

TECHSPEC® 6mm Dia. x 12mm FL, UV-AR Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#49-248** **1 In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ £118⁴⁰

ADD TO CART

Volume Pricing	
Qty 1-5	£118.40 each
Qty 6-25	£94.40 each
Qty 26-49	£89.60 each
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⚠ Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

General

Double-Convex Lens **Type:**

Physical & Mechanical Properties

6.00 +0.0/-0.025 **Diameter (mm):**

<1 **Centering (arcmin):**

Protective as needed **Bevel:**

2.20 ±0.05 **Center Thickness CT (mm):**

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

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

Optical Properties

11.23 **Back Focal Length BFL (mm):**

12.00 **Effective Focal Length EFL (mm):**

UV-AR (250-425nm) **Coating:**

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

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

40-20 **Surface Quality:**

1.5λ **Power (P-V) @ 632.8nm:**

M4 **Irregularity (P-V) @ 632.8nm:**

10.65 **Radius $R_1=R_2$ (mm):**

2.00 **f#:**

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

±1 **Focal Length Tolerance (%):**

0.25 **Numerical Aperture NA:**

250 - 425 **Wavelength Range (nm):**

3 J/cm² @ 355nm, 10ns **Damage Threshold, Reference:**

Regulatory Compliance

Compliant **RoHS 2015:**

View **Certificate of Conformance:**

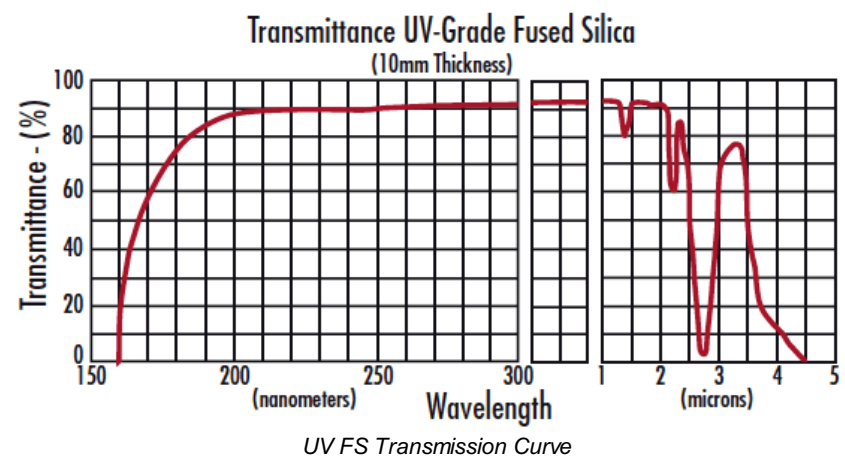
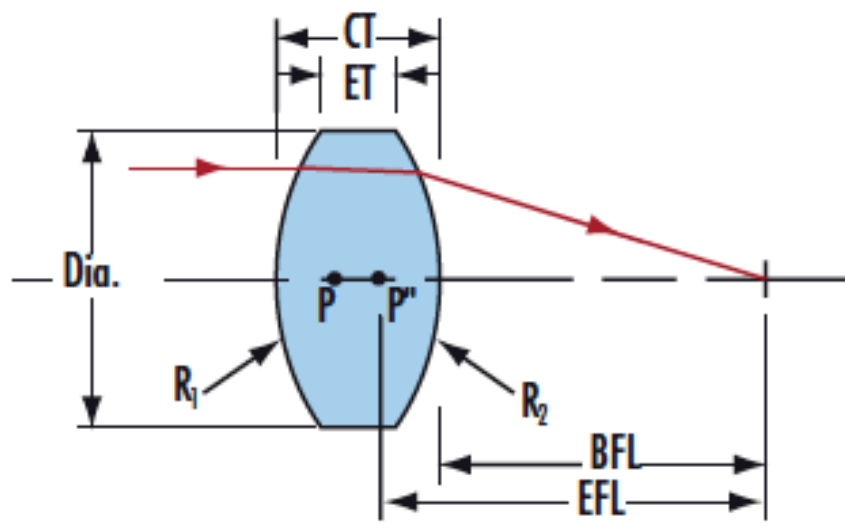
Compliant **Reach 235:**

PRODUCT DETAILS

- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- Precision Fused Silica Substrate

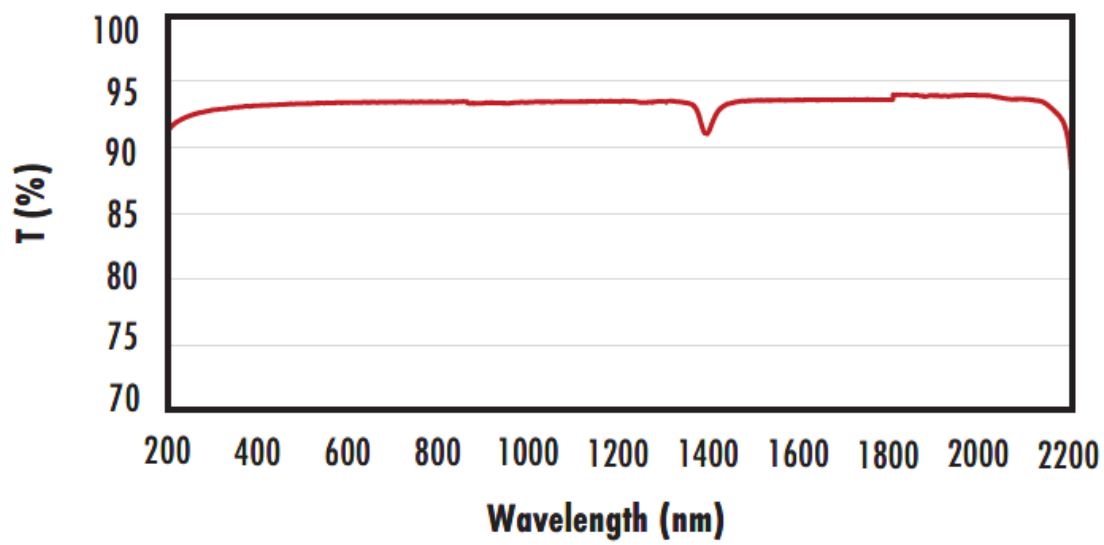
TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) between 0.2 and 5. At a conjugate ratio of 1, aberrations such as spherical aberration, chromatic aberration, coma, and distortion are minimized or canceled due to the symmetric lens design. TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses have a precision fused silica substrate. These lenses are available uncoated or with UV-AR, UV-VIS, VIS-EXT, VIS-NIR, VIS 0°, NIR I, or NIR II coatings.

TECHNICAL INFORMATION



FUSED SILICA

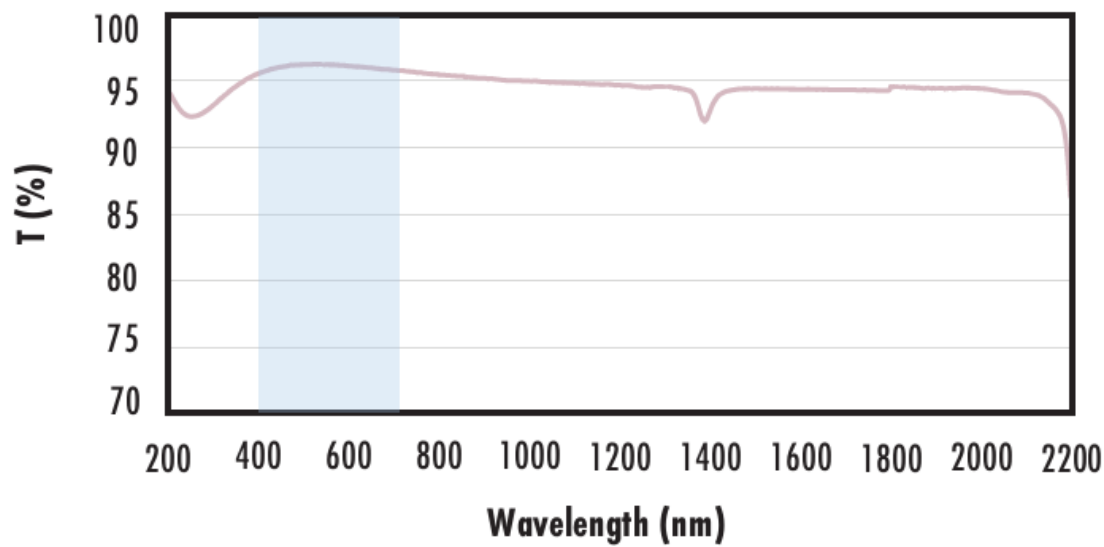
**Uncoated Fused Silica
Typical Transmission**



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

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**Fused Silica with MgF₂ Coating
Typical Transmission**



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 wavelength range, with the following specification:

$$R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}$$

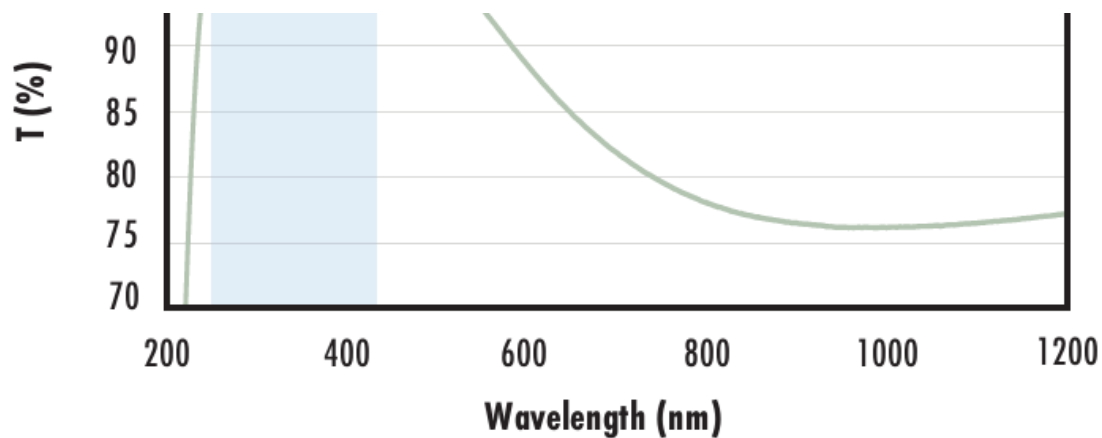
Data outside this range is not guaranteed and is for reference only.

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**Fused Silica with UV-AR Coating
Typical Transmission**



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



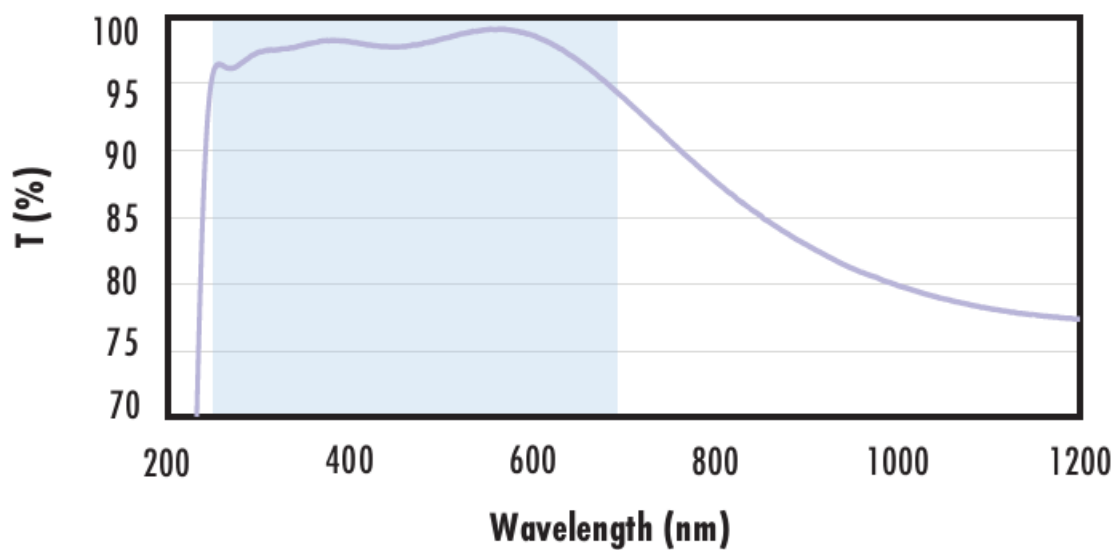
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$
- $R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$
- $R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$

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

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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.

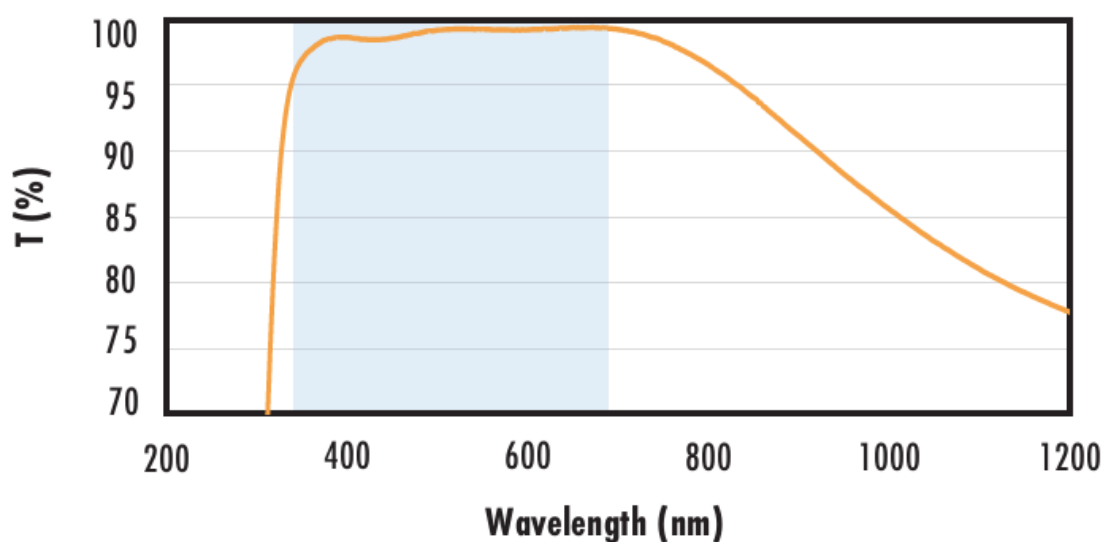
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$
- $R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$

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.

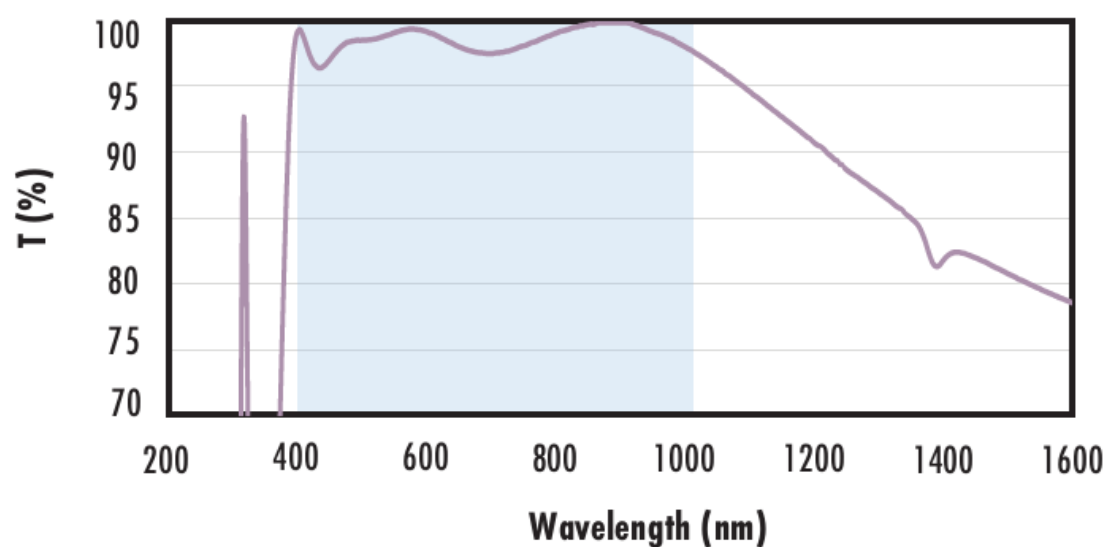
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

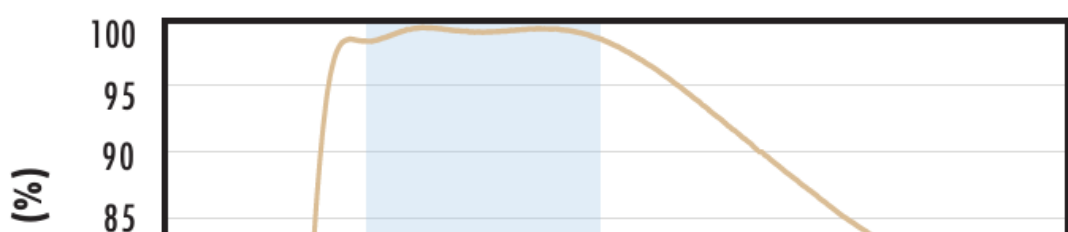
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 0.25\% @ 880\text{nm}$
- $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$
- $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$

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

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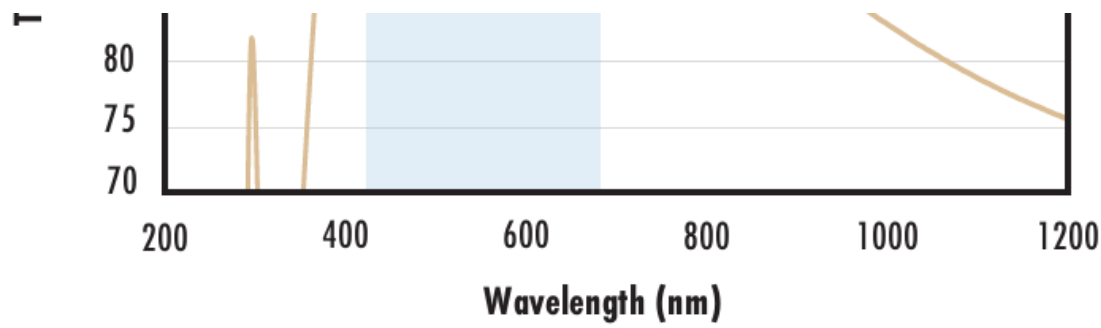
Fused Silica with VIS 0° Coating Typical Transmission



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 wavelength range, with the following specification:

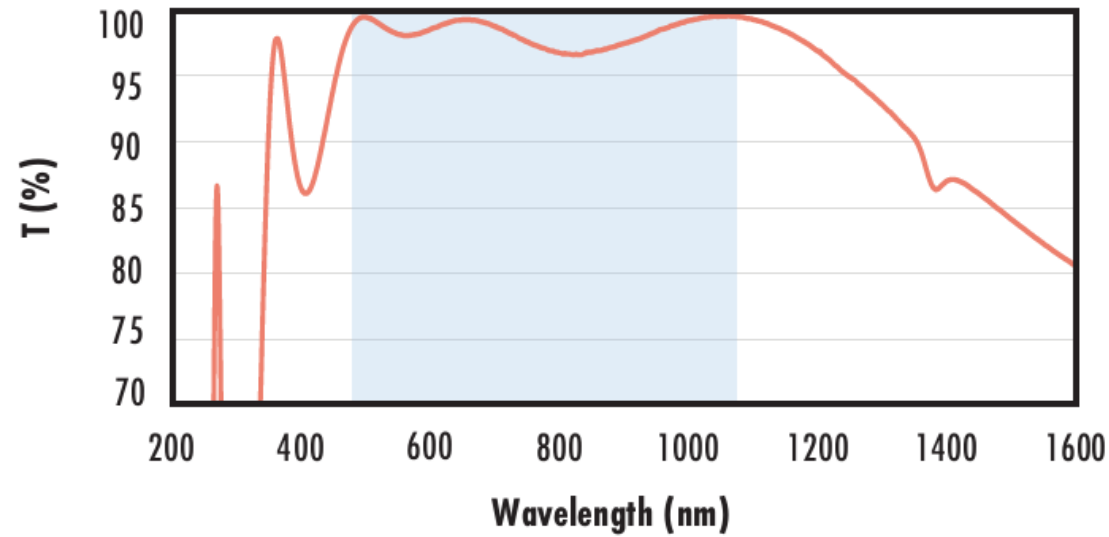
- $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$



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

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Fused Silica with YAG-BBAR Coating Typical Transmission



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

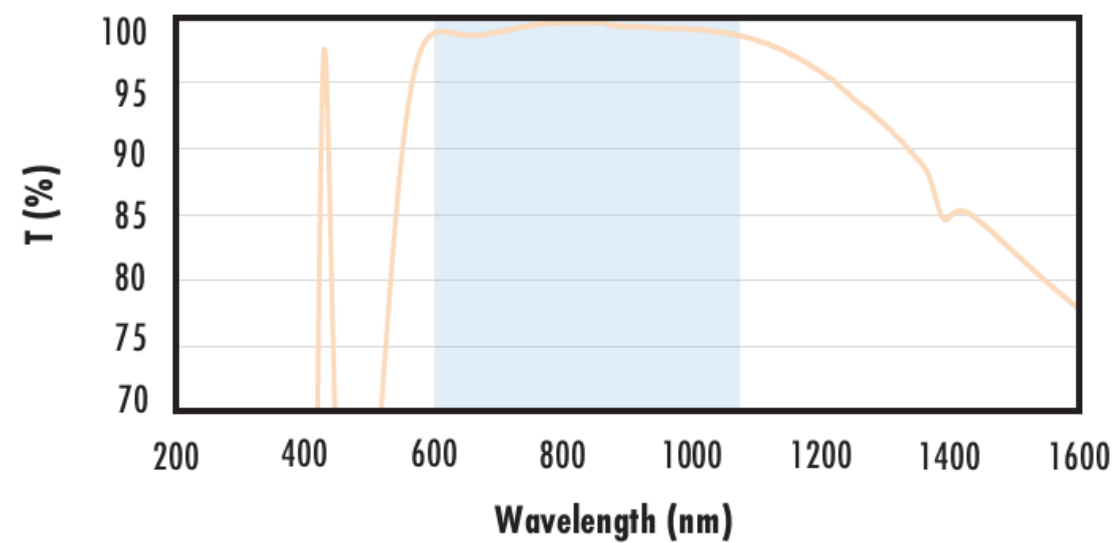
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 0.25\% @ 532nm$
 $R_{abs} \leq 0.25\% @ 1064nm$
 $R_{avg} \leq 1.0\% @ 500 - 1100nm$

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

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Fused Silica with NIR I Coating Typical Transmission



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

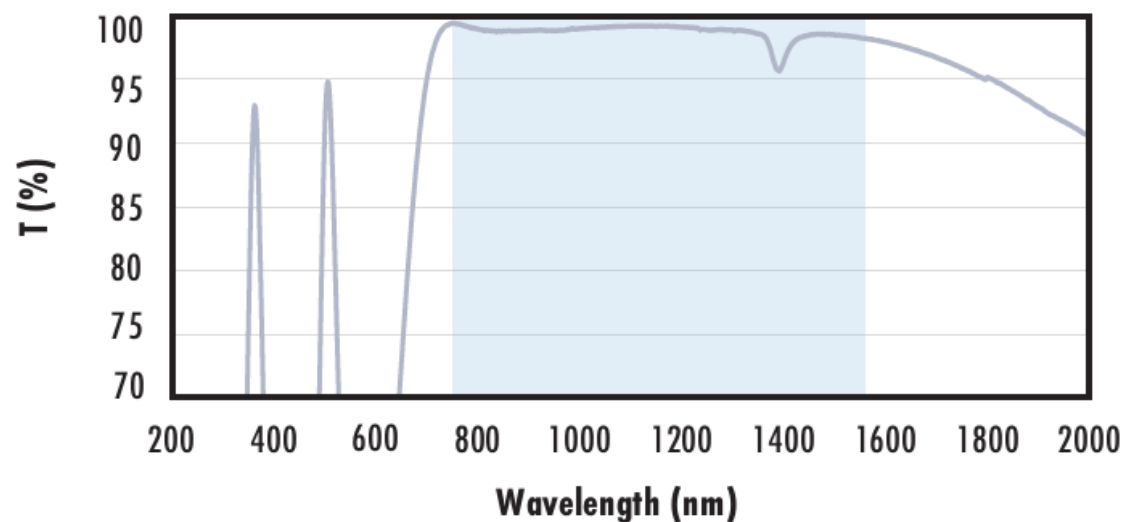
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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Fused Silica with NIR II Coating Typical Transmission



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 wavelength 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
