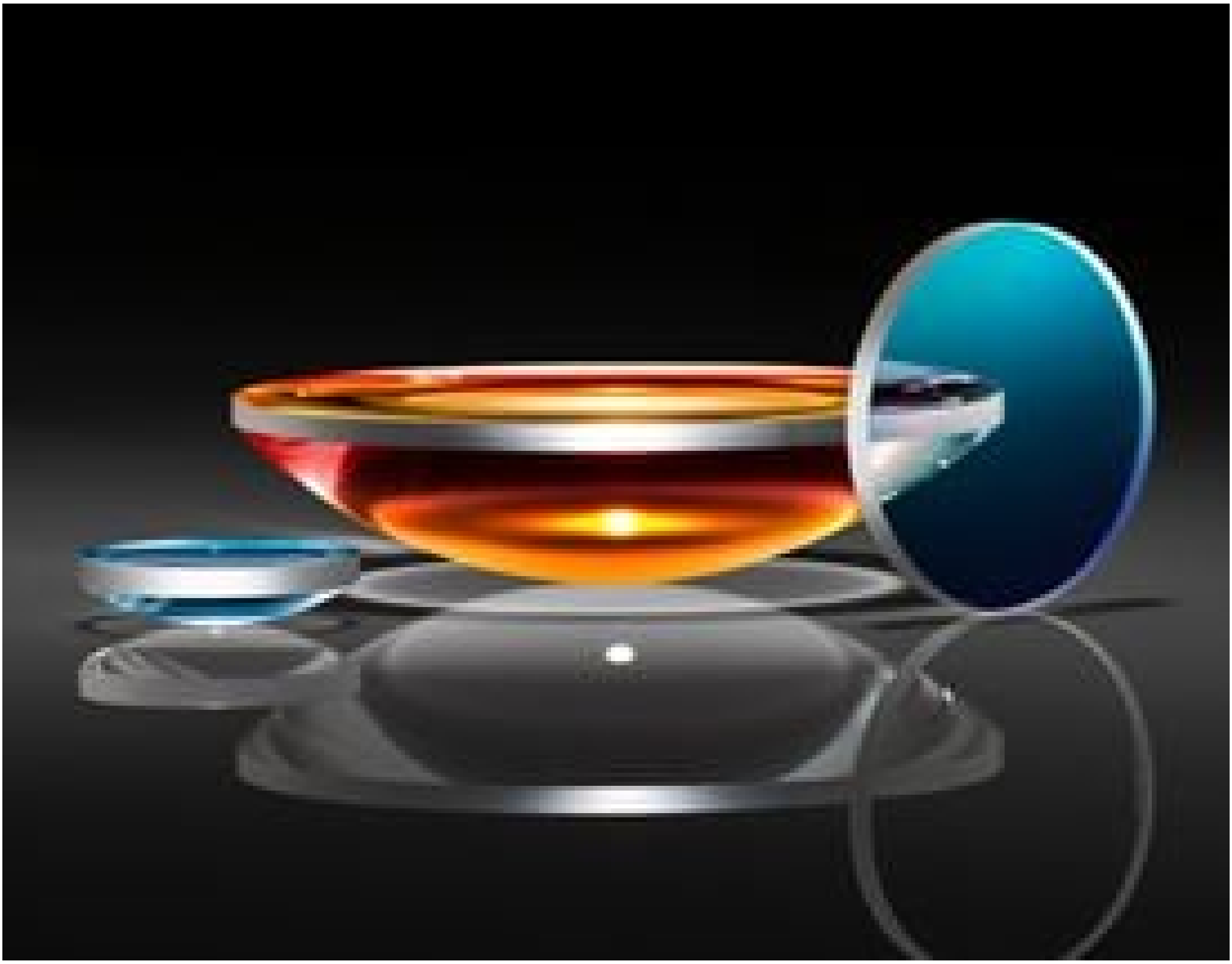
TECHSPEC® 50mm Dia. x 200mm FL, NIR I Coated, Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses

Stock **#18-195** **2 In Stock**

- 1 + **C$466.20**

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Volume Pricing	
Qty 1-5	**C$466.20** each
Qty 6-25	**C$372.40** each
Qty 26-49	**C$348.60** each
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SPECIFICATIONS

General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):
50.00 -0.025

Centering (arcmin):
<1

Center Thickness CT (mm):
7.00 ±0.10

Edge Thickness ET (mm):
3.53

Clear Aperture CA (mm):
49

Bevel:
Protective as needed

Optical Properties

Effective Focal Length EFL (mm):
200.00 @ 587.6nm

Back Focal Length BFL (mm):
195.19

Coating:
NIR I (600-1050nm)

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

Substrate:
Fused Silica (Corning 7980)

Surface Quality:
40-20

Power (P-V) @ 632.8nm:
3 Rings

Irregularity (P-V) @ 632.8nm:
0.5 Rings

Focal Length Tolerance (%):
±1

Radius R_1 (mm):
91.69

f/#:
4

Numerical Aperture NA:
0.13

Wavelength Range (nm):
600 - 1050

Damage Threshold, Reference:
7 J/cm^2 @ 1064nm, 10ns

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 235:
Compliant

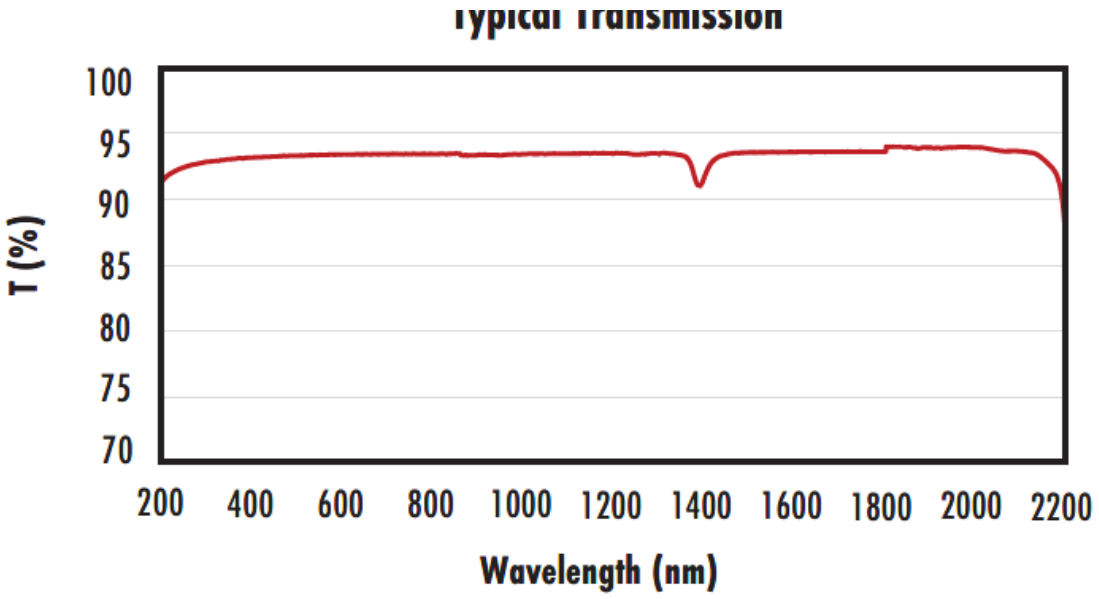
PRODUCT DETAILS

- AR Coated to Provide <0.5% Reflection per Surface for 600 - 1050nm
- Precision Fused Silica Substrate
- Various Coating Options: Uncoated, MgF_2, UV-AR, UV-VIS, VIS-EXT, VIS-NIR, VIS 0°, YAG-BBAR, and NIR II

TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses NIR I Coated feature precision specifications and a variety of coating options on a broadband substrate. Fused Silica is commonly used in applications from the Ultraviolet (UV) through the Near-Infrared (NIR). Its low index of refraction, low coefficient of thermal expansion, and low inclusion content make it ideal for laser applications and harsh environmental conditions. TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses NIR I Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are NIR I coated to increase their coating performance in the 600nm to 1050nm range.

TECHNICAL INFORMATION

FUSED SILICA



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

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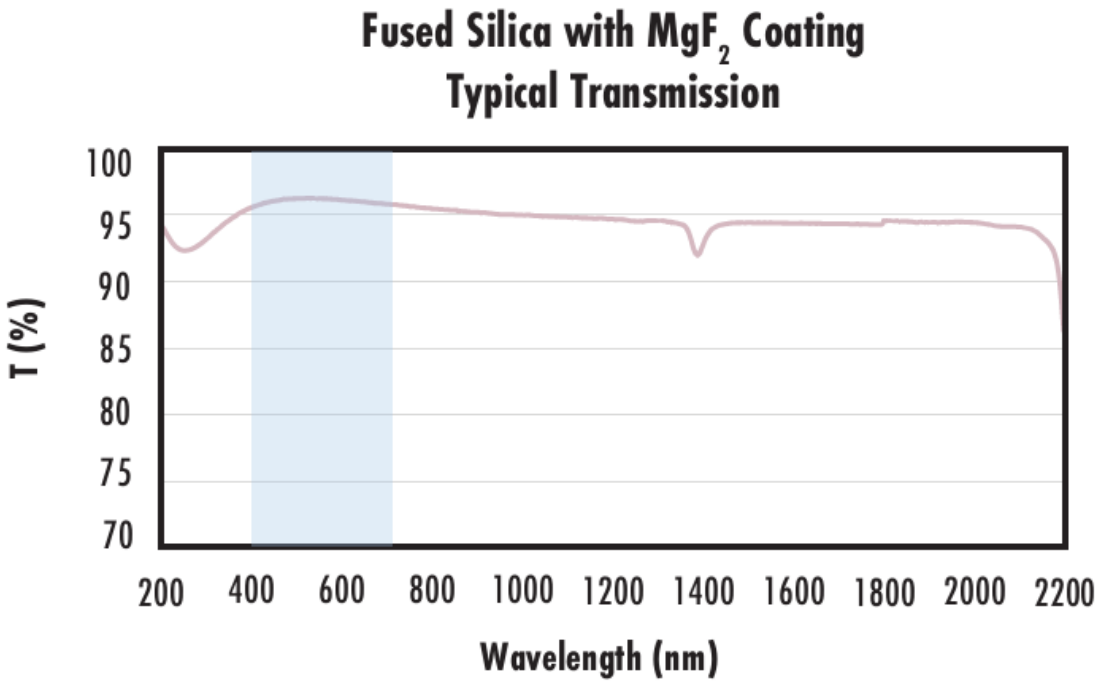

Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

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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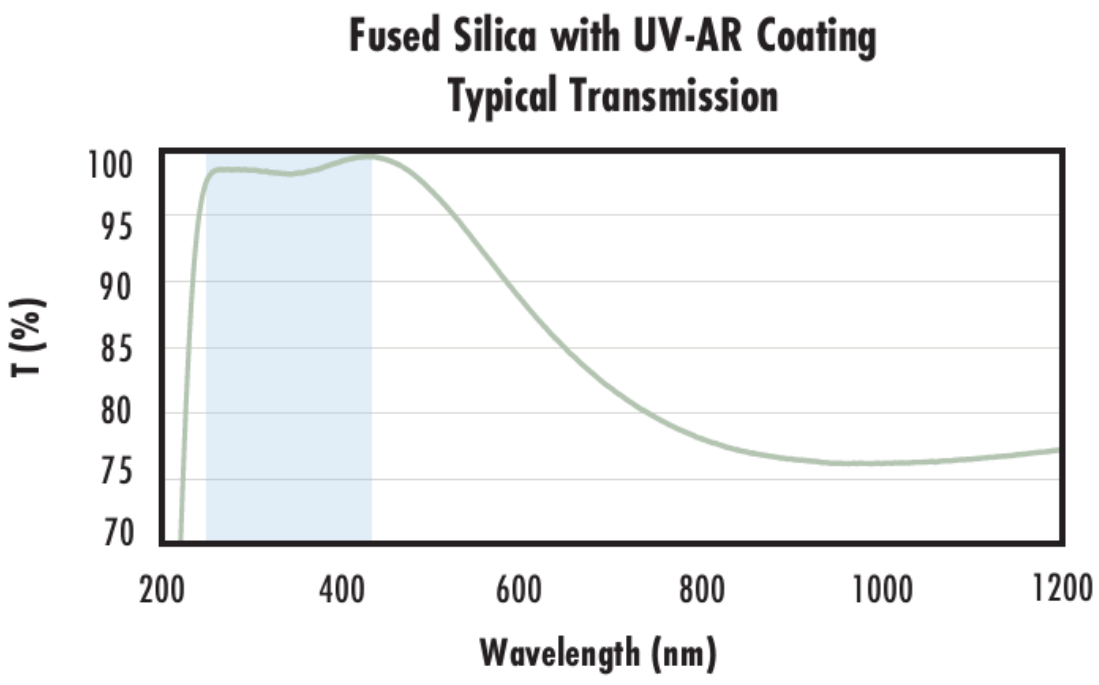

Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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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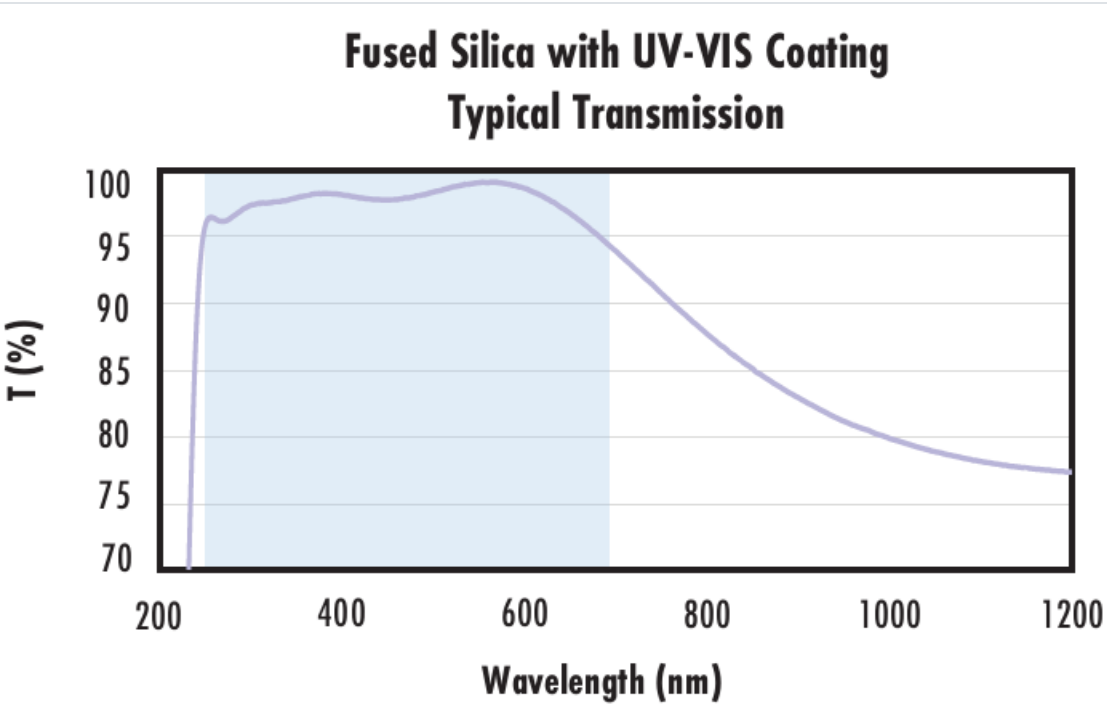

Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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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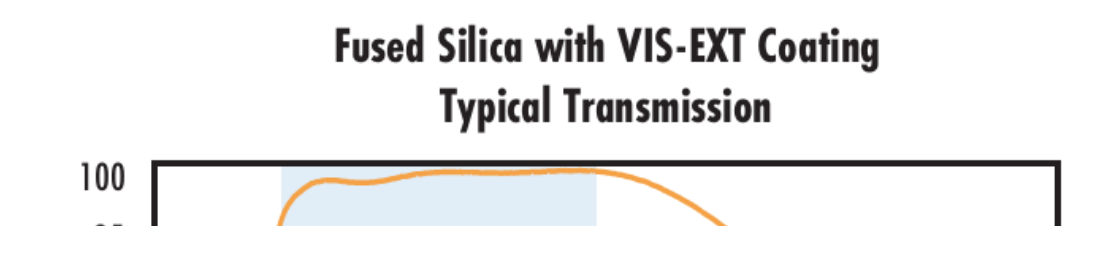

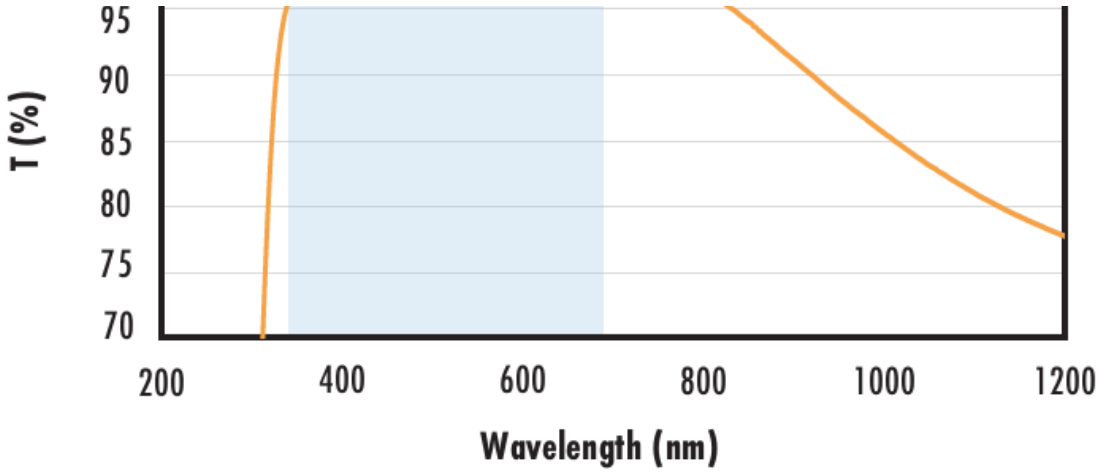

Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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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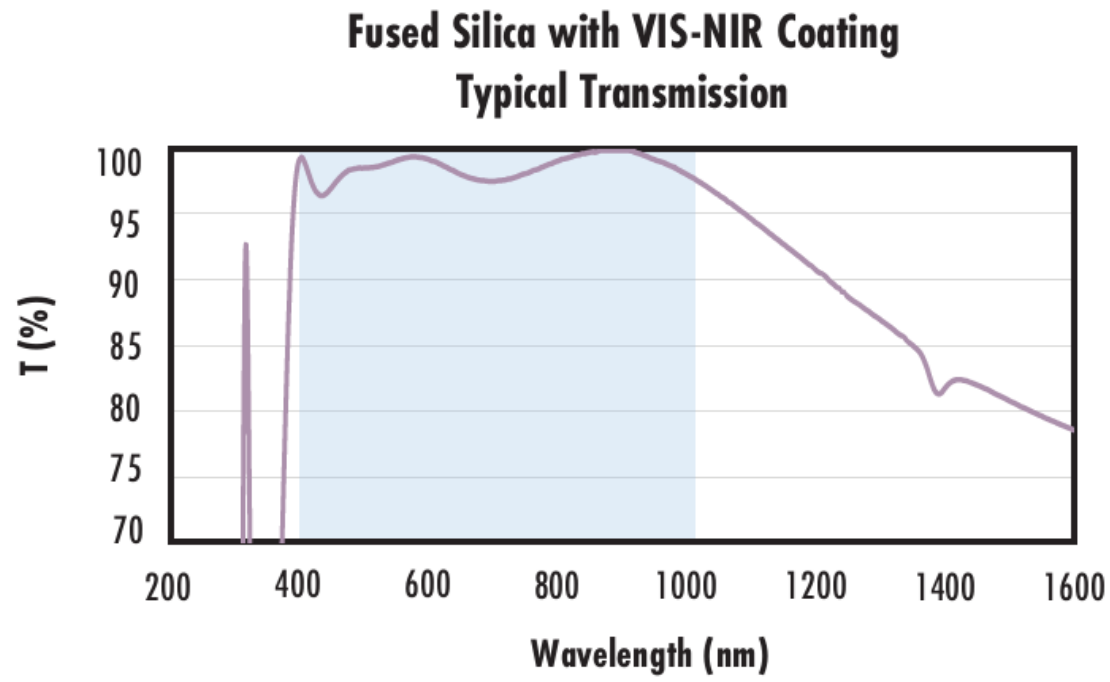

Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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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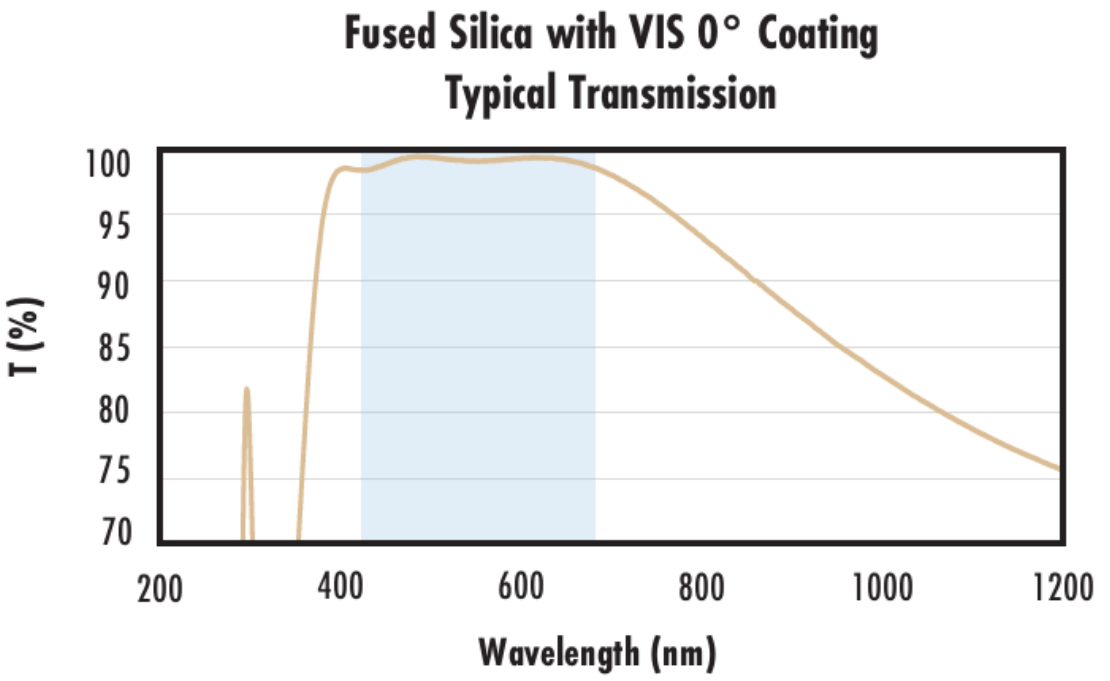

Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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

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

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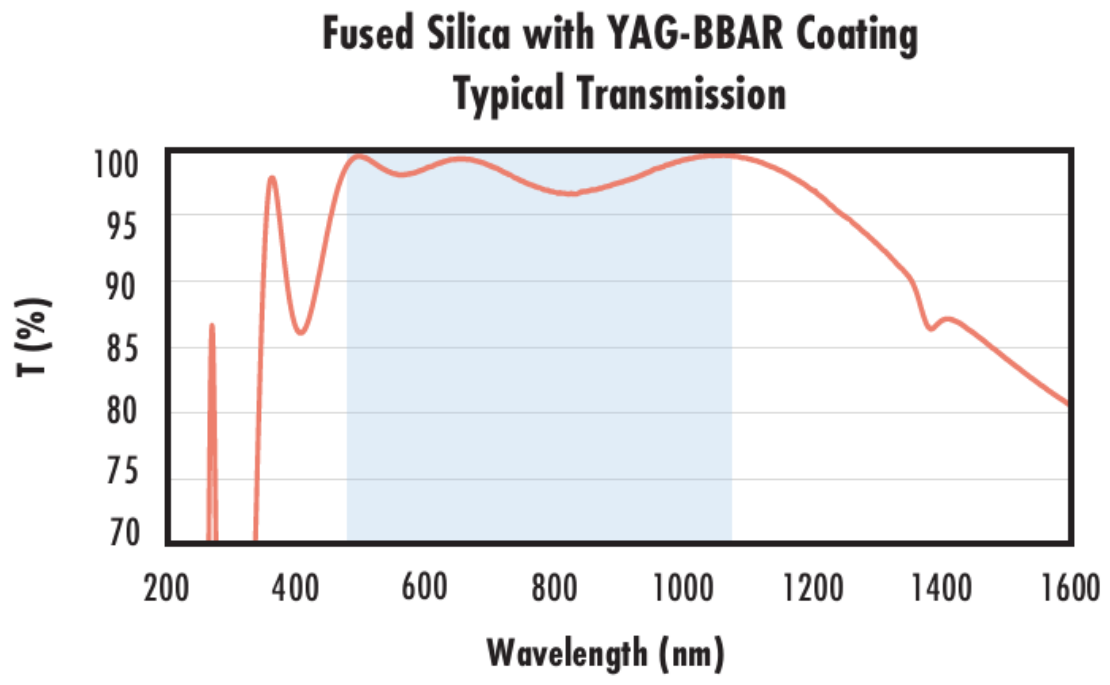

Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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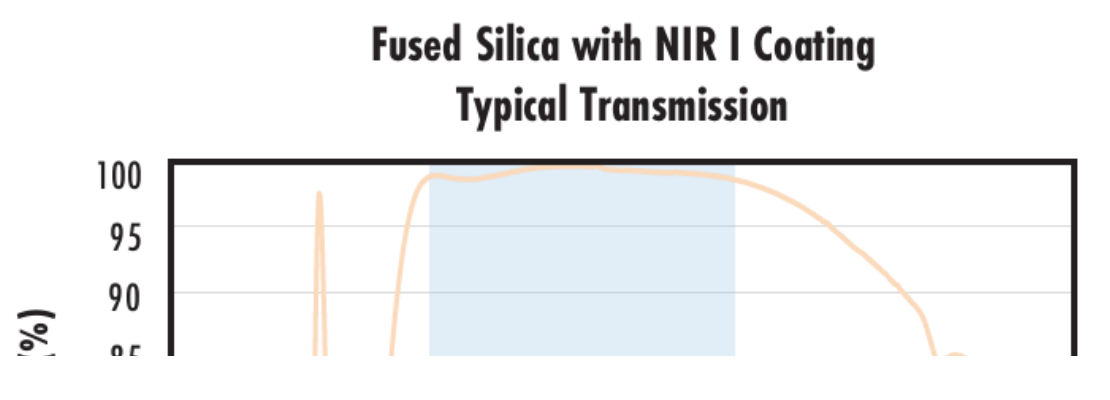
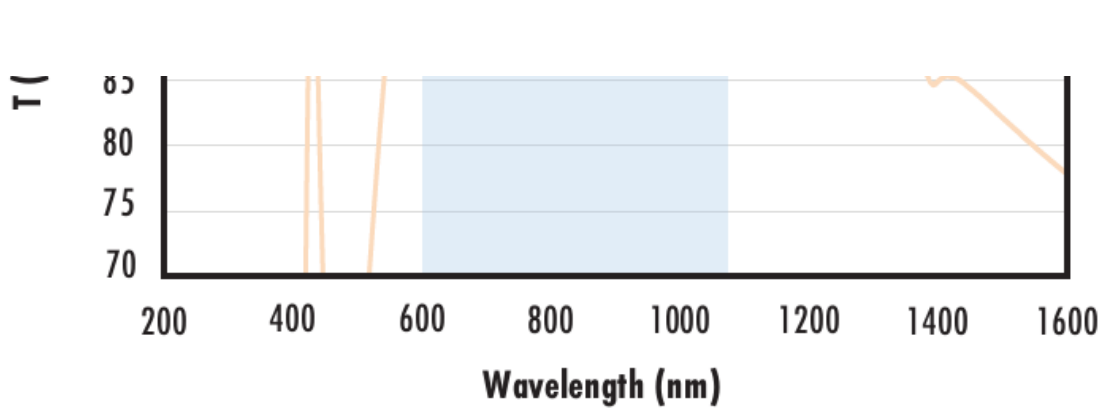


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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

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



R_{avg} ≤ 0.5% @ 800 - 1550nm

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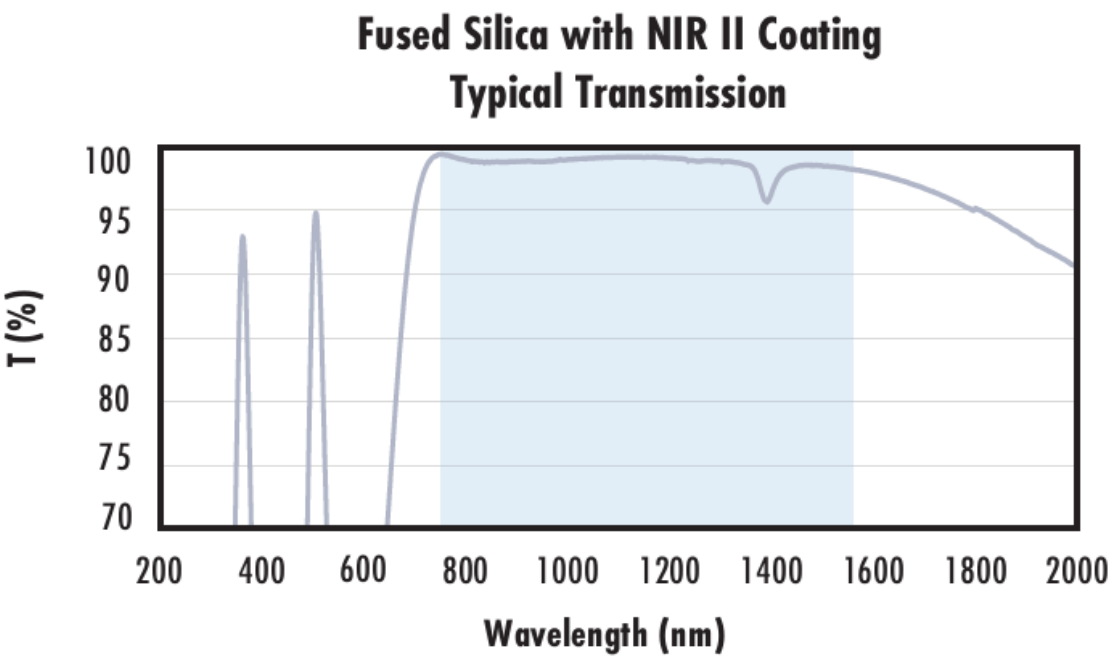

Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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

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

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