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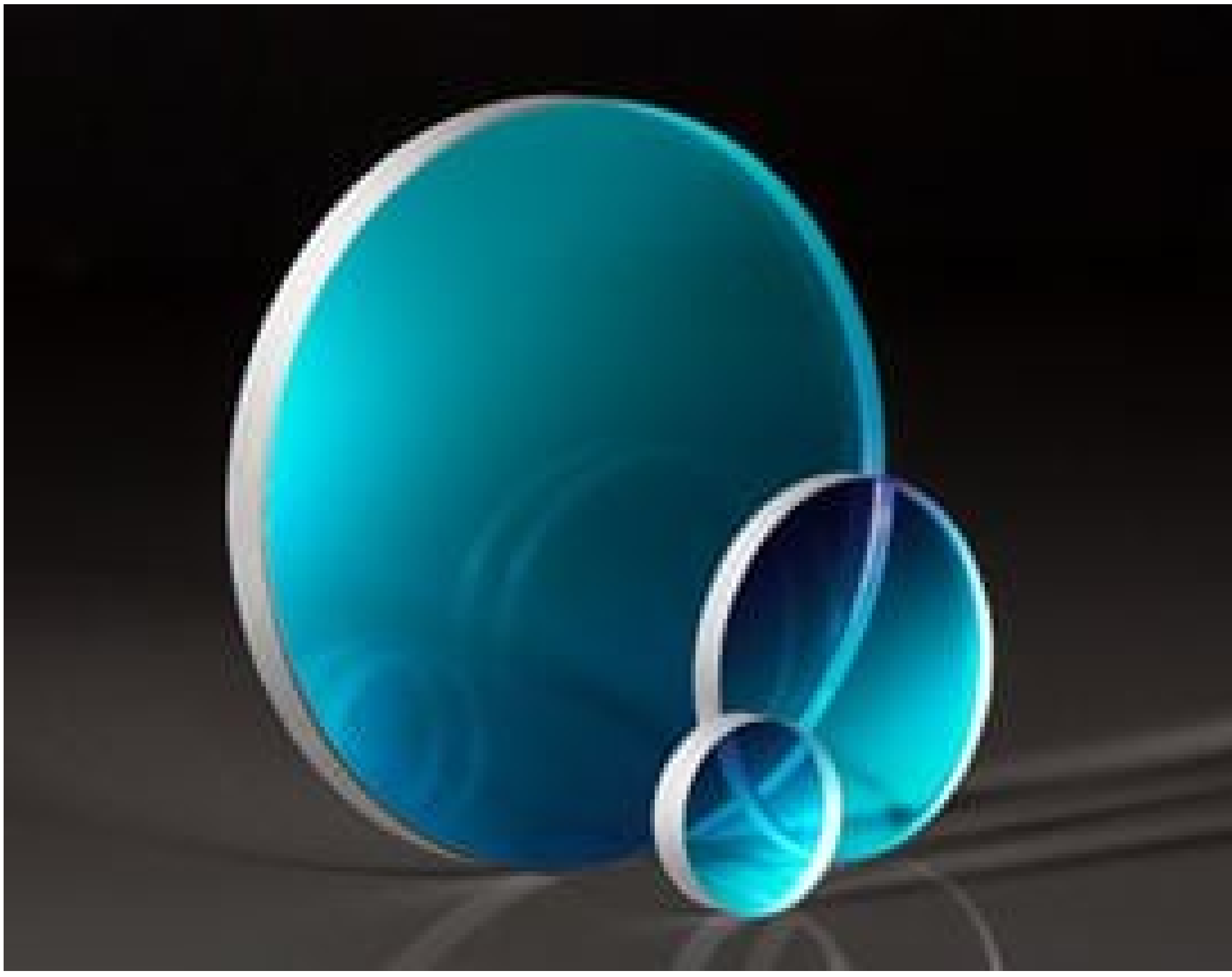
TECHSPEC® 50mm Dia., VIS-NIR Coated, 30' Wedge, Fused Silica Wedged Window



TECHSPEC® Fused Silica Wedged Windows

Stock **#17-668** **2 In Stock**

- 1 + **A$481**.60

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Volume Pricing	
Qty 1-5	**A$481.60** each
Qty 6-25	**A$384.00** each
Qty 26-49	**A$360.00** each
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Product Downloads

General

Type:

Wedged Window

Physical & Mechanical Properties

Clear Aperture CA (mm):

45.00

Diameter (mm):

50.00 +0.0/-0.10

Thickness (mm):
3.00 ±0.20

Edges:
Fine Ground

Young's Modulus (GPa):
73

Wedge Angle (arcmin):
30' ±10'

Optical Properties

Coating:
VIS-NIR (400-1000nm)

Coating Specification:
R_{abs} ≤0.25% @ 880nm
R_{avg} ≤1.25% @ 400 - 870nm
R_{avg} ≤1.25% @ 890 - 1000nm

Index of Refraction (n_d):
1.458

Substrate:
Fused Silica (Corning 7980)

Surface Flatness (P-V):
λ/10 over 25mm Aperture

Surface Quality:
20-10

Wavelength Range (nm):
400 - 1000

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

Material Properties

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

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 235:
Compliant

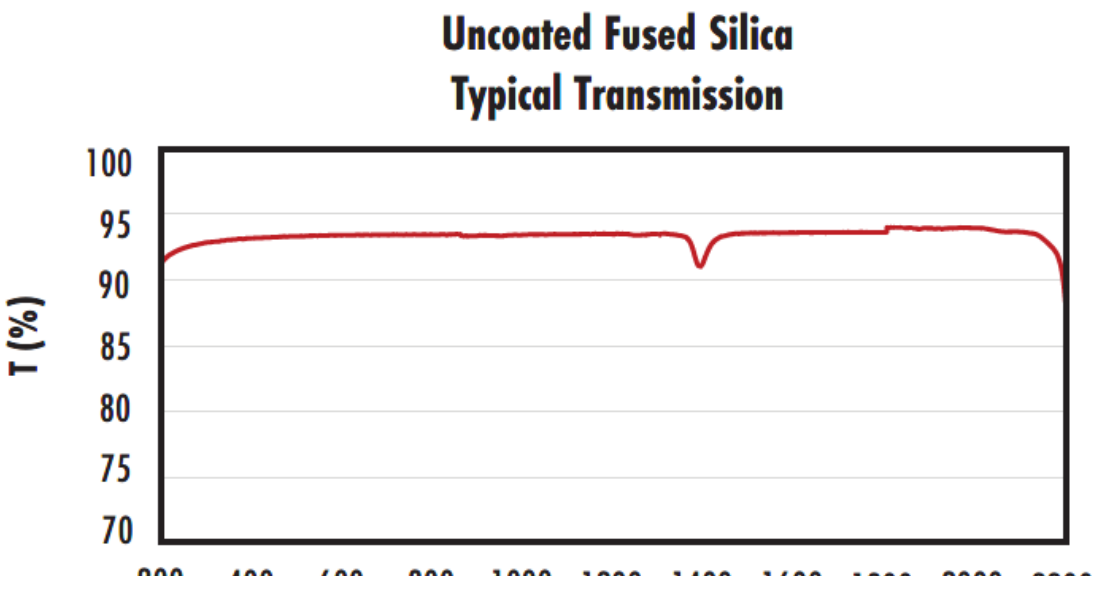
Product Details

- UV Fused Silica Substrates with a 30 Arcminute Wedge
- λ/10 Surface Flatness and 20-10 Surface Quality
- Prevent Laser Instability When Used in Laser Cavities
- N-BK7 Wedged Windows and Fused Silica Flat Windows Also Available

TECHSPEC® Fused Silica Wedged Windows are manufactured from UV grade fused silica and feature a 30 arcminute wedge. The wedge of these windows eliminates Etalon effects by preventing back surface reflections from traveling along the same optical path as the transmitted beam. This protects against laser instability, mode-hopping, and power spikes when used in laser cavities and beam interference effects when used externally. TECHSPEC® Fused Silica Wedged Windows are ideal for use in UV or high power laser applications due to their high UV transmittance and insensitivity to temperature variations. These windows can also be used as beam pick-off optics or beam samplers to monitor laser beam properties such as beam power over time.

Technical Information

FUSED SILICA



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

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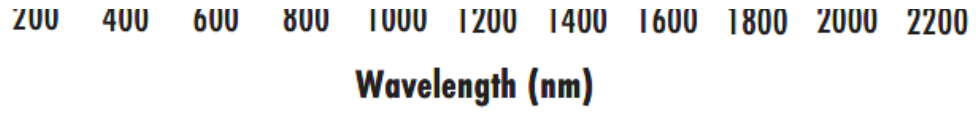

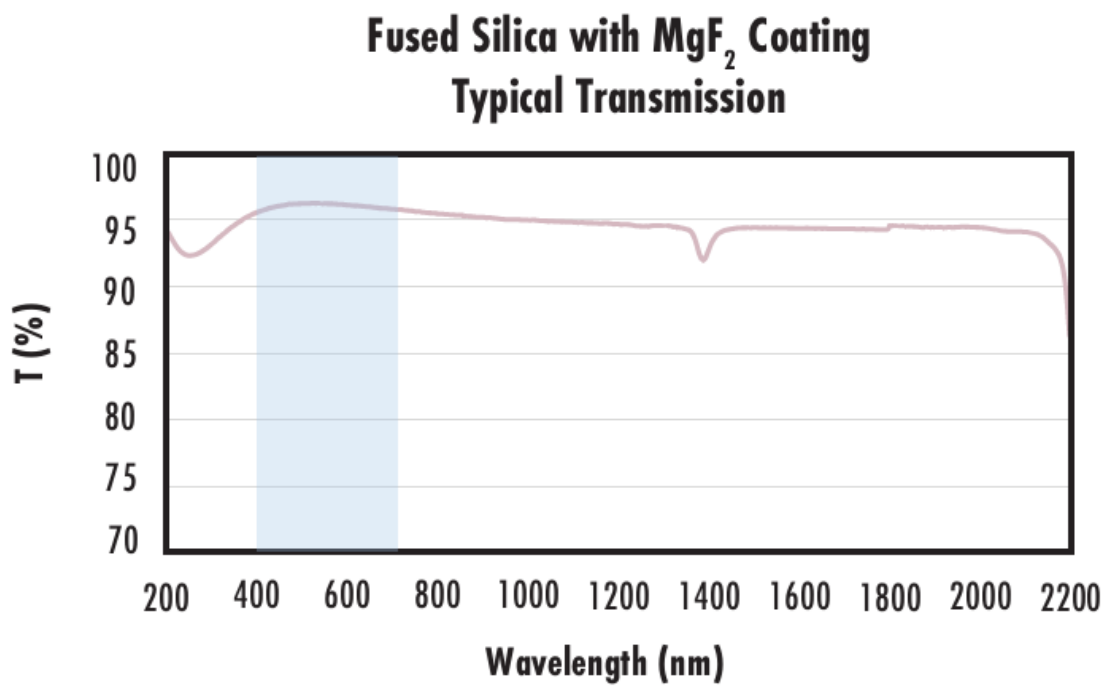

Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

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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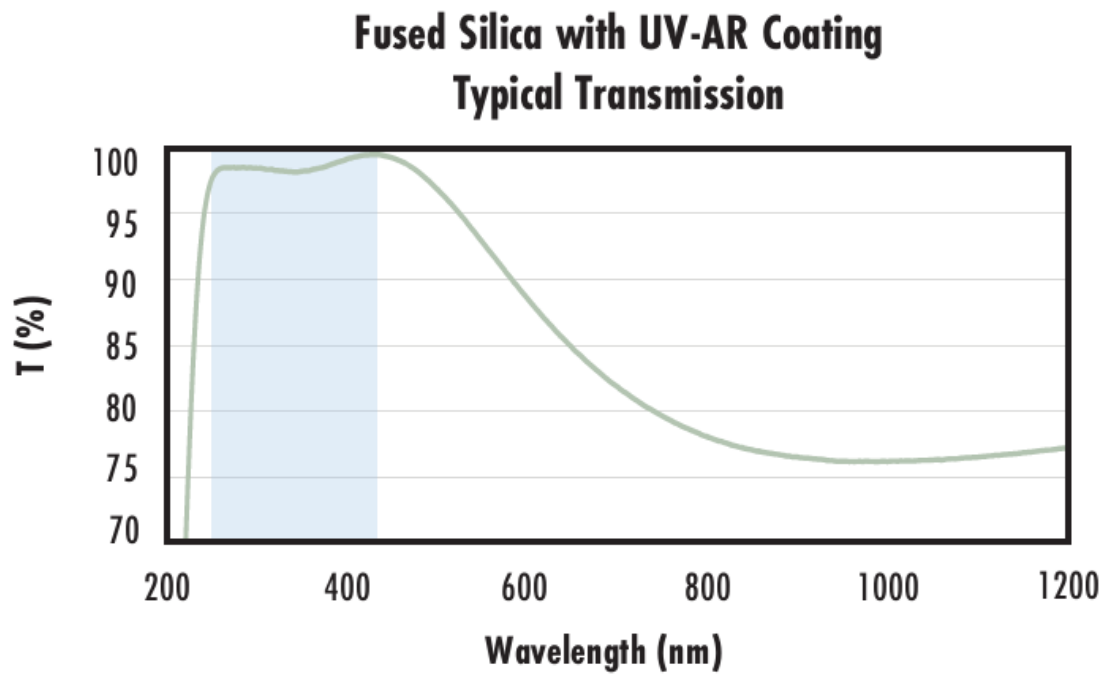

Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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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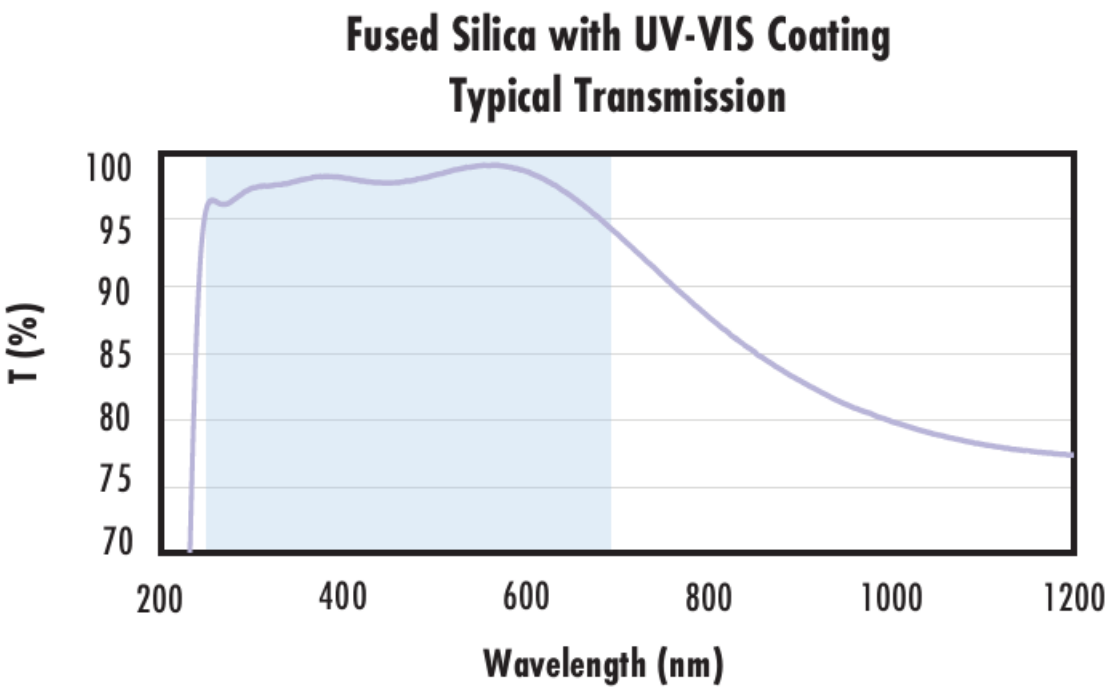

Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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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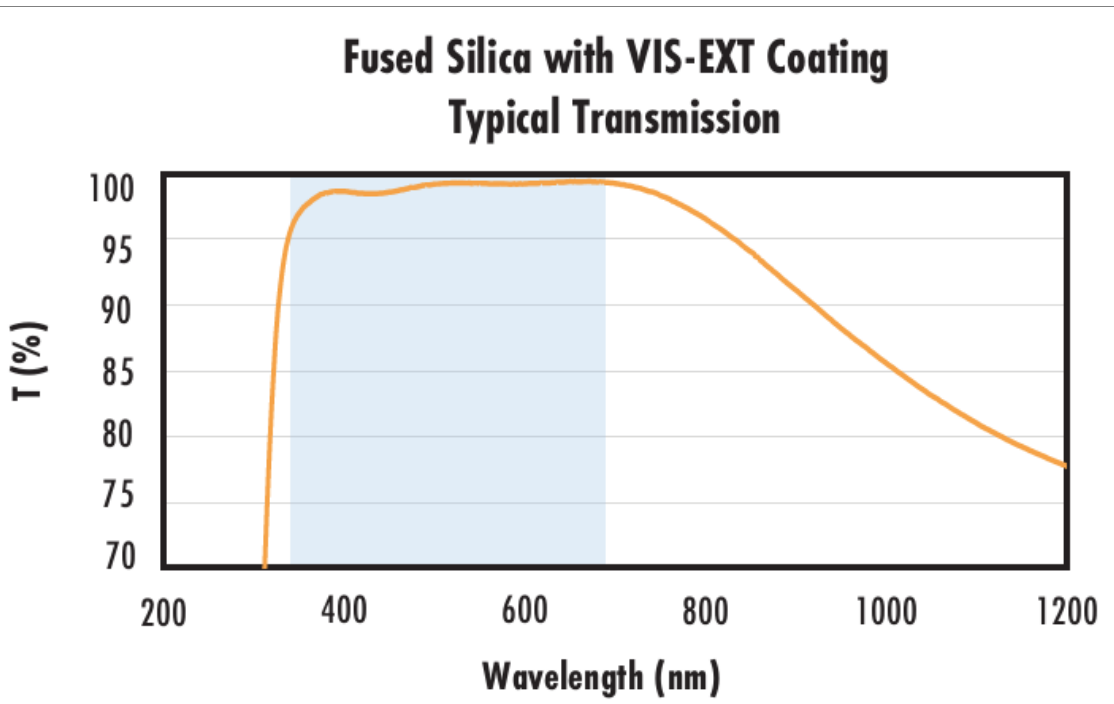

Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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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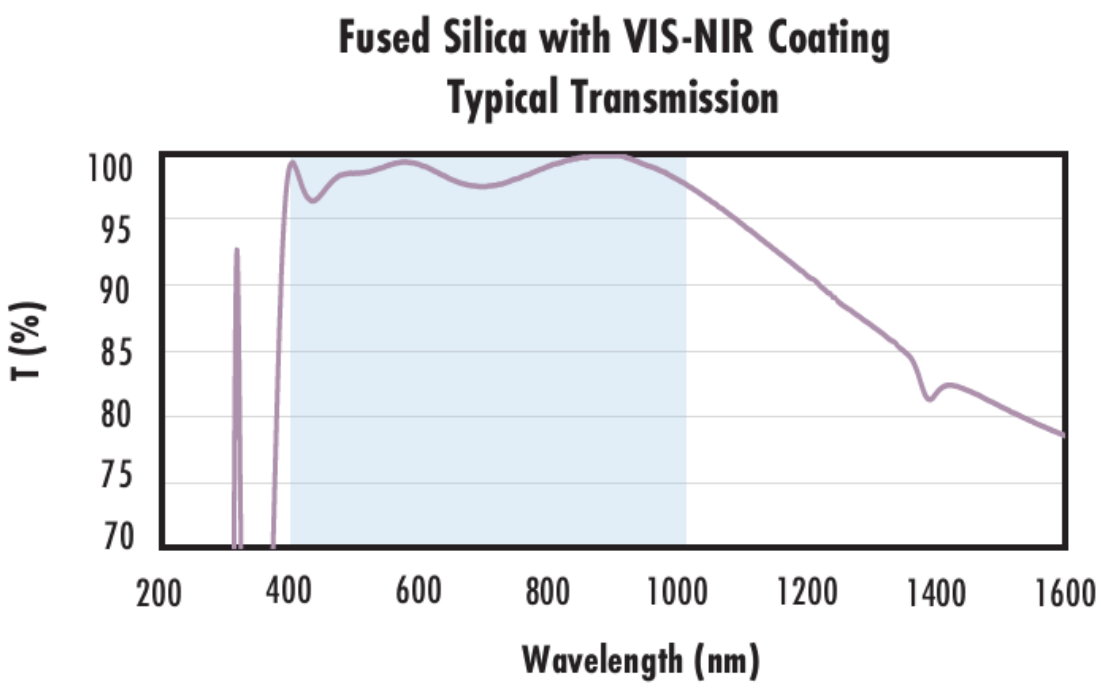

Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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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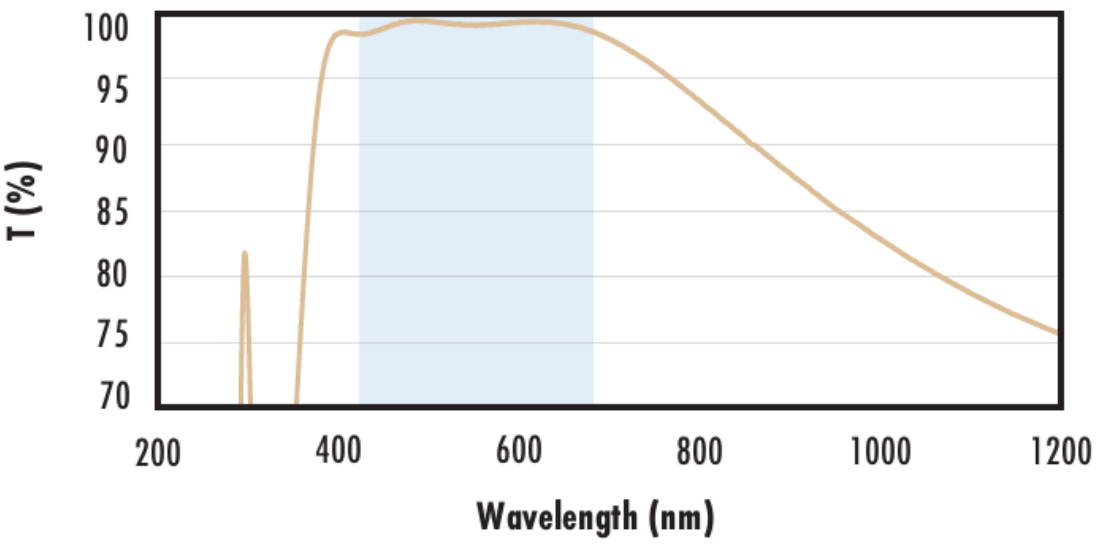

Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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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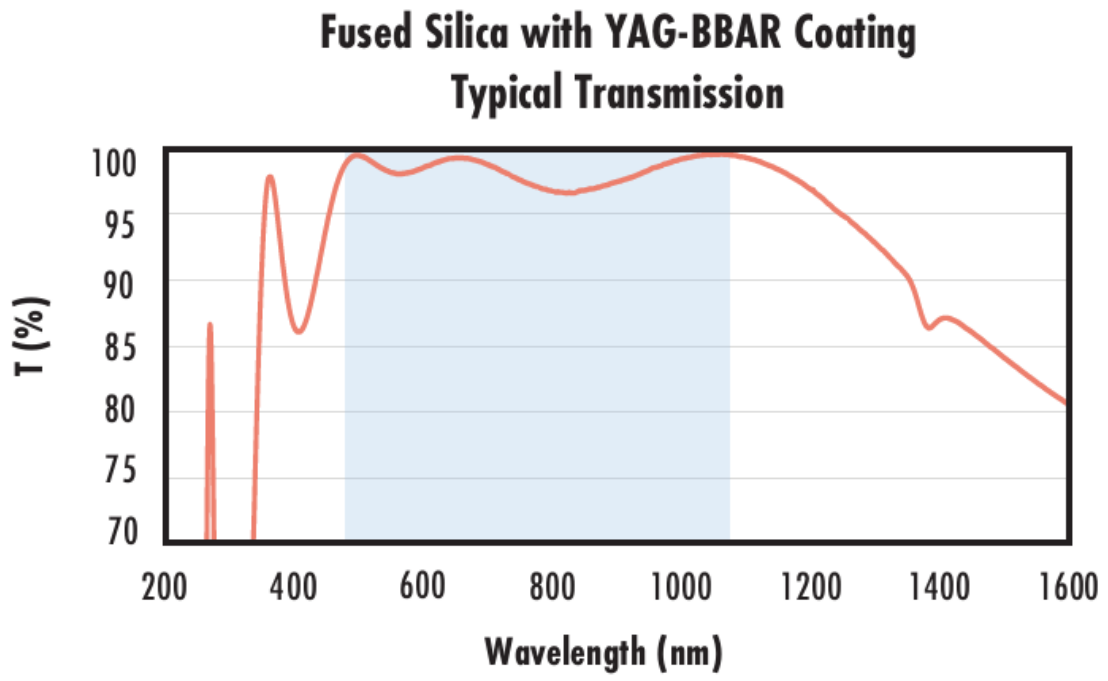

Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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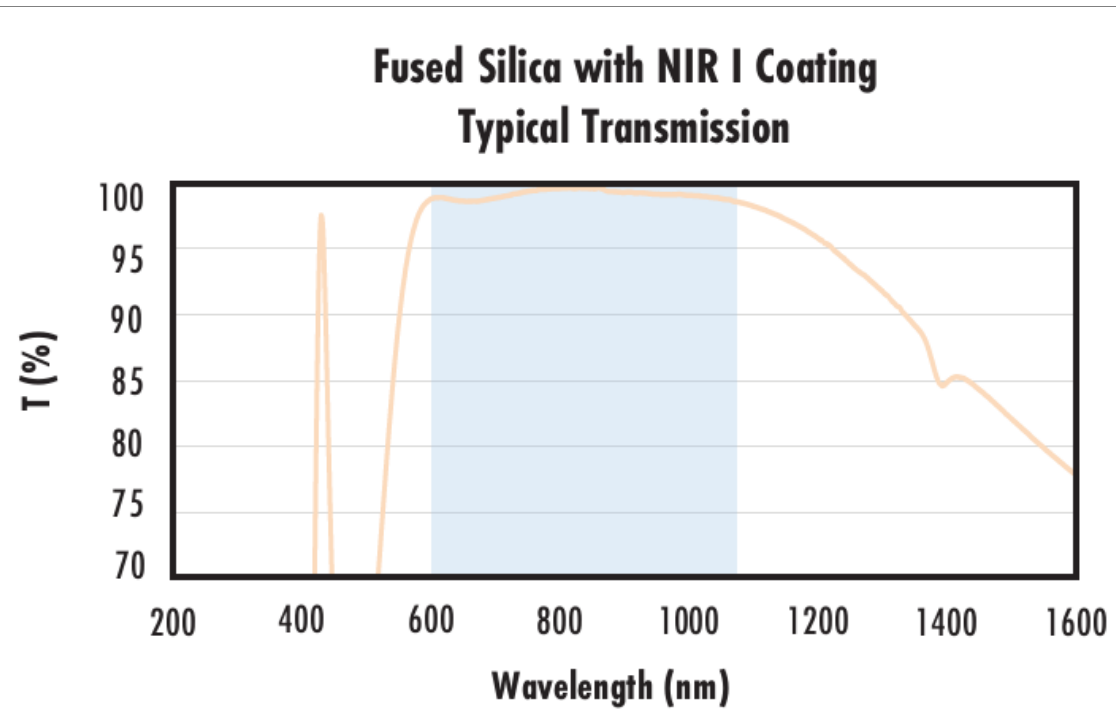

Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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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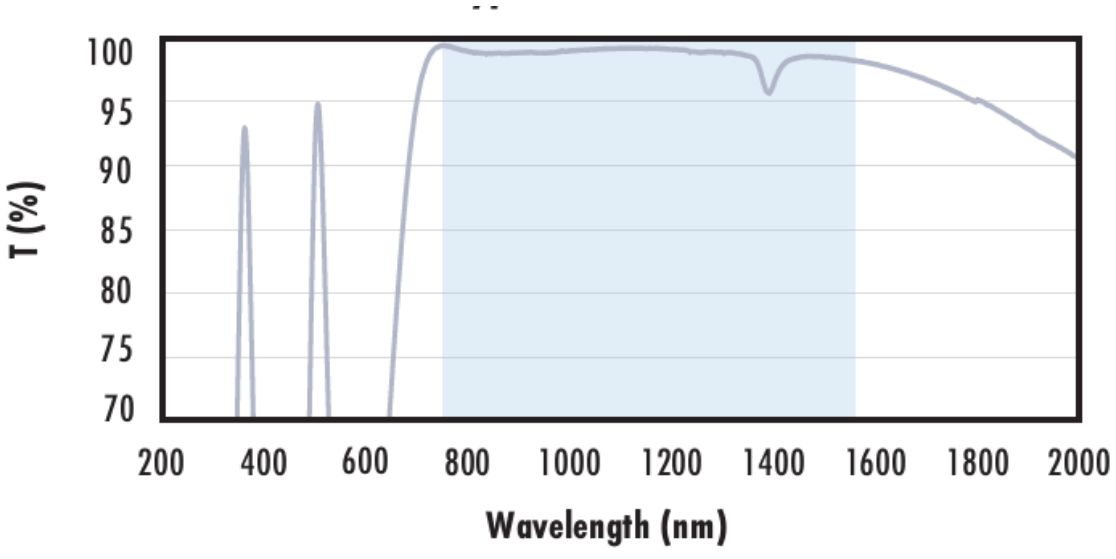

Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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

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