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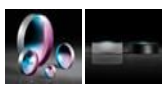
# TECHSPEC® 12.0mm Dia. x -50 FL, Uncoated , UV Plano-Concave Lens

UV Fused Silica Plano-Concave (PCV) Lenses



Stock **#48-049** **20+ In Stock**

Other Coating Options

- 1 + **£105**.60

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| Volume Pricing | |
|---|---|
| Qty 1-5 | **£105.60** each |
| Qty 6-25 | **£84.00** each |
| Qty 26-49 | **£78.80** each |
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Prices shown are exclusive of VAT/local taxes

Product Downloads

## General

**Type:**

Plano-Concave Lens

**Note:**

Max. Flat Annulus is 0.3mm

## Physical & Mechanical Properties

**Diameter (mm):**
12.00 +0.0/-0.025

**Center Thickness CT (mm):**
2.00

**Center Thickness Tolerance (mm):**
±0.05

**Centering (arcmin):**
<1

**Clear Aperture CA (mm):**
11

**Edge Thickness ET (mm):**
2.72

## Optical Properties

**Effective Focal Length EFL (mm):**
-50.00

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

**f/#:**
4.17

**Numerical Aperture NA:**
0.12

**Coating:**
Uncoated

**Wavelength Range (nm):**
200 - 2200

**Back Focal Length BFL (mm):**
-51.37

**Focal Length Specification Wavelength (nm):**
587.6

**Focal Length Tolerance (%):**
±1

**Radius $R_1$ (mm):**
-22.92

**Surface Quality:**
40-20

**Power (P-V) @ 632.8nm:**
1.5λ

**Irregularity (P-V) @ 632.8nm:**
λ/4

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Reach 224:**
Compliant

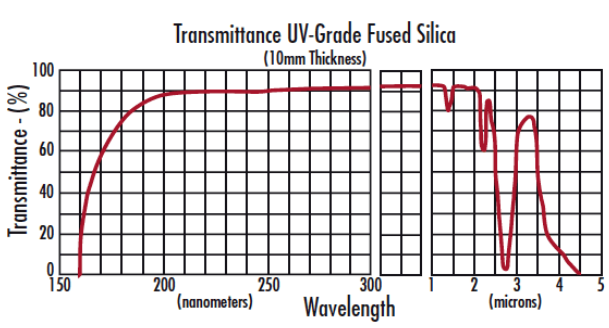
**Certificate of Conformance:**
View

# Product Details

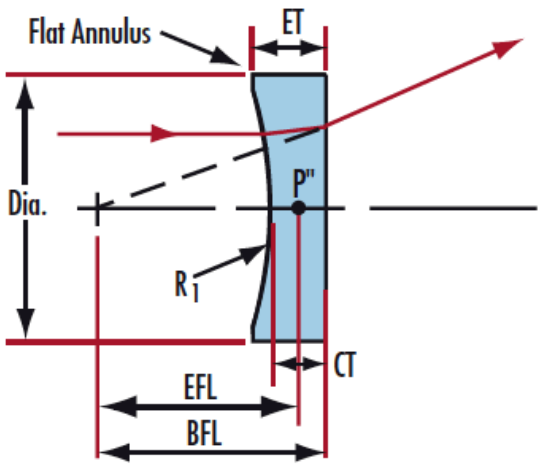
- Negative Focal Lengths for Beam Expansion or Light Projection Applications
- Wavelength Range of 200 - 2200nm
- Popular UV-AR Coating Option Available

TECHSPEC® UV Fused Silica Plano-Concave (PCV) Lenses are high performance UV optic elements, manufactured utilizing state of the art CNC equipment. Zygo's GPI-XP Interferometer is used to assure the surface accuracy and performance of these UV optics. UV Grade lenses are precision manufactured using research-grade synthetic fused silica. In addition to providing excellent transmission characteristics and higher operating temperatures, synthetic fused silica also exhibits an exceptional inclusion specification and chemical purity. TECHSPEC® UV Fused Silica Plano-Concave (PCV) Lenses are an ideal choice for many laser and imaging applications, particularly those involving ultraviolet wavelengths. A broadband anti-reflection coating is available for optimized throughput in the ultraviolet spectrum.

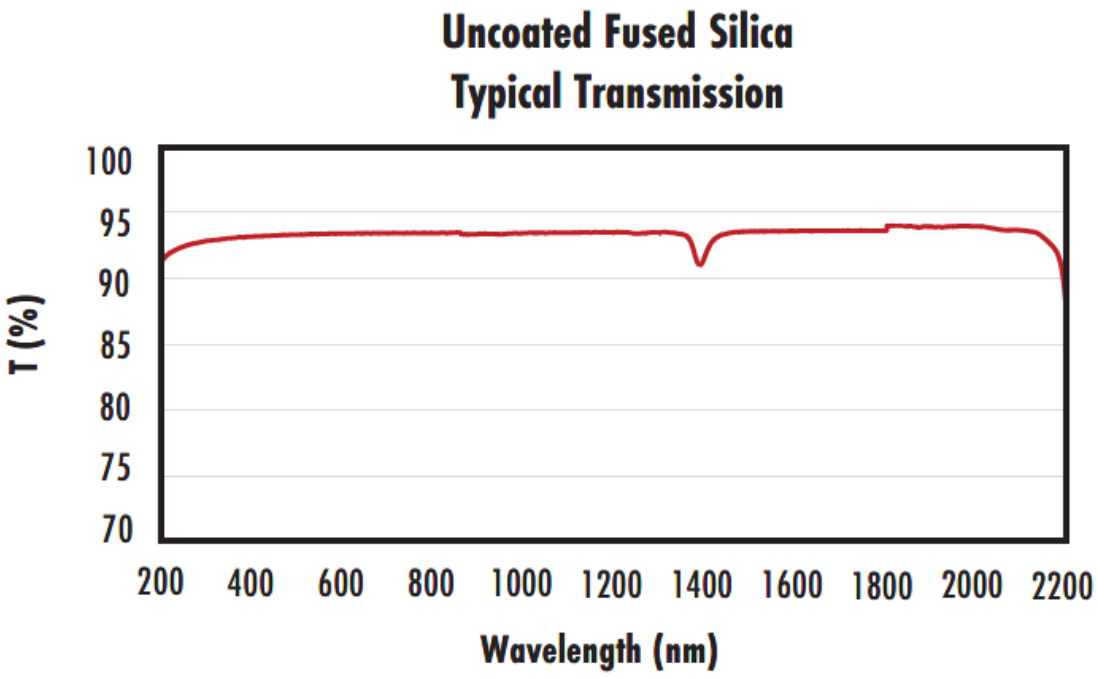
# Technical Information



*UV FS Transmission Curve*




**FUSED SILICA**




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

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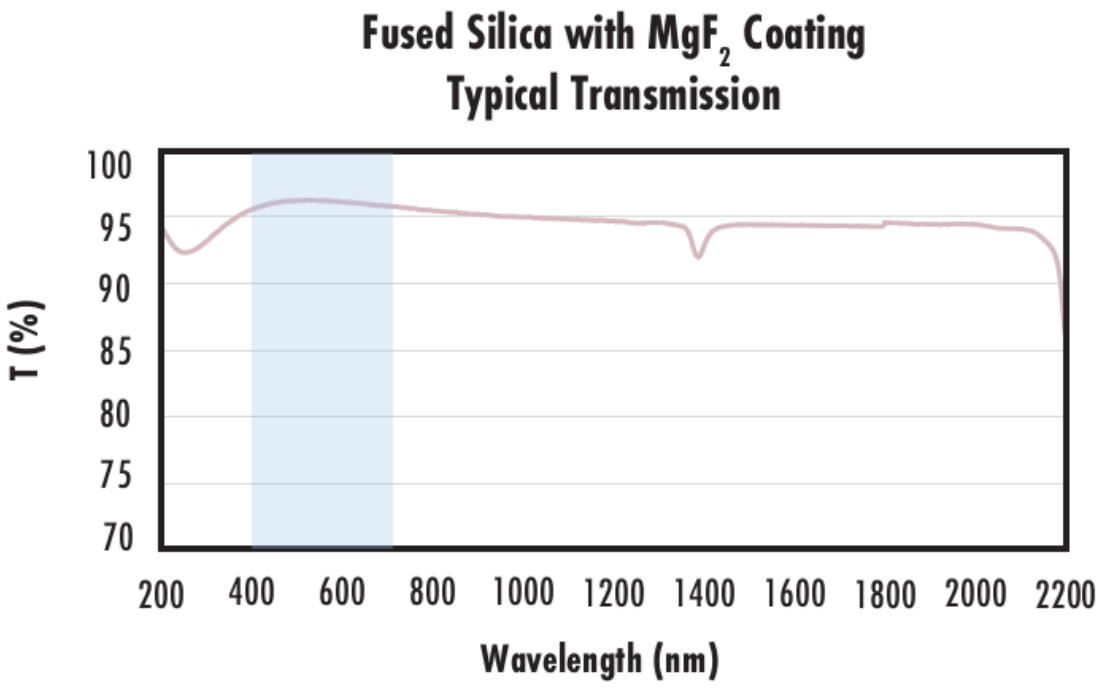


Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

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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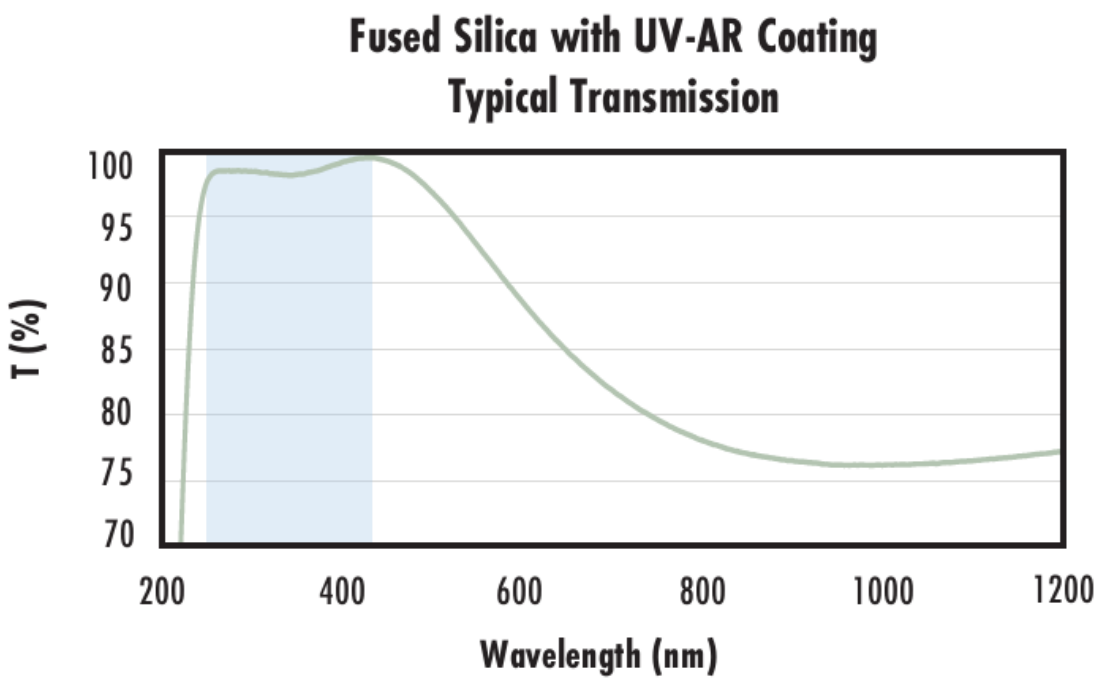


Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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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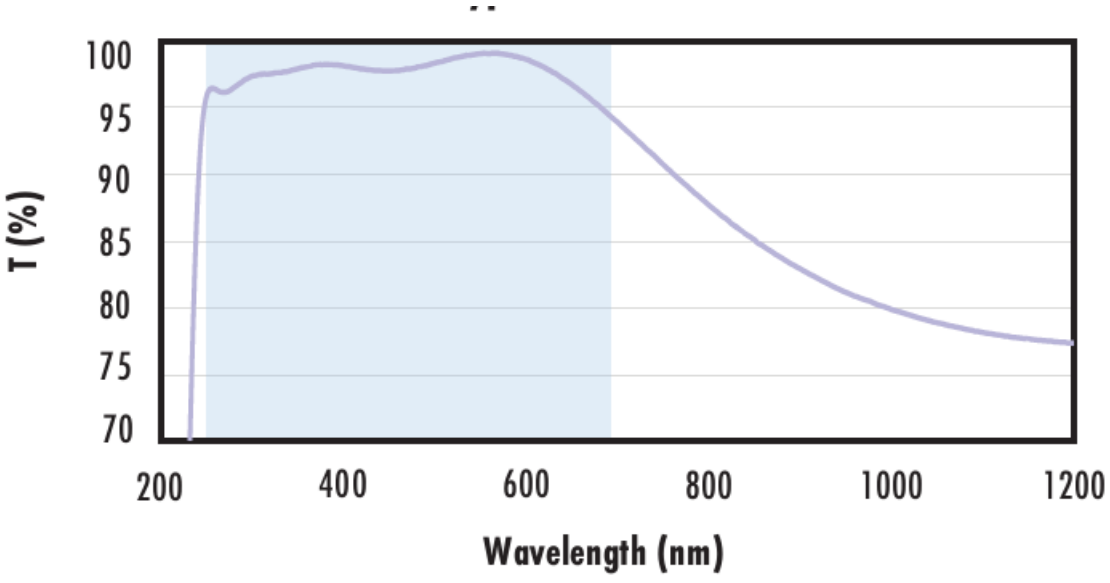


Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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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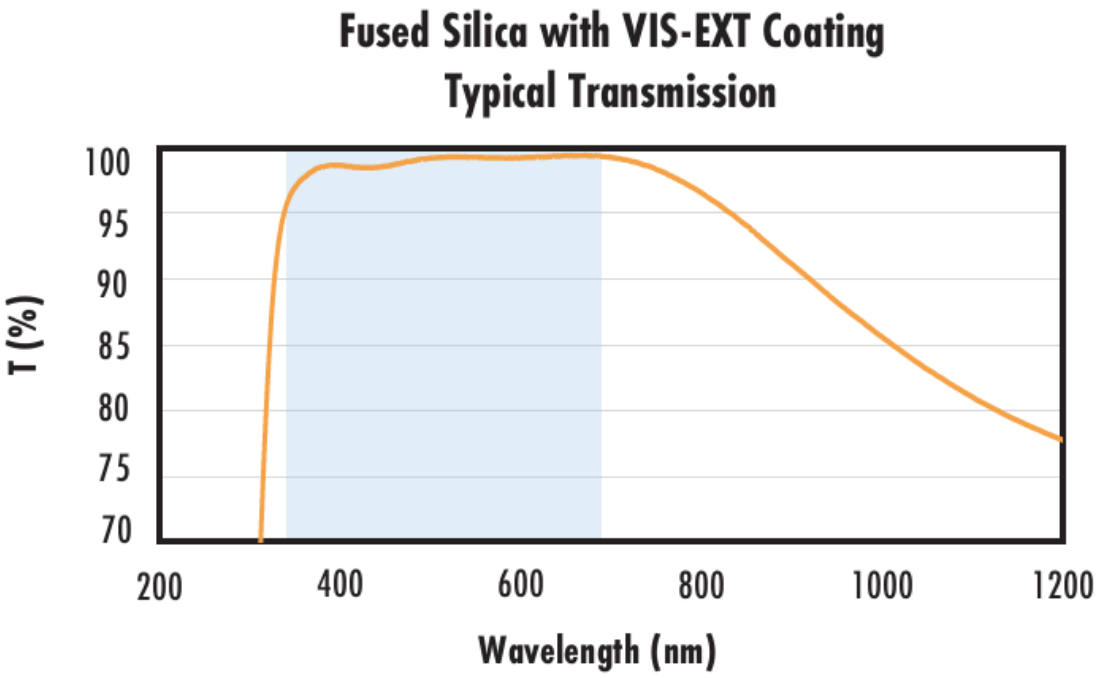


Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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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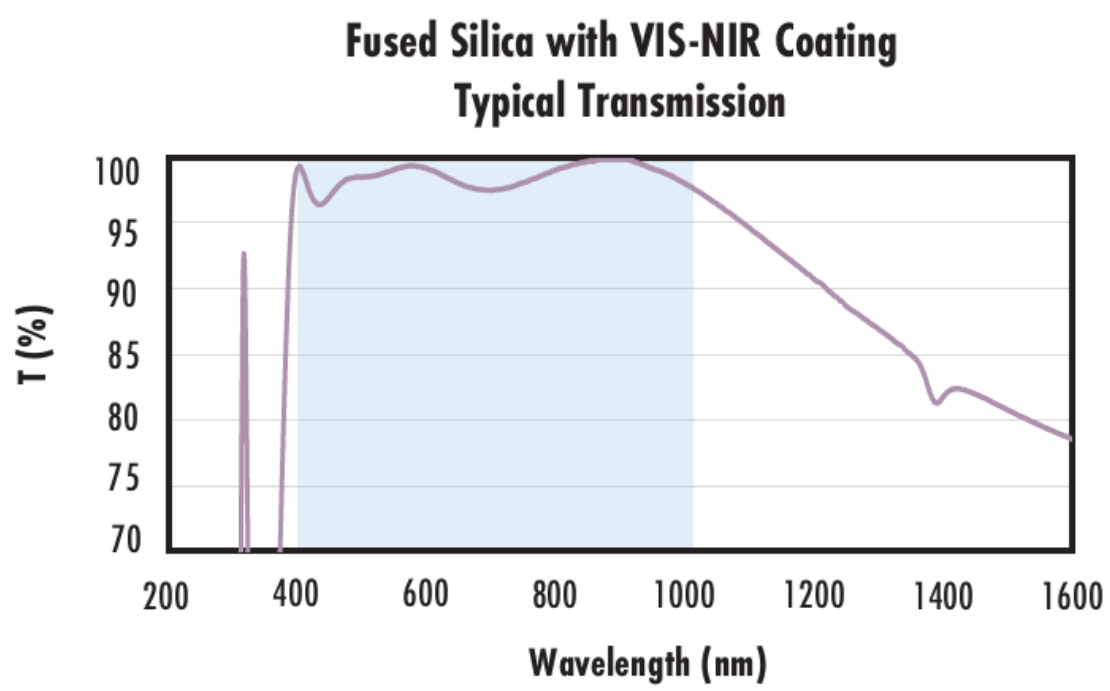


Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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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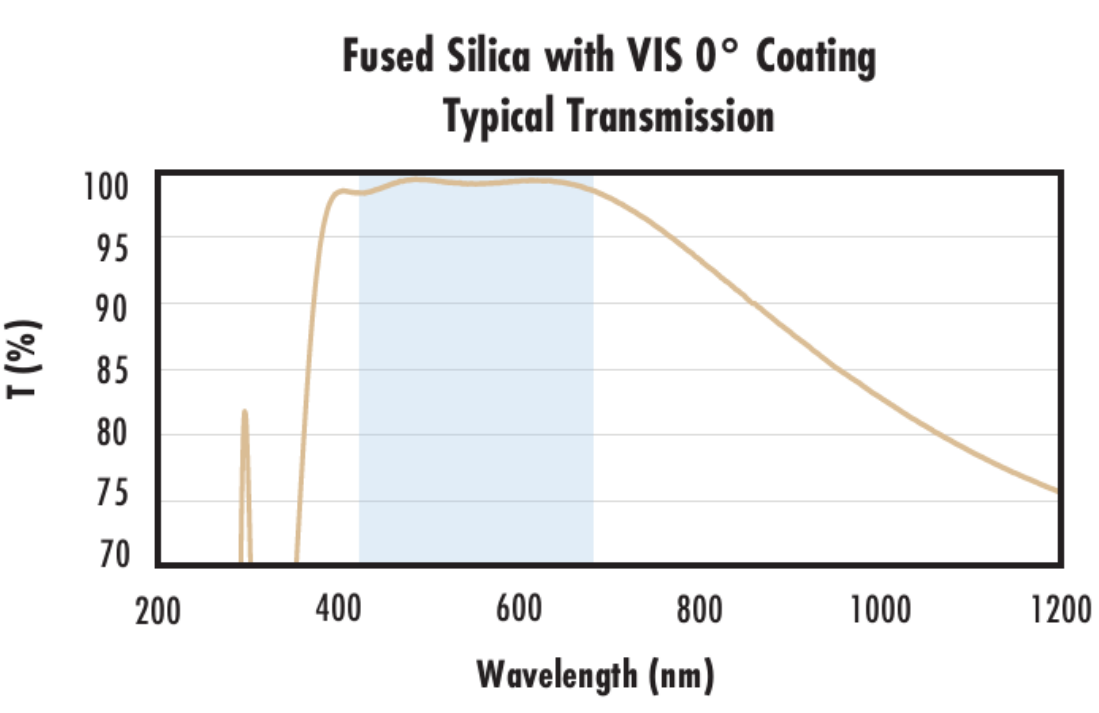


Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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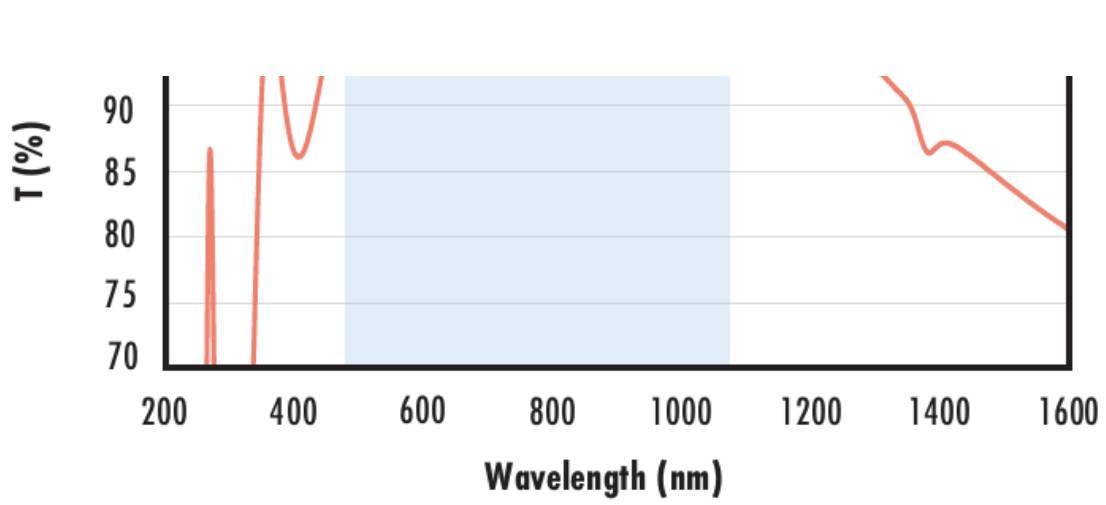
Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.




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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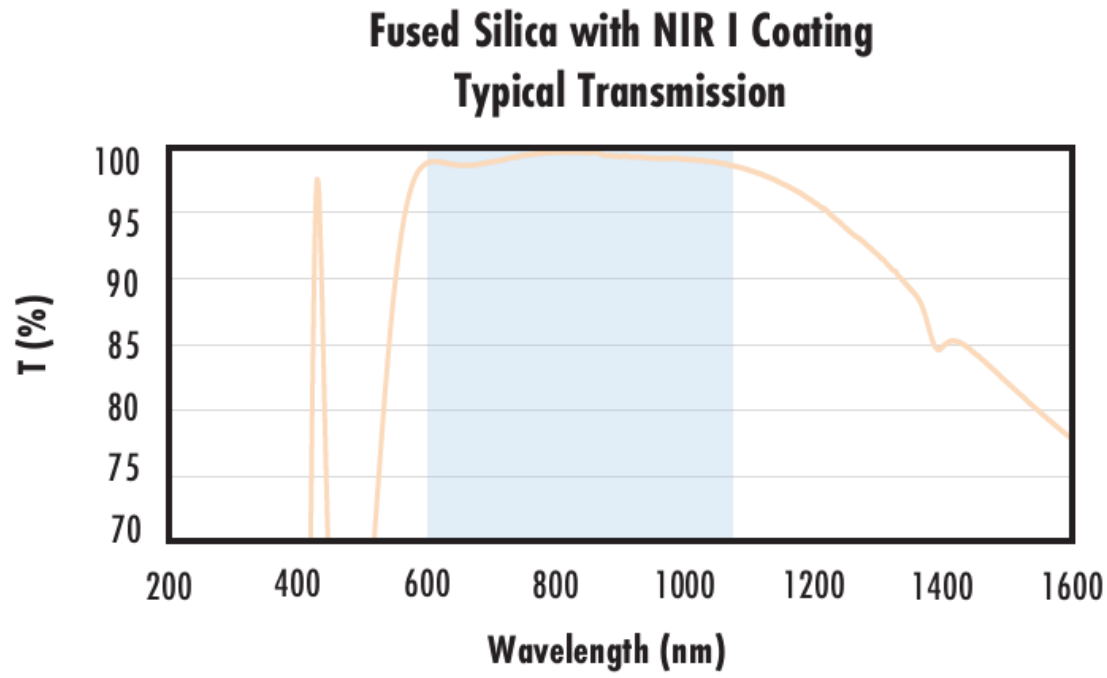


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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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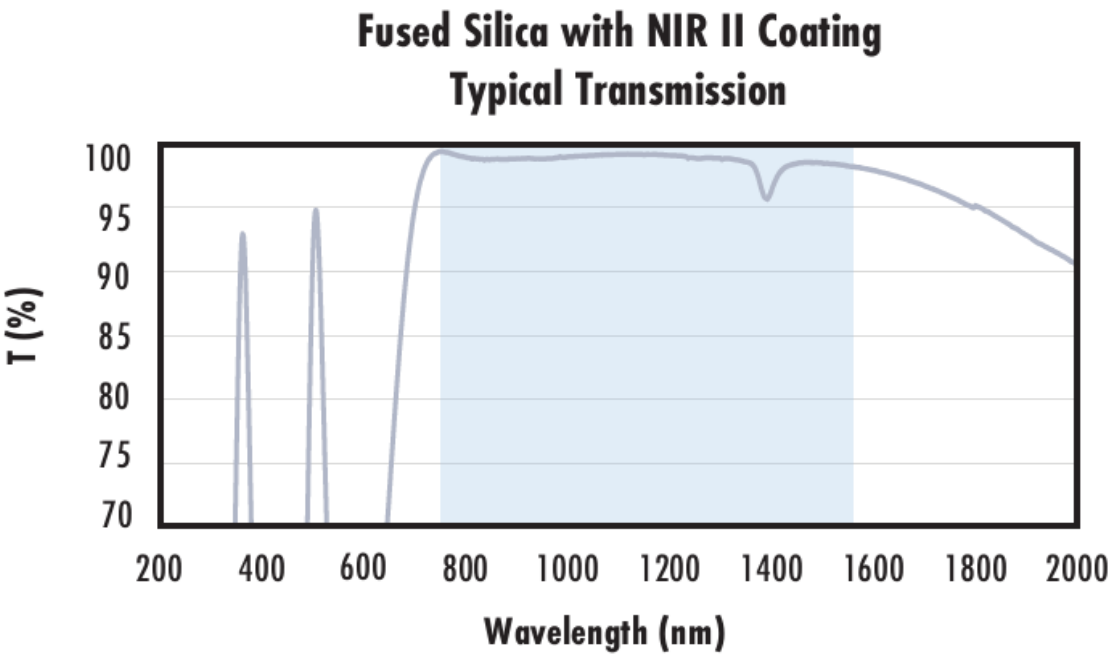


Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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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## 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