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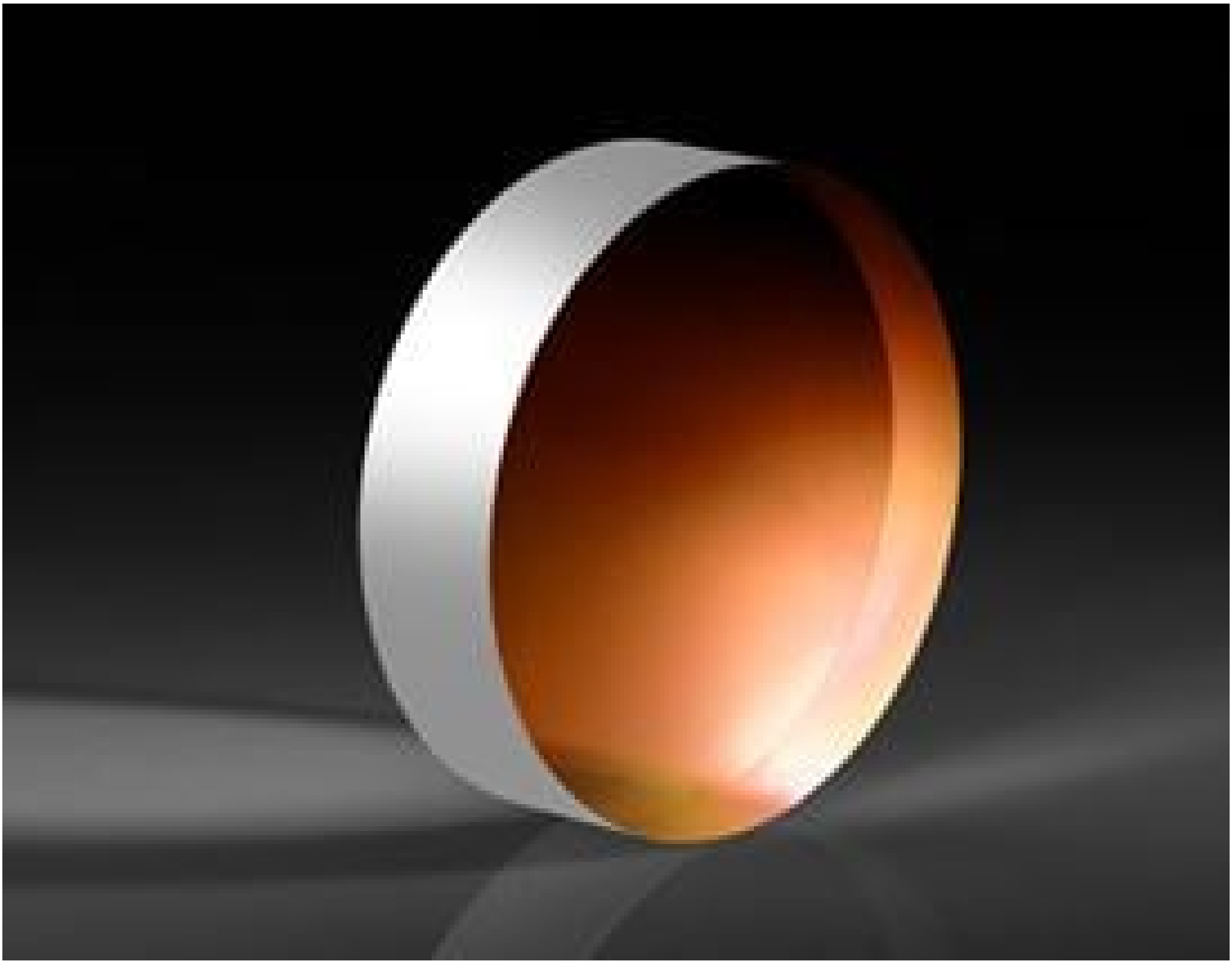
# TECHSPEC 40mm Dia., 4mm Thick, VIS 0° Coated λ/10 Fused Silica Window



Stock **#47-839** **13 In Stock**

- 1 + **€267**.00

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| Qty 1-5 | **€267,00** each |
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Product Downloads

## General

**Type:**
Protective Window

## Physical & Mechanical Properties

**Bevel:**
Protective as needed

**Clear Aperture (%):**
80

| | |
|---|---|
| **Clear Aperture CA (mm):** 32.00 | |
| **Diameter (mm):** 40.00 +0.00/-0.20 | |
| **Thickness (mm):** 4.00 ±0.10 | |
| **Edges:** Fine Ground | |
| **Knoop Hardness (kg/mm$^2$):** 522.00 | |
| **Parallelism (arcsec):** <5 | |
| **Poisson's Ratio:** 0.16 | |
| **Young's Modulus (GPa):** 73 | |

## Optical Properties

| | |
|---|---|
| **Abbe Number ($v_d$):** 67.8 | |
| **Coating:** VIS 0° (425-675nm) | |
| **Coating Specification:** $R_{avg}$ ≤0.4% @ 425 - 675nm | |
| **Index of Refraction ($n_d$):** 1.458 | |
| **Substrate:** Fused Silica (Corning 7980) | |
| **Surface Quality:** 20-10 | |
| **Transmitted Wavefront, P-V:** λ/10 | |
| **Wavelength Range (nm):** 425 - 675 | |
| **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)<br>0.57 (0 to +200°C)<br>0.48 (-100 to +200°C) | |
| **Density (g/cm$^3$):** 2.20 | |

## Regulatory Compliance

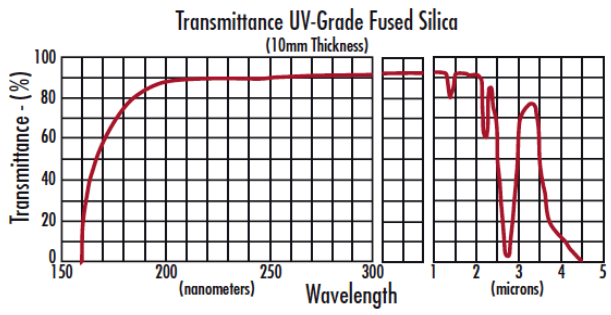
| | |
|---|---|
| **RoHS 2015:** Compliant | |
| **Certificate of Conformance:** View | |
| **Reach 235:** Compliant | |

# Product Details

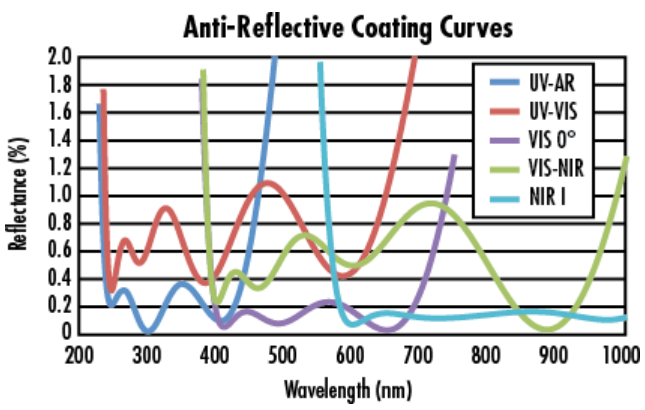
- UV, Visible, and NIR Anti-Reflection Coated Versions Available
- λ/10 Transmitted Wavefront Distortion
- Circular and Square Sizes from 2mm to 150mm
- 1λ or λ/4 UV Fused Silica Windows Also Available

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.

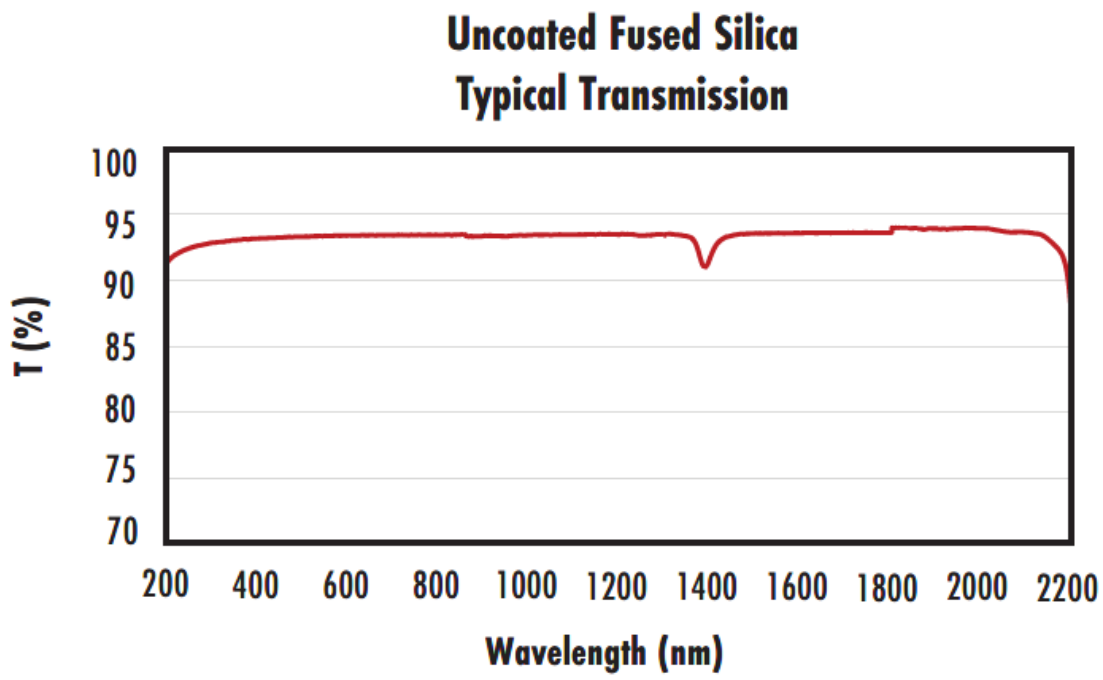
# Technical Information




*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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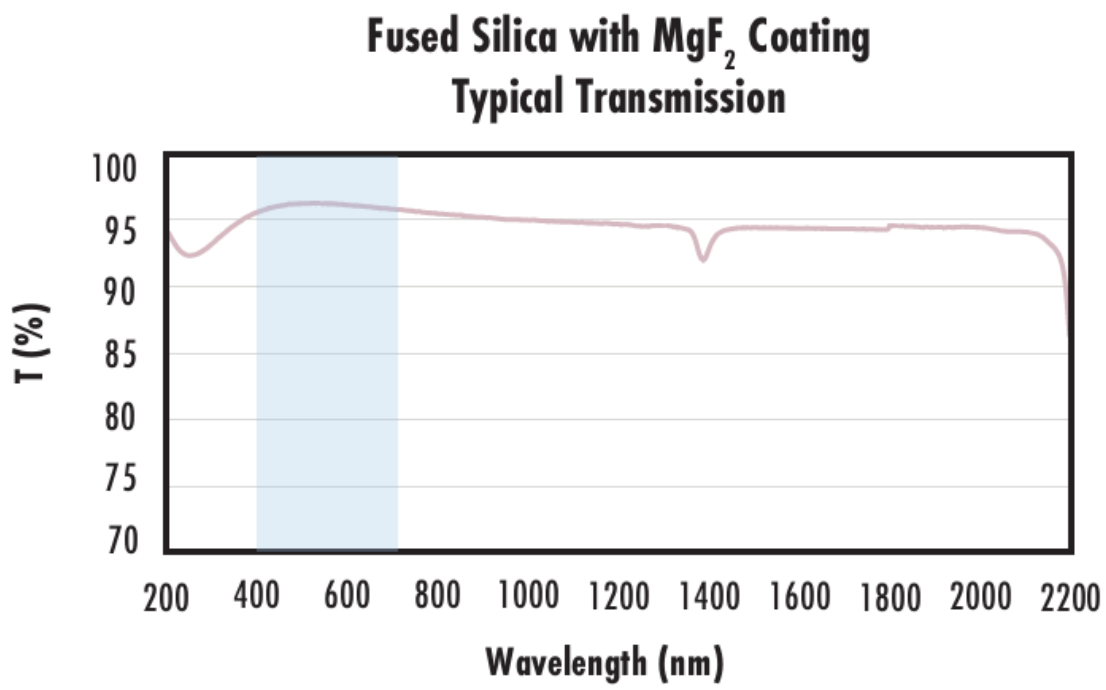


Typical transmission of a 3mm thick fused silica window with MgF2 (400-700nm) coating at 0° AOI.

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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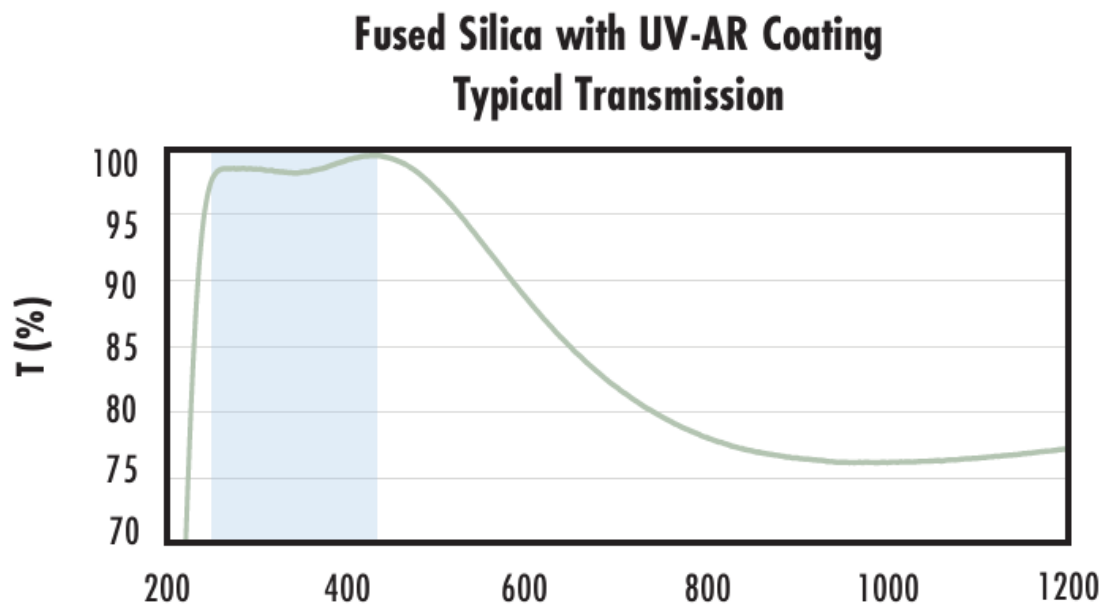


Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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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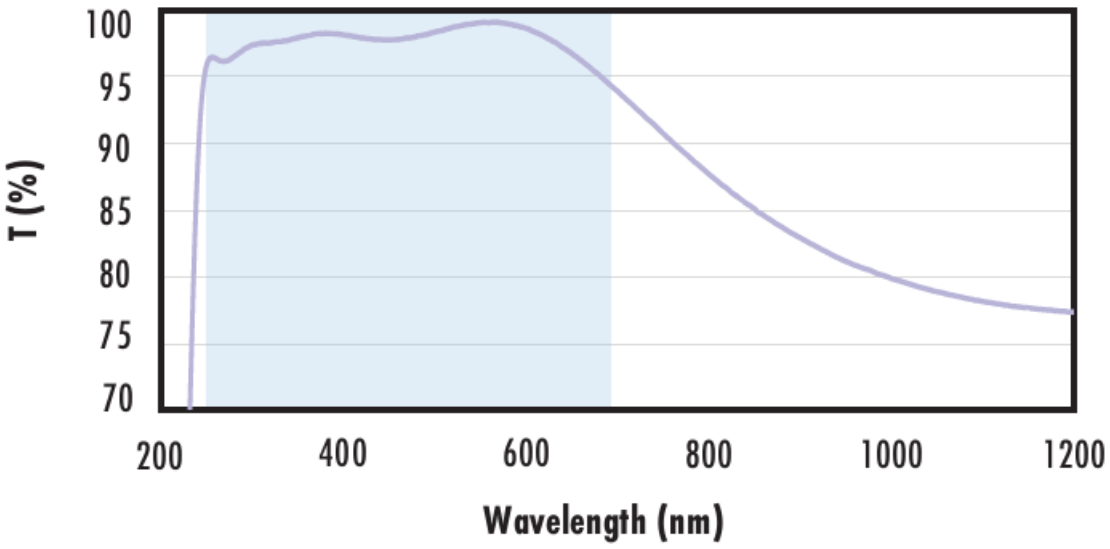
Wavelength (nm)

## Fused Silica with UV-VIS Coating
## Typical Transmission




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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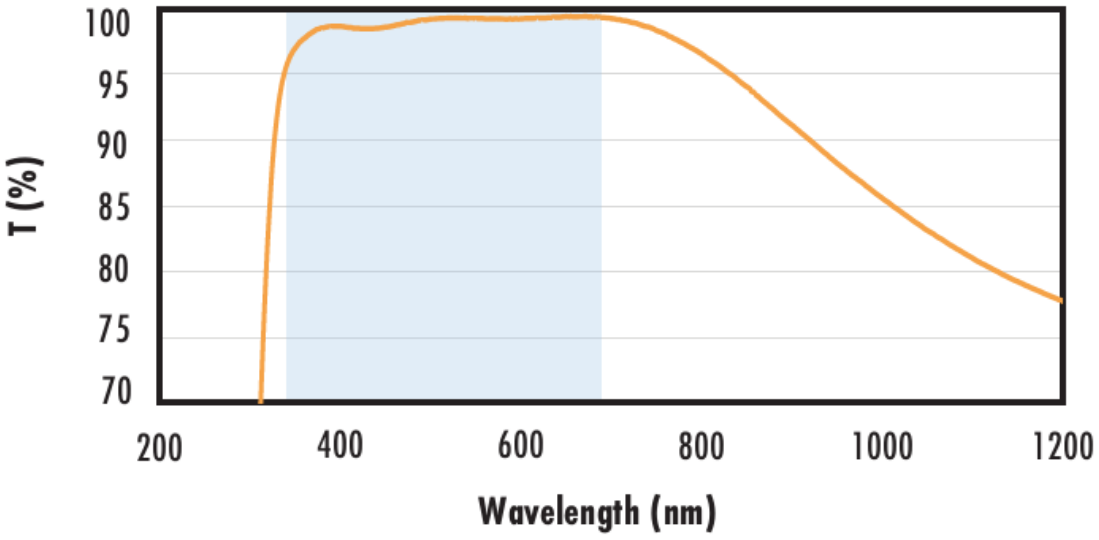
## Fused Silica with VIS-EXT Coating
## Typical Transmission




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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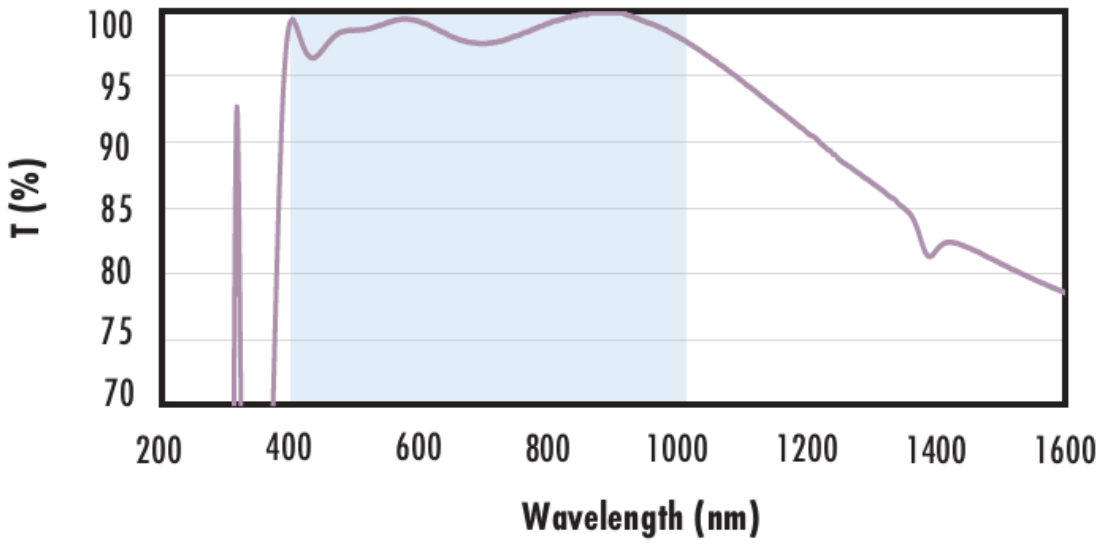
## Fused Silica with VIS-NIR Coating
## Typical Transmission




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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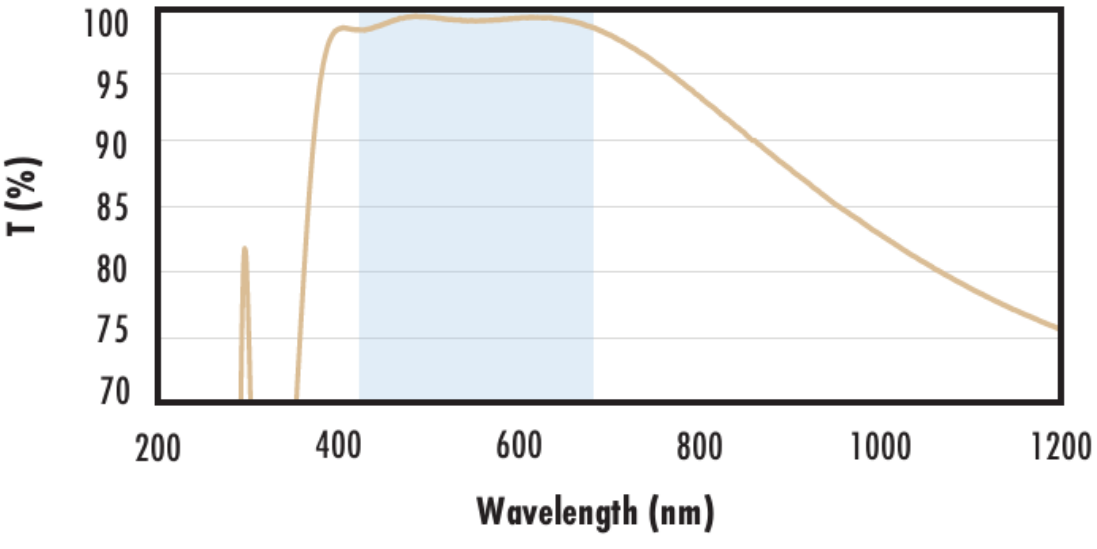
## Fused Silica with VIS 0° Coating
## Typical Transmission




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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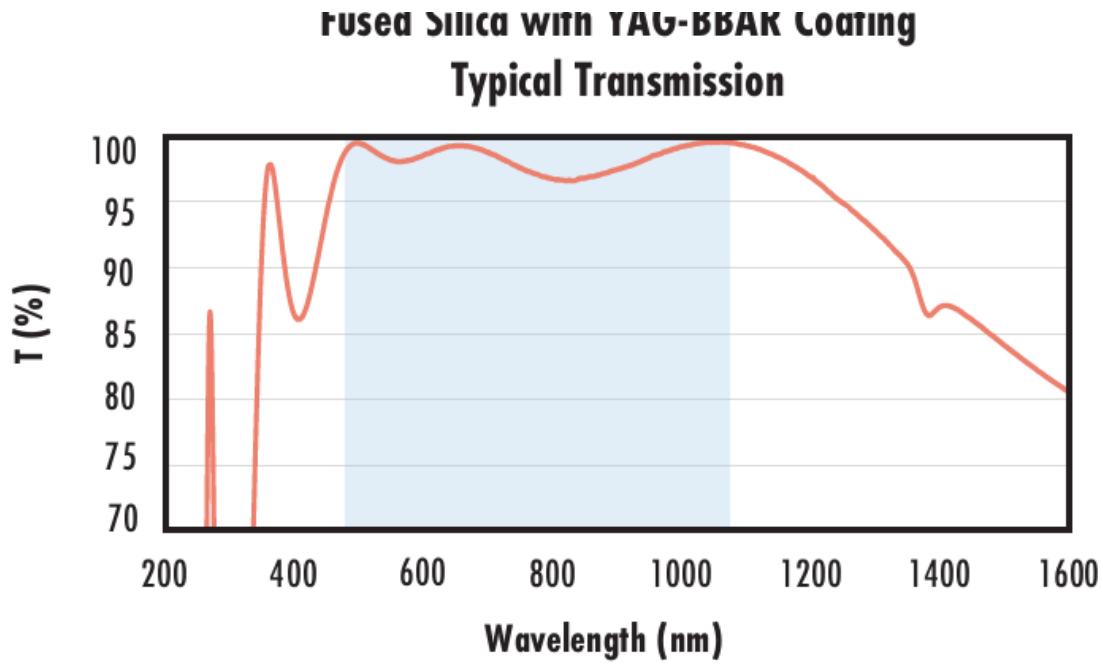


Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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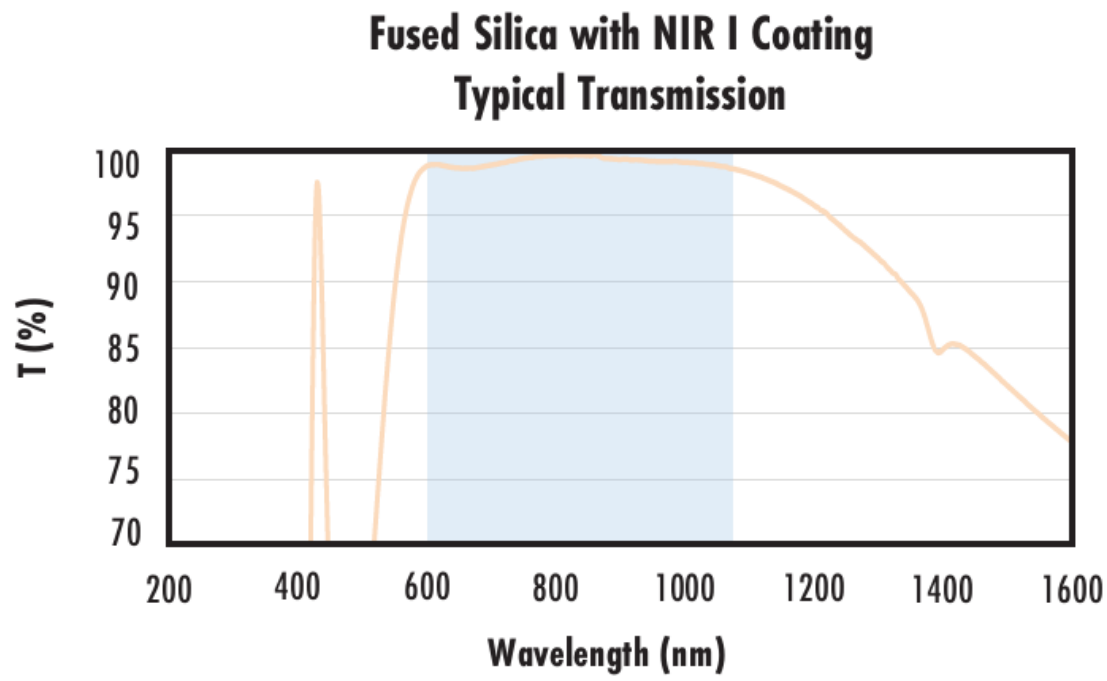


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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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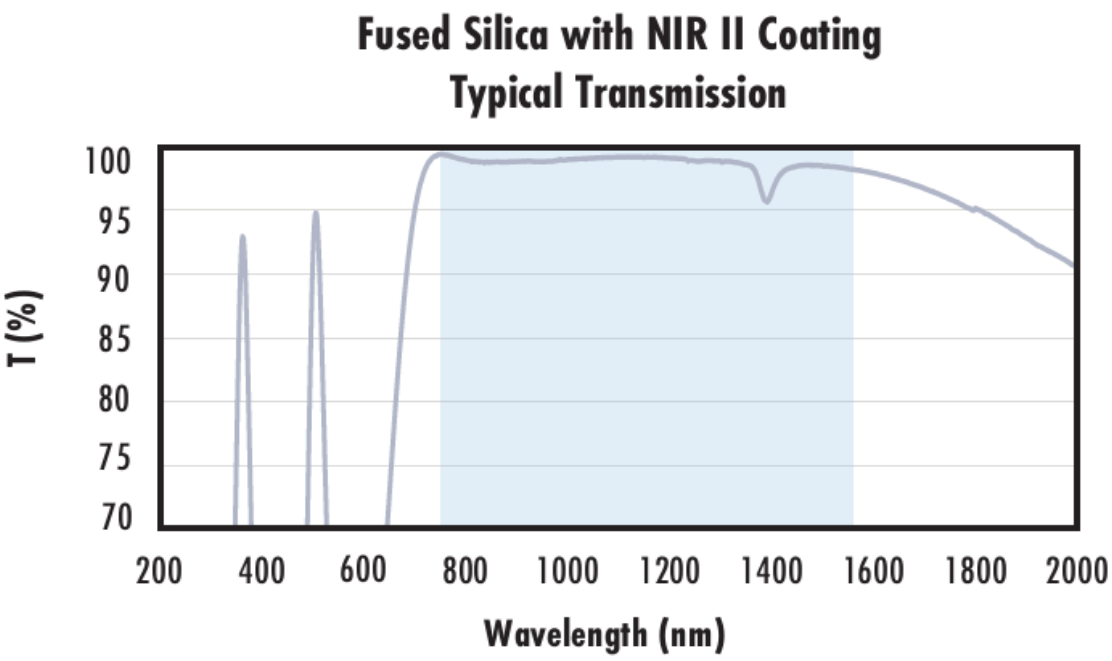


Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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