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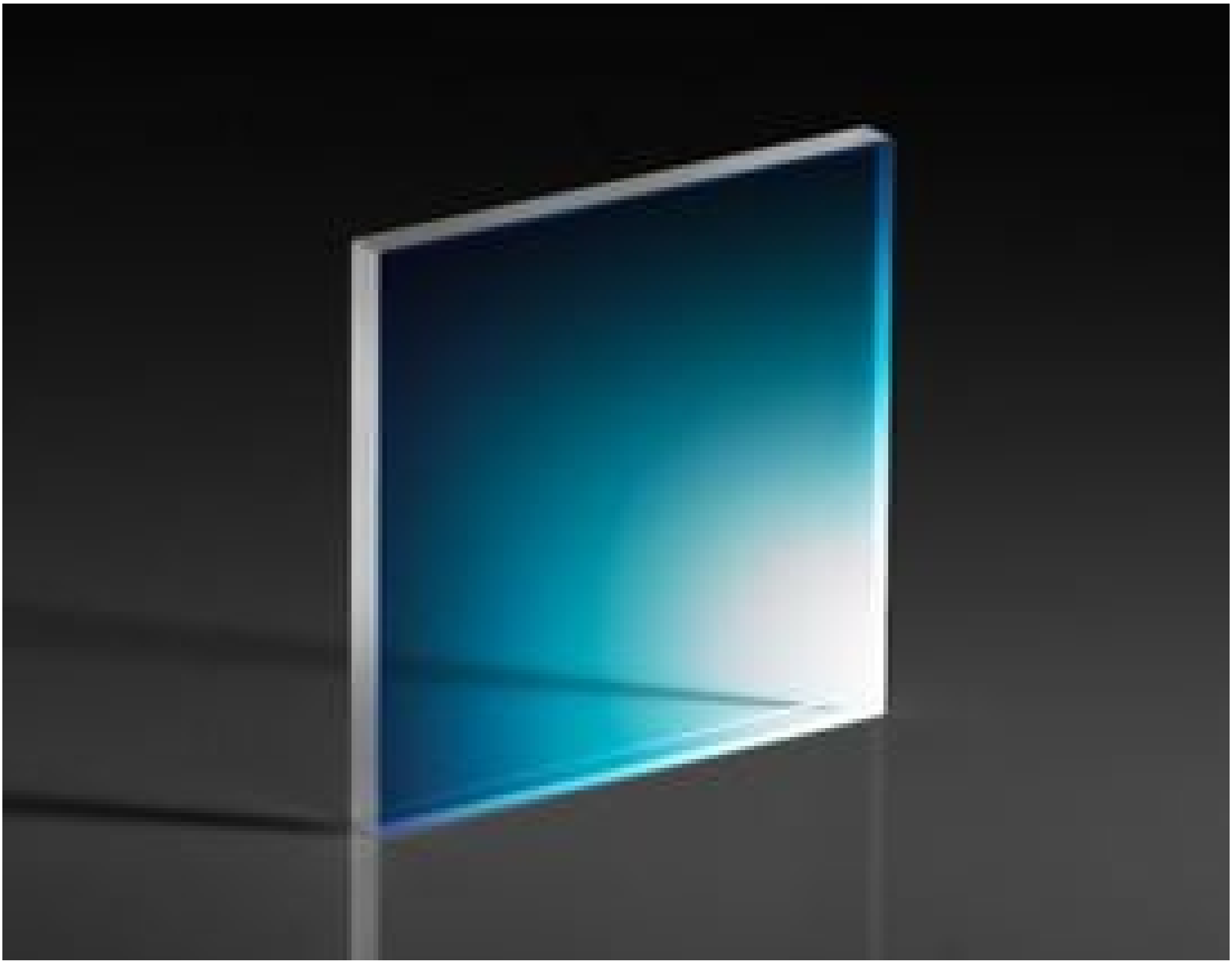
TECHSPEC® 50mm Sq., 5mm Thick, UV-AR Coated λ/10 Fused Silica Window



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- 1 + **₹20,098**

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General

Type:
Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):
45.00 x 45.00

Dimensions (mm):
50.00 x 50.00 +0.00/-0.20

Thickness (mm):
5.00 ±0.10

Bevel:
Protective as needed

Clear Aperture (%):
90

Edges:
Fine Ground

Parallelism (arcsec):
<5

Poisson's Ratio:
0.16

Young's Modulus (GPa):
73

Knoop Hardness (kg/mm^2):
522.00

Optical Properties

Coating:
UV-AR (250-425nm)

Substrate:
Fused Silica Corning 7980

Index of Refraction (n_d):
1.458

Surface Quality:
20-10

Transmitted Wavefront, P-V:
λ/10

Abbe Number (v_d):
67.8

Coating Specification:
R_{abs} ≤1.0% @ 250 - 425nm
R_{avg} ≤0.75% @ 250 - 425nm
R_{avg} ≤0.5% @ 370 - 420nm

Wavelength Range (nm):
250 - 450

Damage Threshold, Reference:
3 J/cm^2 @ 355nm, 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)

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 235:
Compliant

Country of Origin:
Vietnam

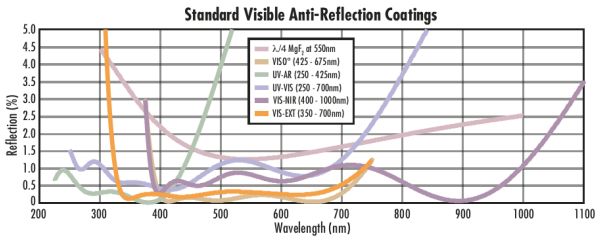
Imported By:
Edmund Optics India Private Limited

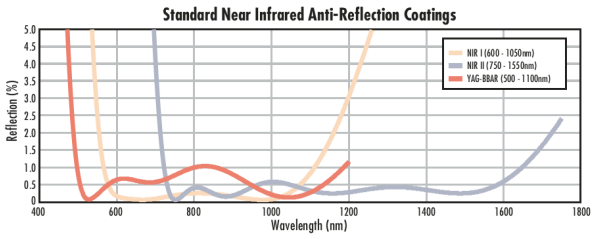
Product Details

- 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

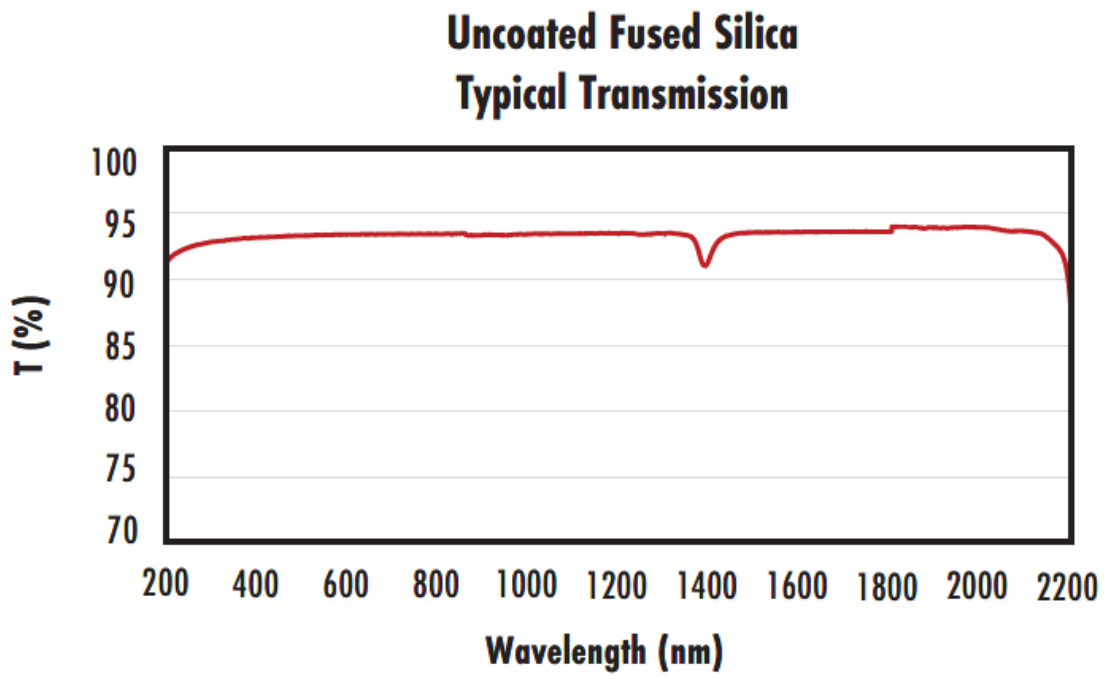
TECHSPEC® λ/10 UV Fused Silica Windows feature laser-grade surface quality and parallelism. In addition, these windows will limit the transmitted wavefront distortion to λ/10. The superior transmission characteristics, excellent thermal properties, and high tolerance manufacturing specifications make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





FUSED SILICA



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

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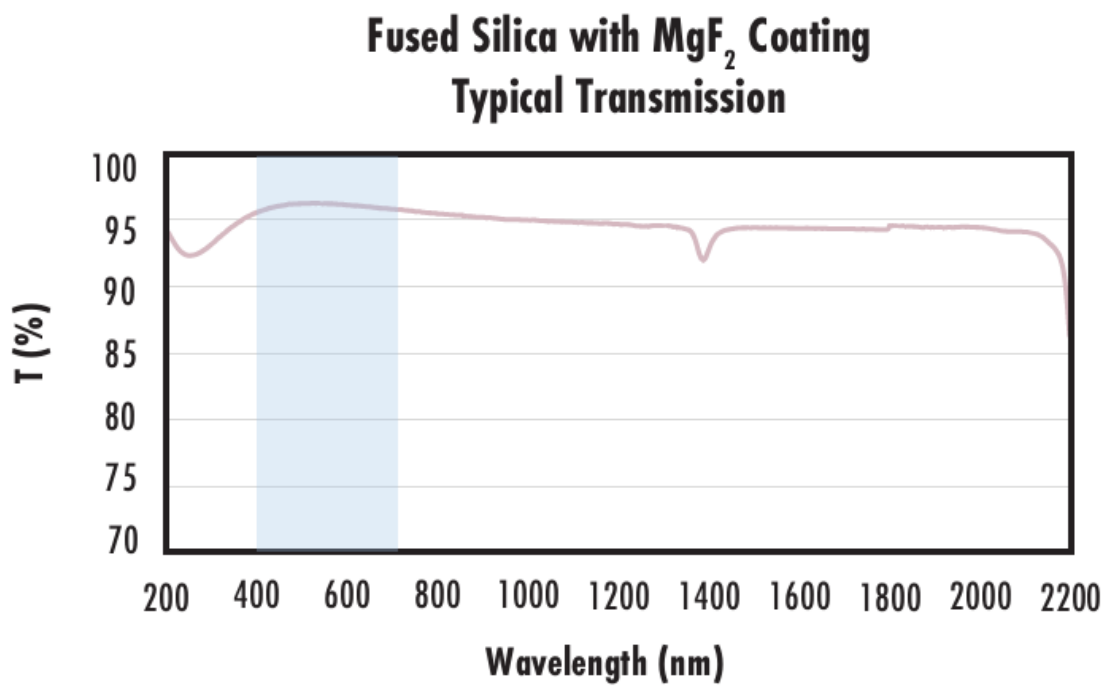

Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

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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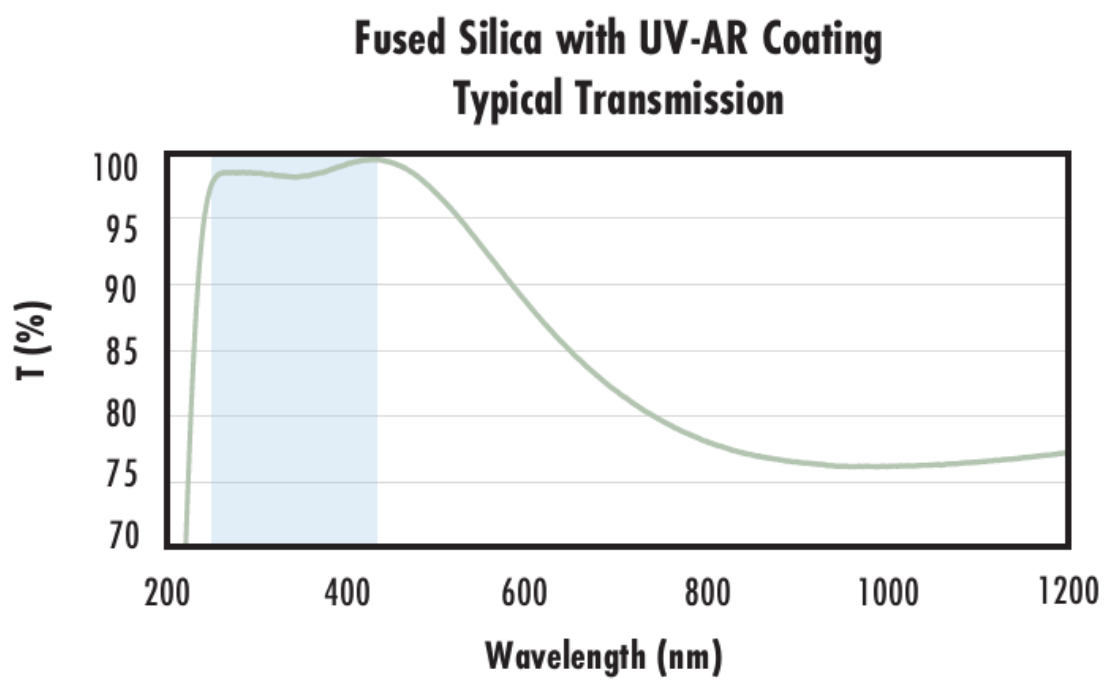

Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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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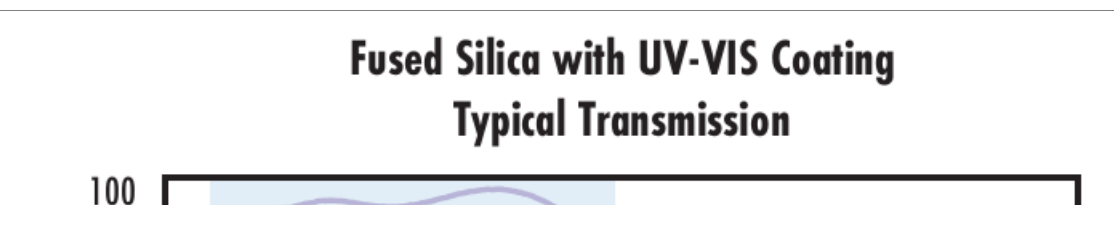

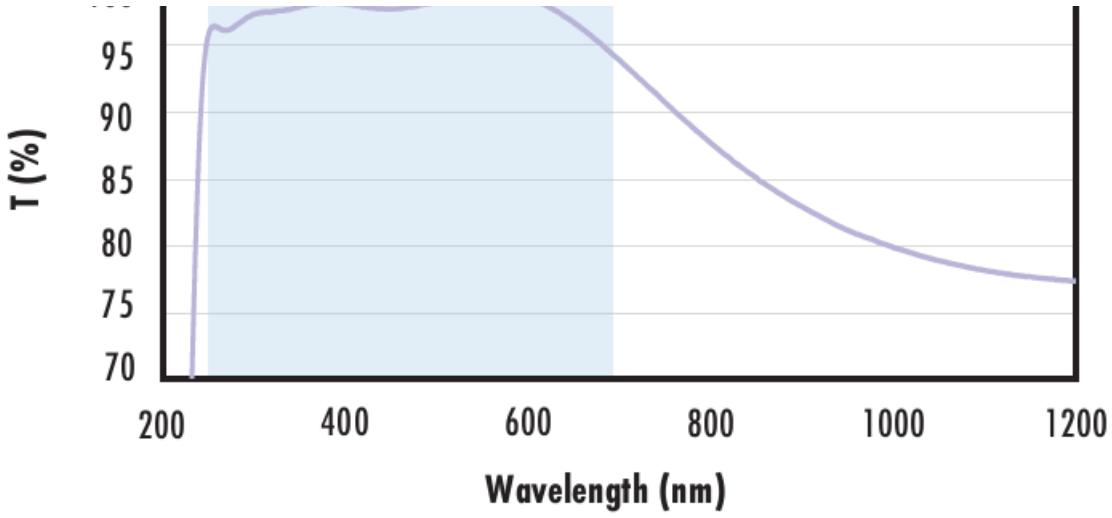

Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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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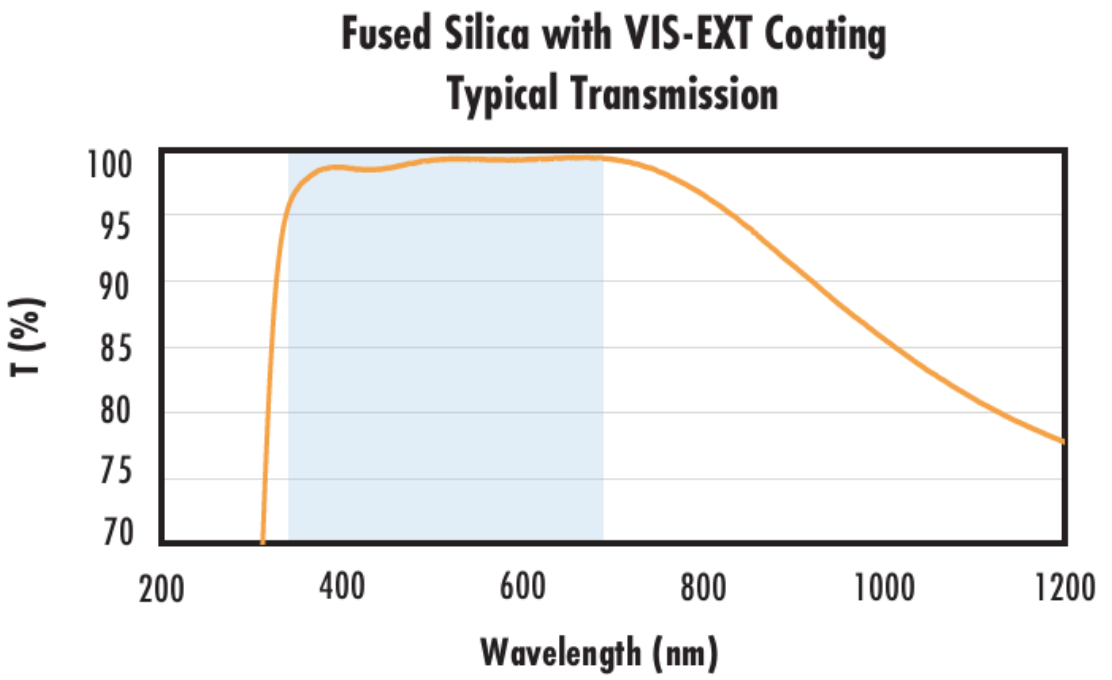

Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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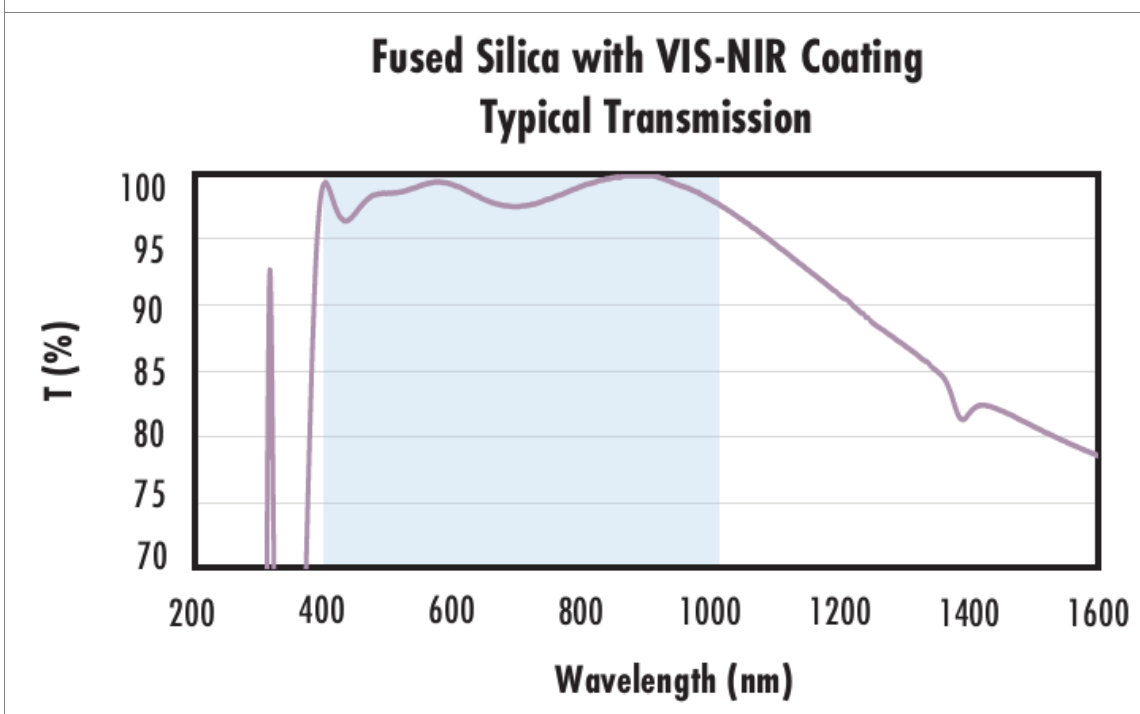

Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

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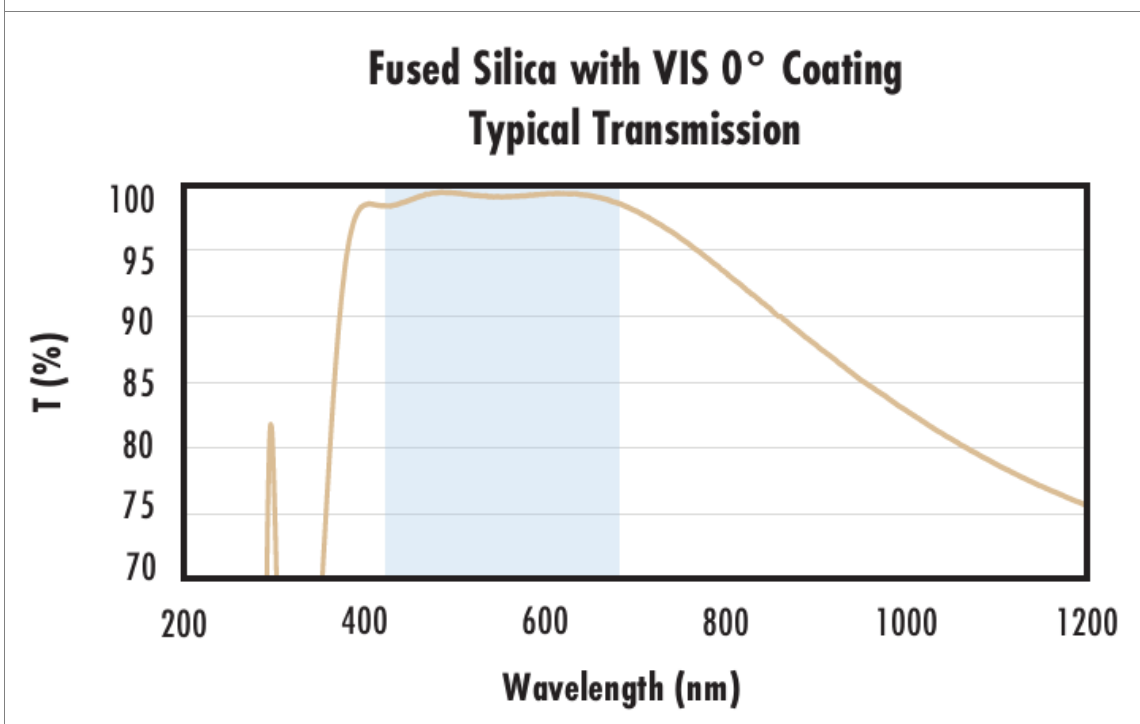

Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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

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

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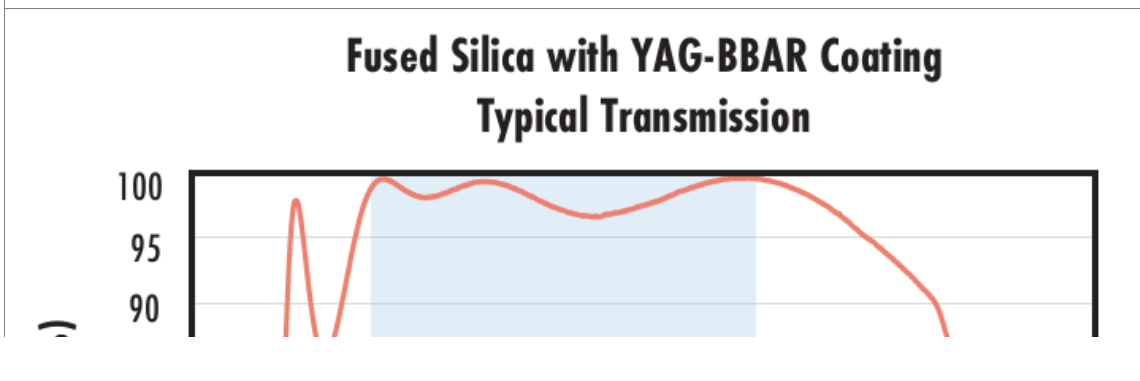
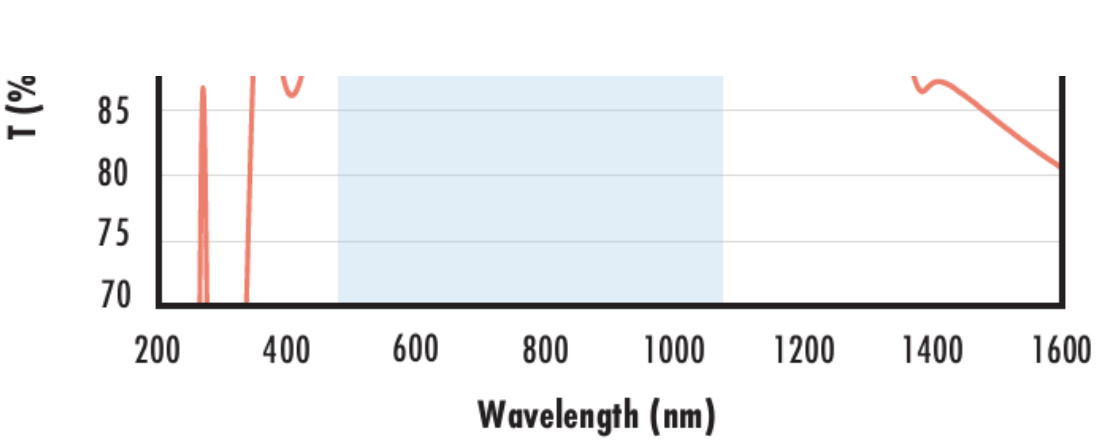


Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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



R_{abs} ≤ 0.25% @ 532nm
R_{abs} ≤ 0.25% @ 1064nm
R_{avg} ≤ 1.0% @ 500 - 1100nm

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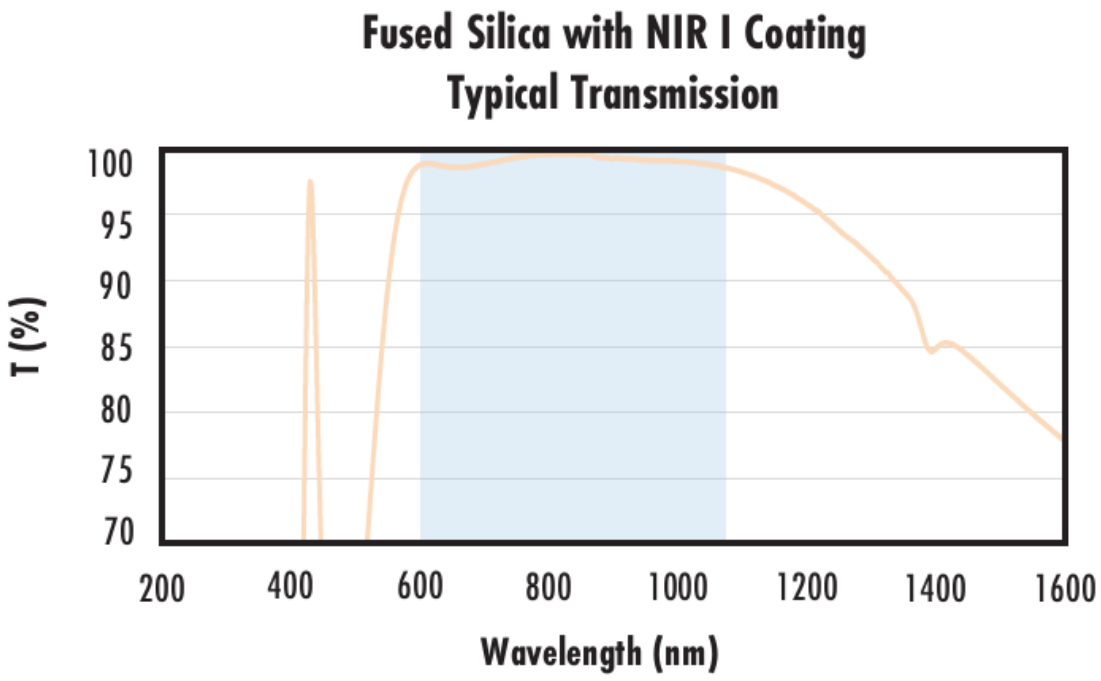

Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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

R_{avg} ≤ 0.5% @ 600 - 1050nm

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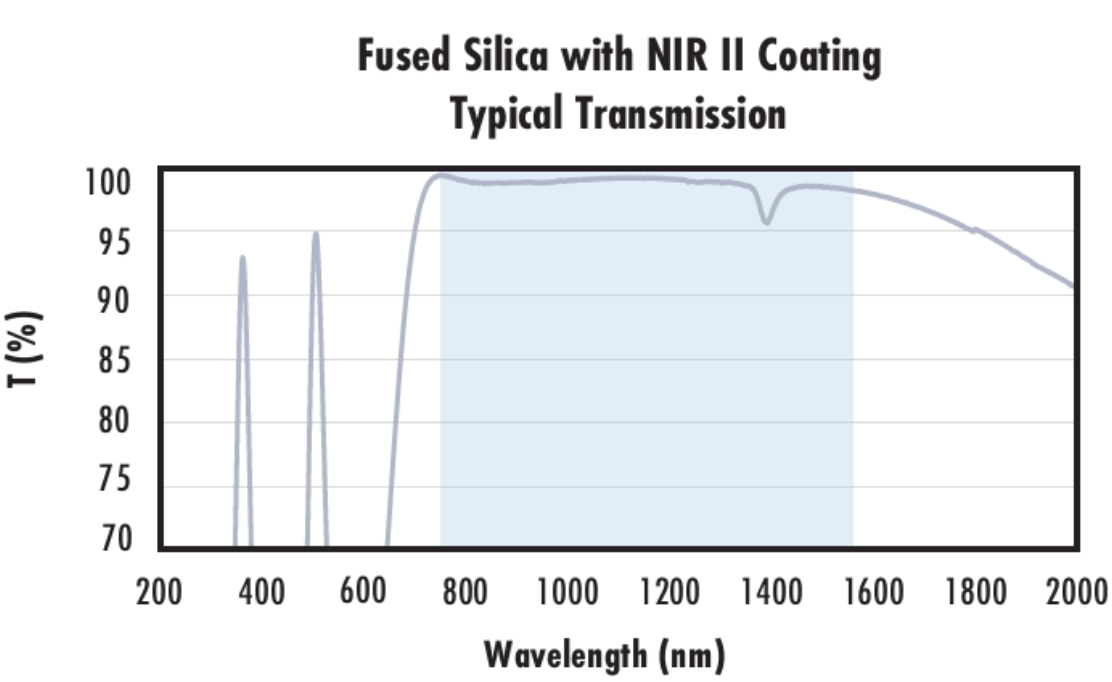

Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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

R_{abs} ≤ 1.5% @ 750 - 800nm
R_{abs} ≤ 1.0% @ 800 - 1550nm
R_{avg} ≤ 0.7% @ 750 - 1550nm

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

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Custom

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- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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