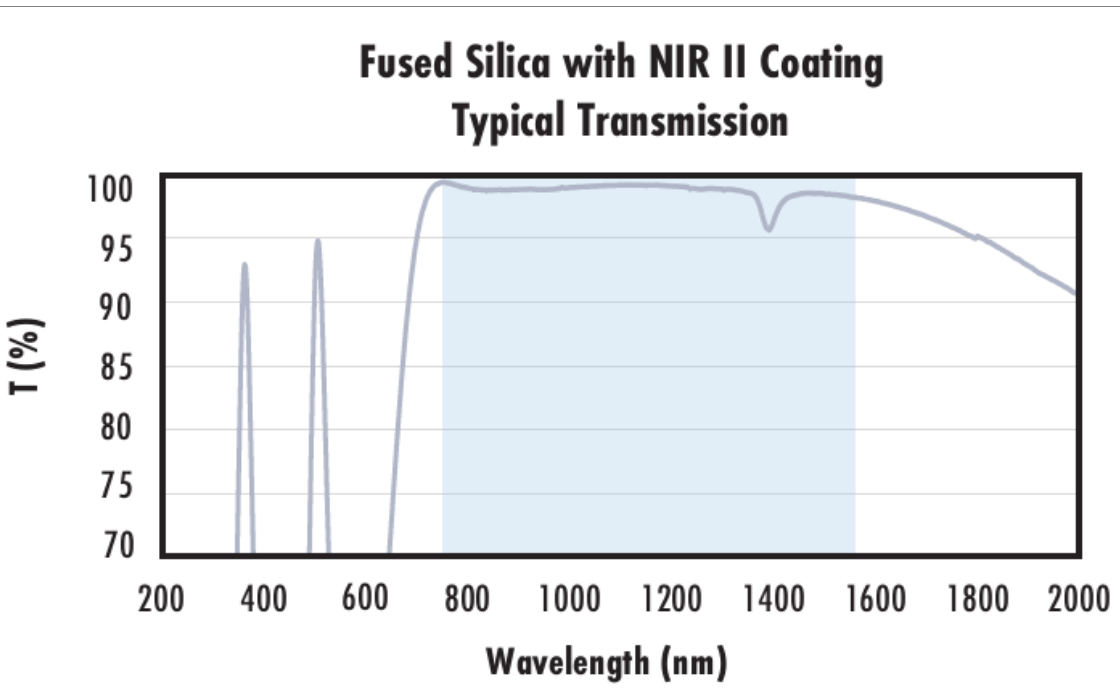


Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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

$R_{abs} \leq 1.5\%$ @ 750 - 800nm
$R_{abs} \leq 1.0\%$ @ 800 - 1550nm
$R_{avg} \leq 0.7\%$ @ 750 - 1550nm

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

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## Coating Curves

## Compatible Mounts

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