

TECHSPEC<sup>®</sup> 20mm Dia. x 80mm FL, NIR II Coated, Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses



Stock **#18-176** 3 In Stock

-

1

+

€168<sup>.00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | €168,00 each                  |
| Qty 6-25       | €134,00 each                  |
| Qty 26-49      | €126,00 each                  |
| Need More?     | <a href="#">Request Quote</a> |

 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Plano-Convex Lens

Type:

Physical & Mechanical Properties

|                      |                           |
|----------------------|---------------------------|
| 20.00 -0.025         | Diameter (mm):            |
| <1                   | Centering (arcmin):       |
| 3.00 ±0.10           | Center Thickness CT (mm): |
| 1.61                 | Edge Thickness ET (mm):   |
| 19                   | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|                                                                                                                        |                                  |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Optical Properties                                                                                                     |                                  |
| 80.00 @ 587.6nm                                                                                                        | Effective Focal Length EFL (mm): |
| 77.95                                                                                                                  | Back Focal Length BFL (mm):      |
| NIR II (750-1550nm)                                                                                                    | Coating:                         |
| R <sub>abs</sub> ≤1.5% @ 750 - 800nm<br>R <sub>abs</sub> ≤1.0% @ 800 - 1550nm<br>R <sub>avg</sub> ≤0.7% @ 750 - 1550nm | Coating Specification:           |
| Fused Silica (Corning 7980)                                                                                            | Substrate: □                     |
| 40-20                                                                                                                  | Surface Quality:                 |
| 3 Rings                                                                                                                | Power (P-V) @ 632.8nm:           |
| 0.5 Rings                                                                                                              | Irregularity (P-V) @ 632.8nm:    |
| ±1                                                                                                                     | Focal Length Tolerance (%):      |
| 36.68                                                                                                                  | Radius R <sub>1</sub> (mm):      |
| 4                                                                                                                      | f/#:                             |
| 0.13                                                                                                                   | Numerical Aperture NA:           |
| 750 - 1550                                                                                                             | Wavelength Range (nm):           |
| 8 J/cm² @ 1064nm, 10ns                                                                                                 | Damage Threshold, By Design: □   |

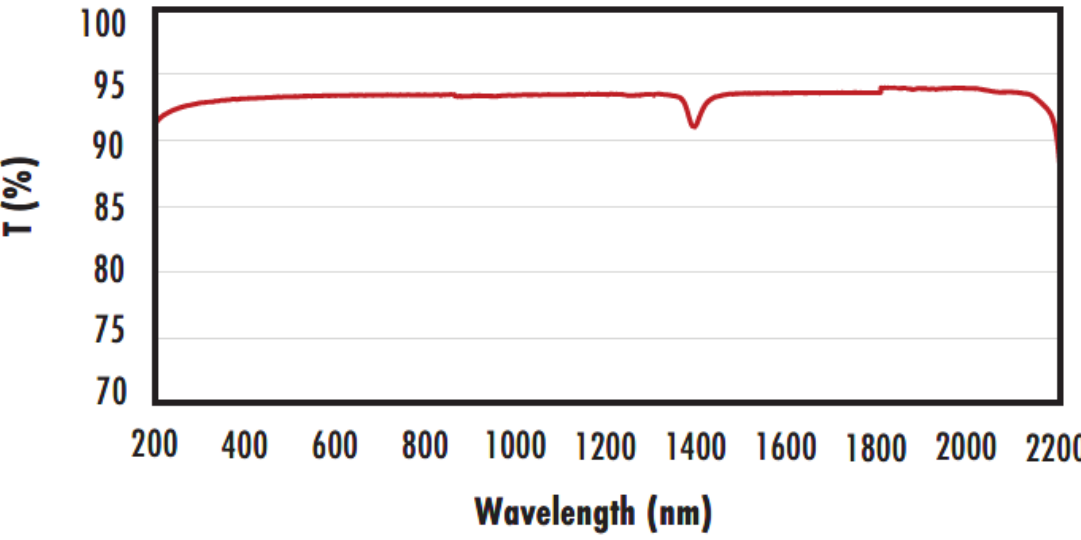
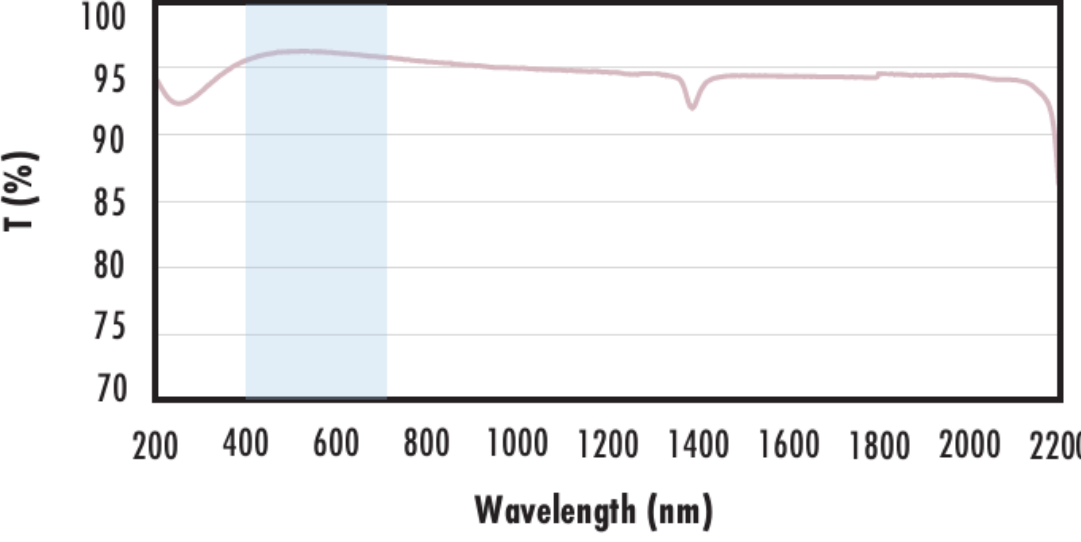
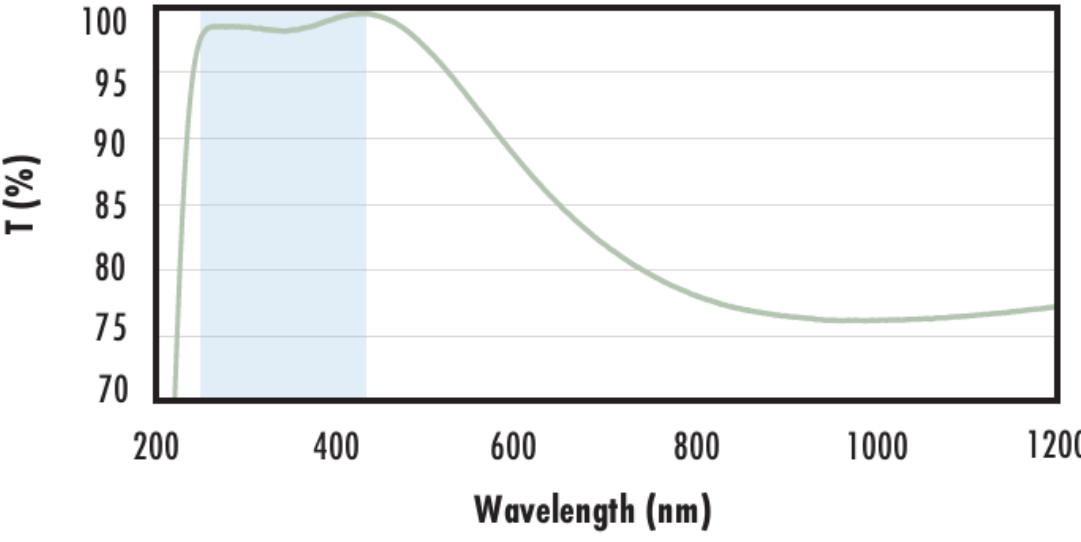
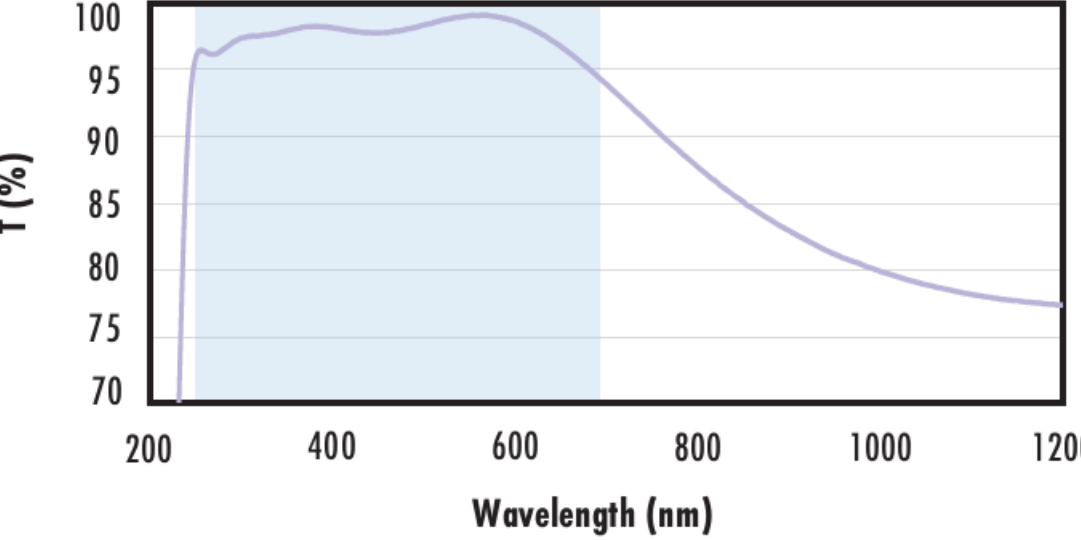
|                       |                             |
|-----------------------|-----------------------------|
| Regulatory Compliance |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant         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

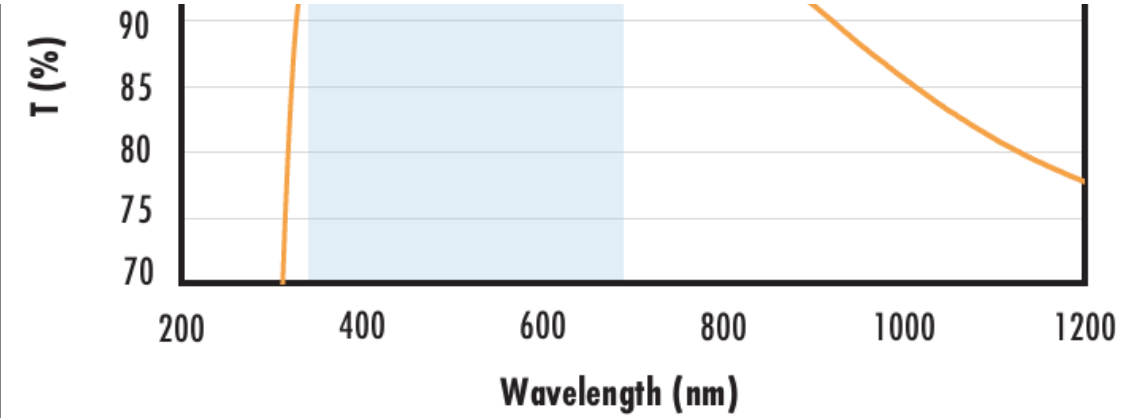
## Product Details

- AR Coated to Provide <0.7% Reflection per Surface for 750 - 1550nm
  - Precision Fused Silica Substrate
  - Various Coating Options: [Uncoated](#), [MgF<sub>2</sub>](#), [UV-AR](#), [UV-VIS](#), [VIS-EXT](#), [VIS-NIR](#), [VIS 0°](#), [YAG-BBAR](#), and [NIR I](#)
- TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses NIR II 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 II Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are NIR II coated to increase their coating performance in the 750 to 1550nm range.

## Technical Information

| FUSED SILICA                                  |
|-----------------------------------------------|
| Uncoated Fused Silica<br>Typical Transmission |

|                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                            | <p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>Fused Silica with MgF<sub>2</sub> Coating</b><br/><b>Typical Transmission</b></p>  | <p>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                 |
| <p><b>Fused Silica with UV-AR Coating</b><br/><b>Typical Transmission</b></p>           | <p>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{abs} \leq 1.0\% @ 250 - 425\text{nm}</math><br/><math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math><br/><math>R_{avg} \leq 0.5\% @ 370 - 420\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p> |
| <p><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>          | <p>Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{abs} \leq 1.0\% @ 350 - 450\text{nm}</math><br/><math>R_{avg} \leq 1.5\% @ 250 - 700\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                          |
| <p><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>         | <p>Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |



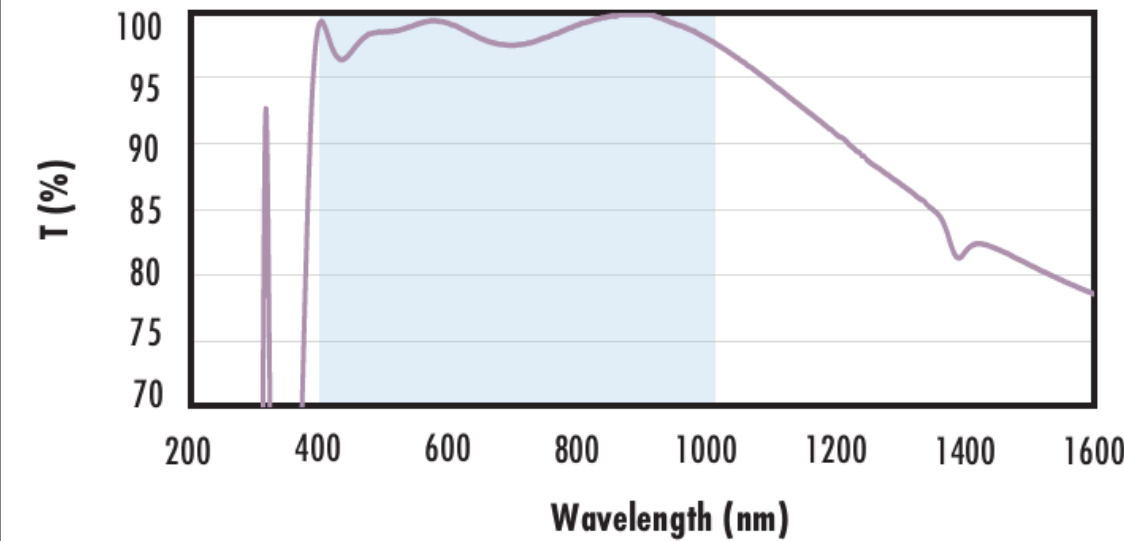
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**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:

$$R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}$$

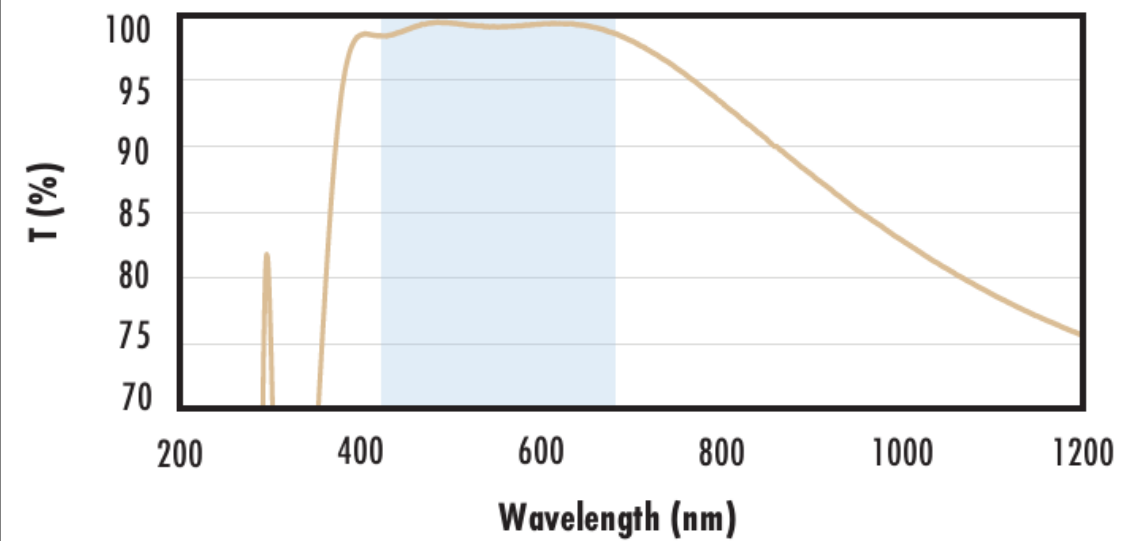
$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}$$

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

[Click Here to Download Data](#)

**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.

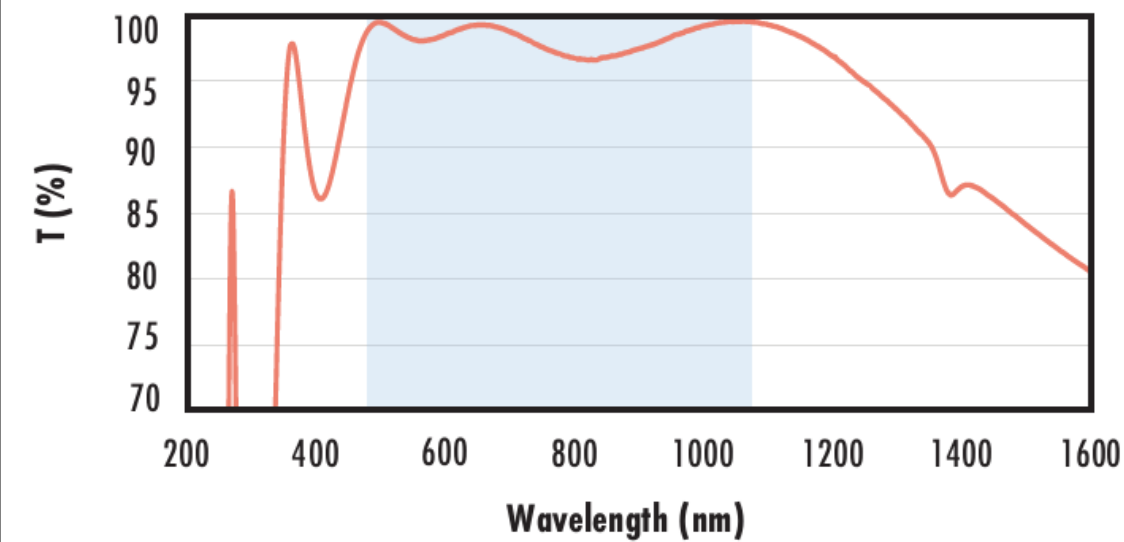
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**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:

$$R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}$$

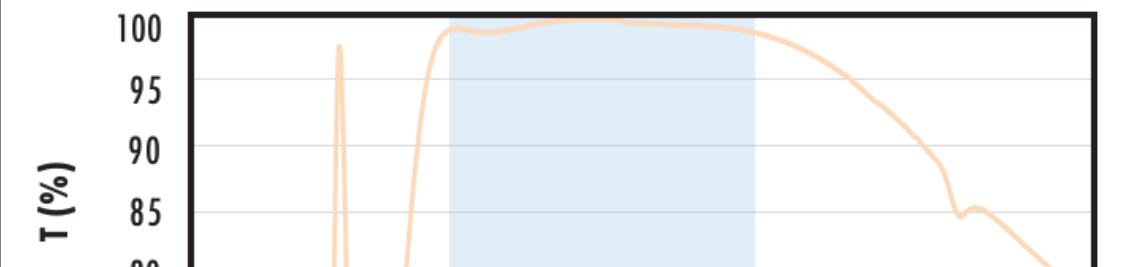
$$R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$$

$$R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}$$

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

[Click Here to Download Data](#)

**Fused Silica with NIR I Coating  
Typical Transmission**

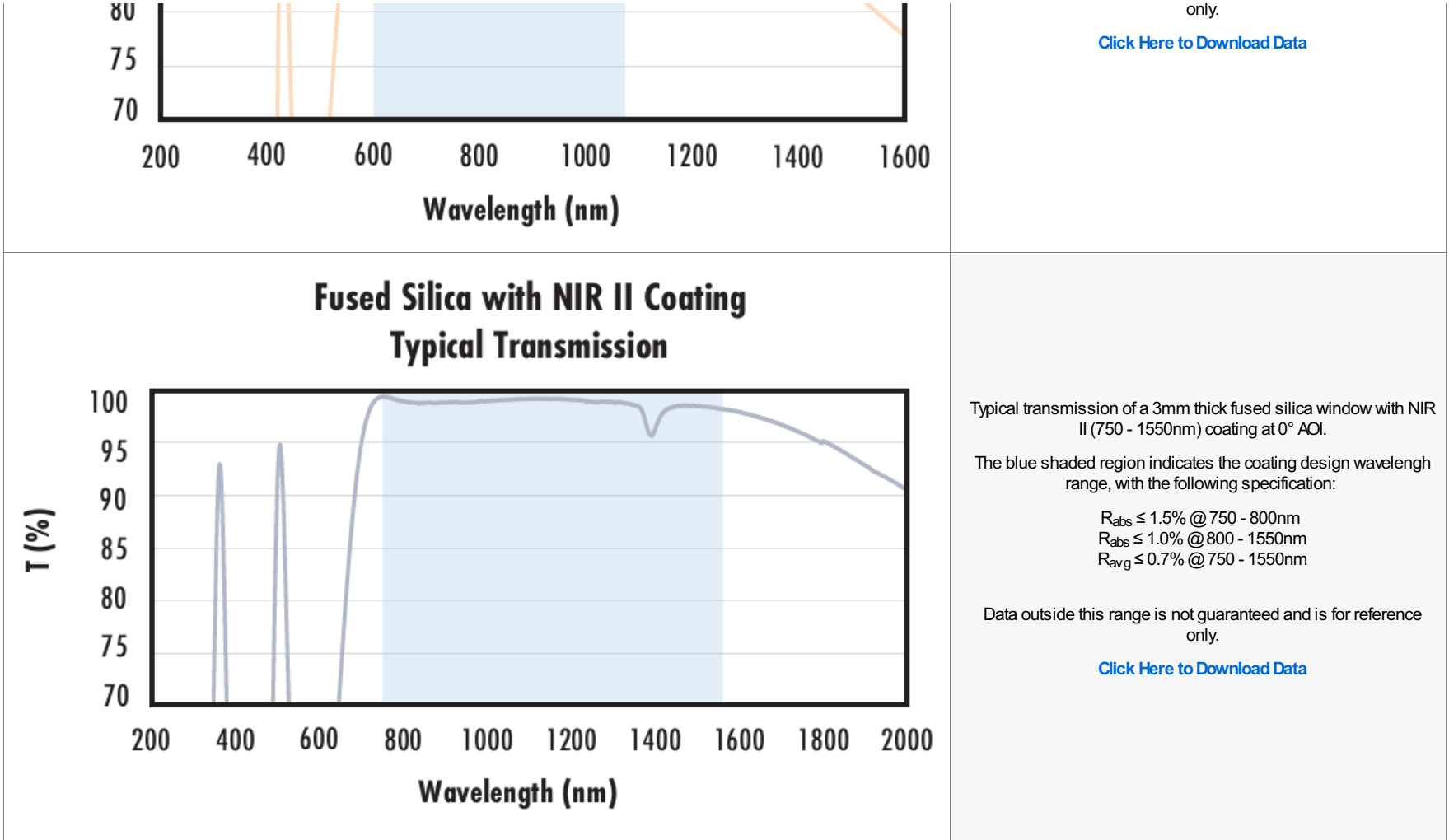


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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

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

Data outside this range is not guaranteed and is for reference



## 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](#).