

TECHSPEC<sup>®</sup> 50.8mm Dia. 1mm Thick UV-AR Coated, 1λ Fused Silica Window



TECHSPEC<sup>®</sup> 1λ UV Fused Silica Windows

Stock #25-258 4 In Stock

-

1

+

₹11,003

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| Qty 1-5        | ₹11,003 each                  |
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312.00

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General

Protective Window

Type:

Physical & Mechanical Properties

45.72

Clear Aperture CA (mm):

|                      |                          |
|----------------------|--------------------------|
| 50.80 +0.00/-0.20    | Diameter (mm):           |
| 1.00 ±0.38           | Thickness (mm):          |
| <5                   | Parallelism (arcmin):    |
| Protective as needed | Bevel:                   |
| 90                   | Clear Aperture (%):      |
| Fine Ground          | Edges:                   |
| 0.16                 | Poisson's Ratio:         |
| 73                   | Young's Modulus (GPa):   |
| 522.00               | Knoop Hardness (kg/mm²): |

|                                                                                                                       |                                        |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Optical Properties                                                                                                    |                                        |
| UV-AR (250-425nm)                                                                                                     | Coating:                               |
| Fused Silica (Corning 7980)                                                                                           | Substrate: □                           |
| 1.458                                                                                                                 | Index of Refraction (n <sub>d</sub> ): |
| 60-40                                                                                                                 | Surface Quality:                       |
| 1λ                                                                                                                    | Transmitted Wavefront, P-V:            |
| 67.8                                                                                                                  | Abbe Number (v <sub>d</sub> ):         |
| R <sub>abs</sub> ≤1.0% @ 250 - 425nm<br>R <sub>avg</sub> ≤0.75% @ 250 - 425nm<br>R <sub>avg</sub> ≤0.5% @ 370 - 420nm | Coating Specification:                 |
| 250 - 450                                                                                                             | Wavelength Range (nm):                 |
| 3 J/cm² @ 355nm, 10ns                                                                                                 | Damage Threshold, Reference:           |

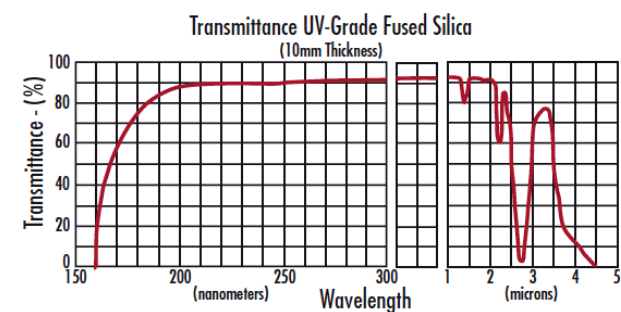
|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| Material Properties                                               |                                                              |
| 2.20                                                              | Density (g/cm³):                                             |
| 0.52 (+5 to +35°C)<br>0.57 (0 to +200°C)<br>0.48 (-100 to +200°C) | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |

|                                     |                             |
|-------------------------------------|-----------------------------|
| Regulatory Compliance               |                             |
| Compliant                           | RoHS 2015:                  |
| View                                | Certificate of Conformance: |
| Compliant                           | Reach 235:                  |
| Vietnam                             | Country of Origin:          |
| Edmund Optics India Private Limited | Imported By:                |

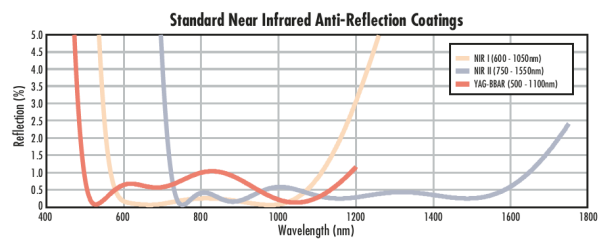
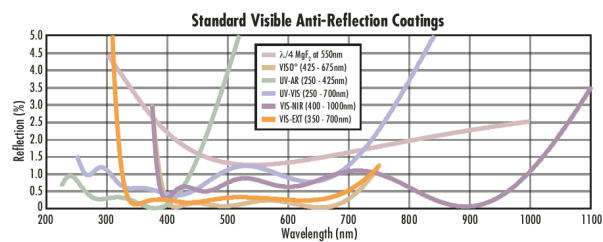
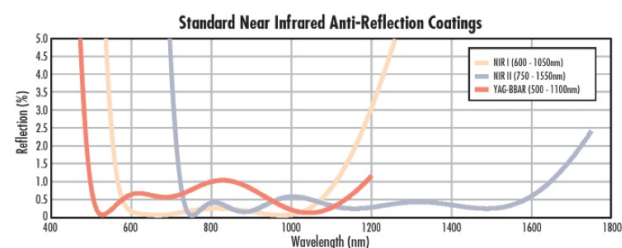
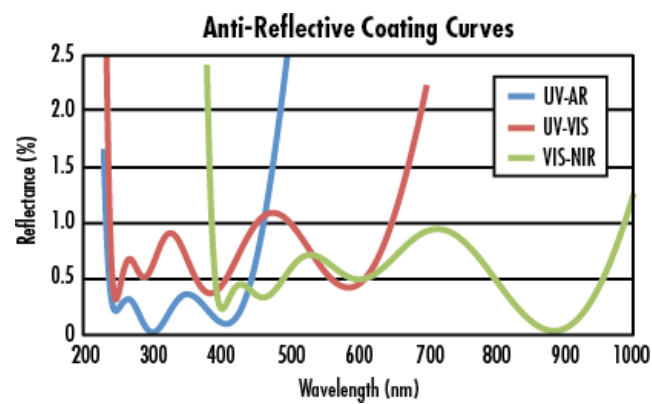
## Product Details

- Available Uncoated or with Broadband Anti-Reflection Coatings
  - Ideal for Cost Sensitive Broadband Applications
  - Circular and Square Sizes from 5mm to 100mm
  - [λ/4](#) or [λ/10](#) UV Fused Silica Windows Also Available
- TECHSPEC® 1λ UV Fused Silica Windows are precision manufactured using UV-grade synthetic fused silica. In addition to superior transmission, the synthetic fused silica of these optical windows exhibits higher thermal properties, exceptional purity, and excellent environmental durability for demanding applications. The windows are ideal for cost-sensitive broadband applications and are available uncoated or with broadband anti-reflection coatings. TECHSPEC® 1λ UV Fused Silica Windows have circular and square sizes ranging from 5mm to 100mm. [λ/4](#) or [λ/10](#) UV Fused Silica Windows are also available.
- Note:** New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

## Technical Information

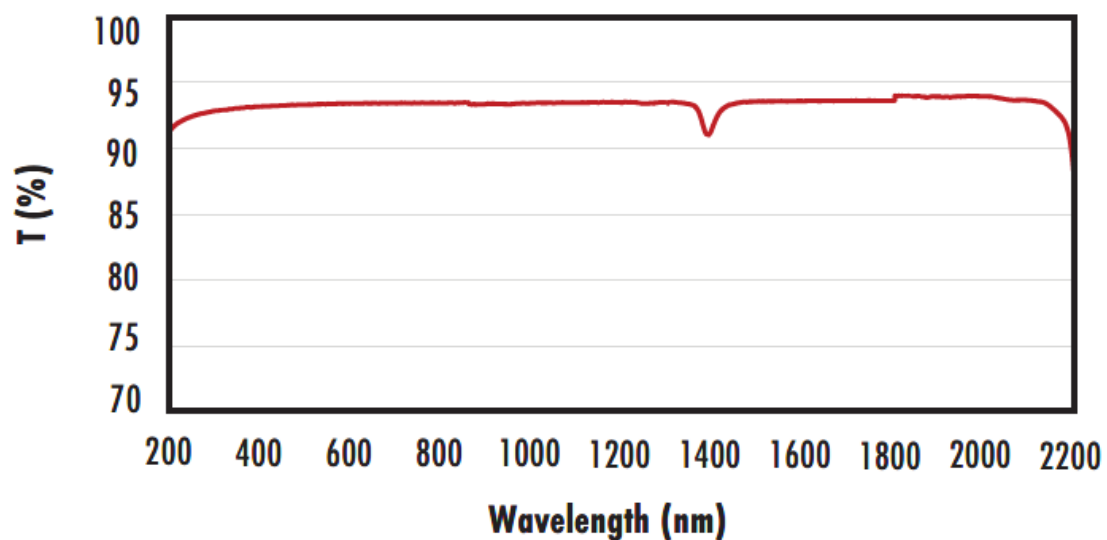


UV FS Transmission Curve



## FUSED SILICA

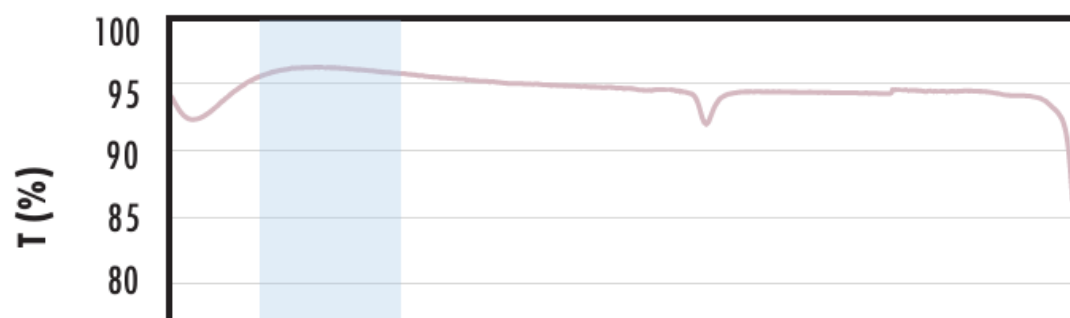
### Uncoated Fused Silica Typical Transmission



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

[Click Here to Download Data](#)

### Fused Silica with MgF<sub>2</sub> Coating Typical Transmission



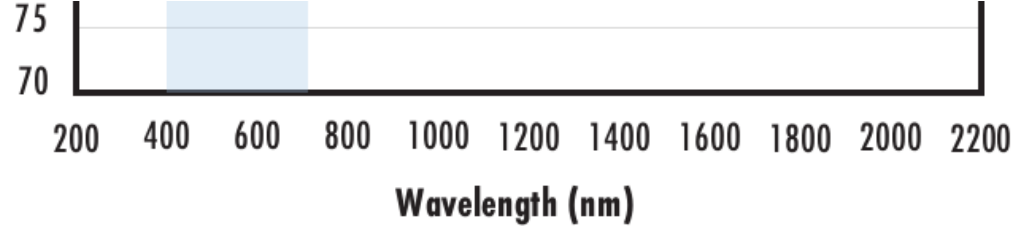
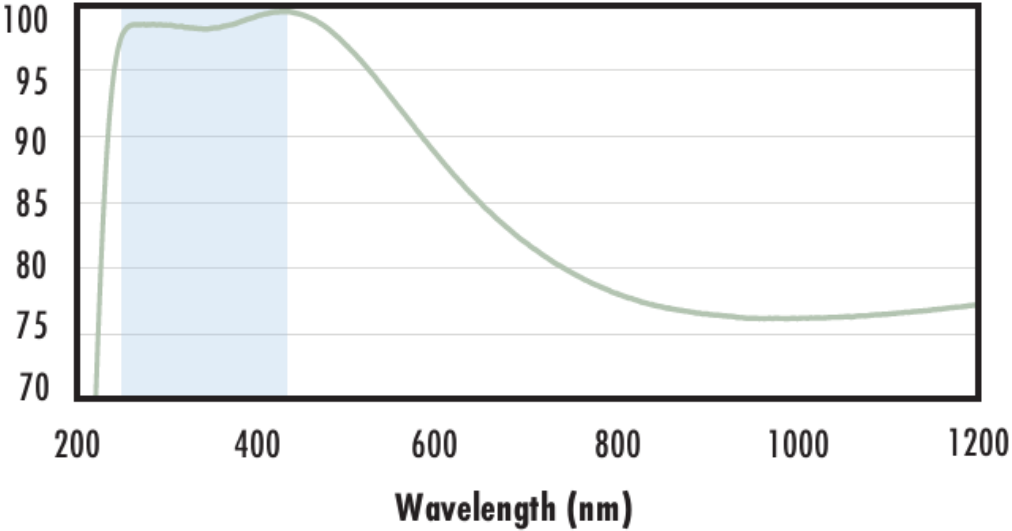
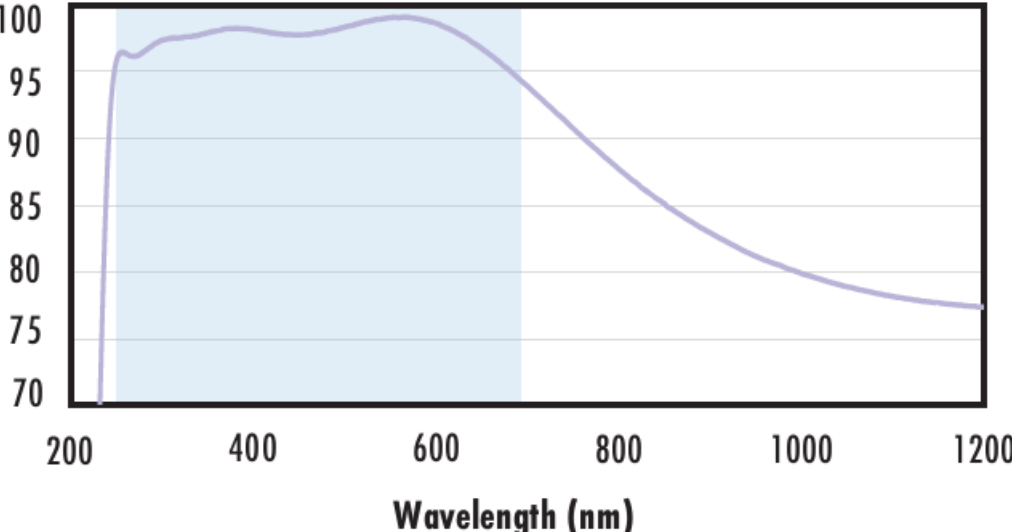
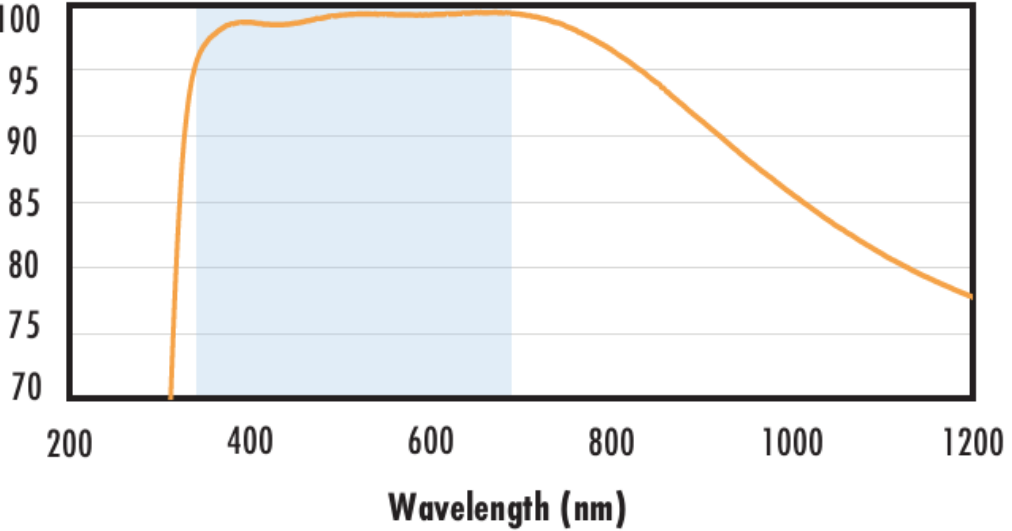
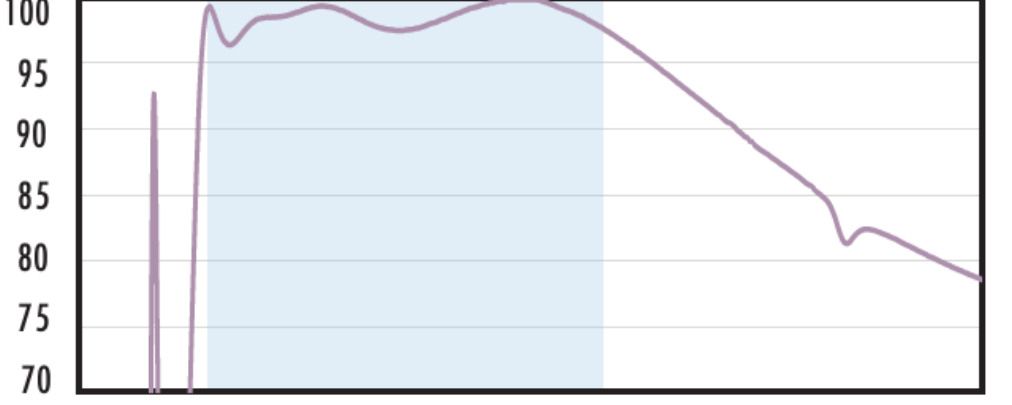
Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

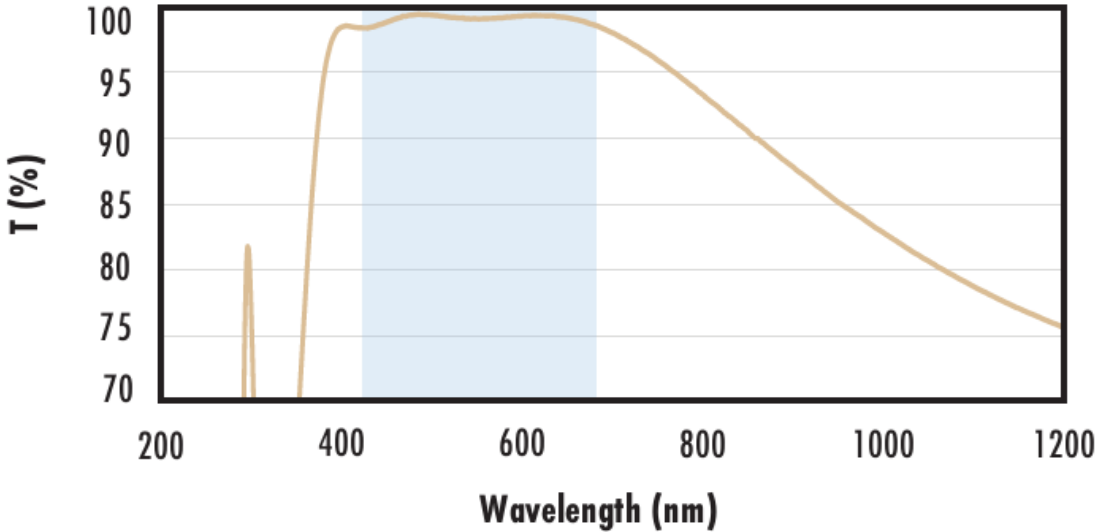
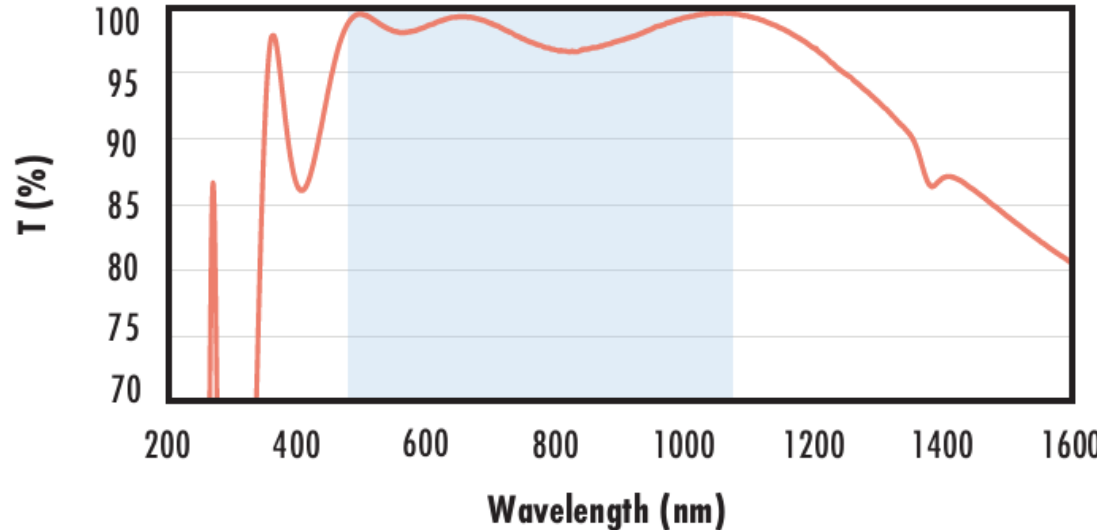
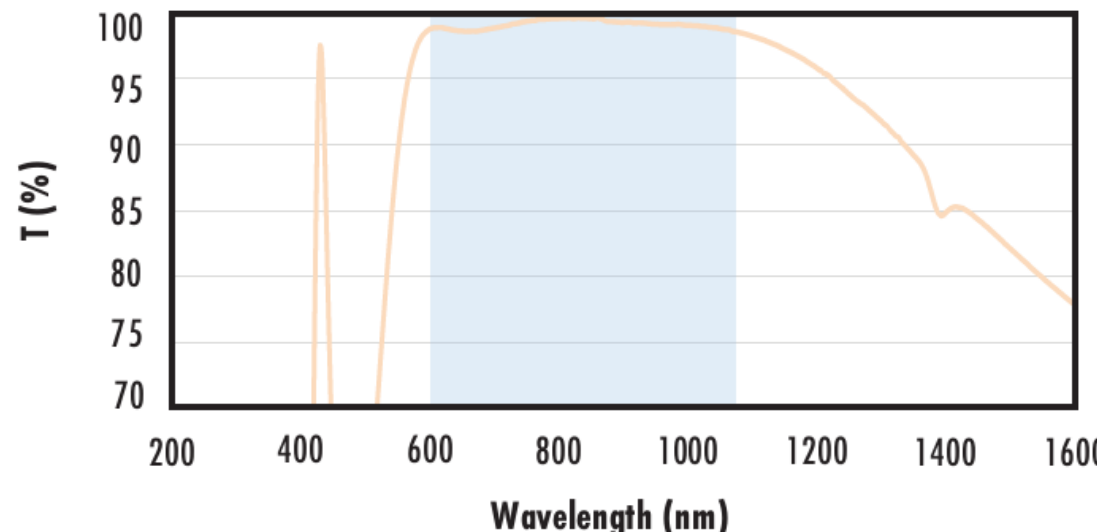
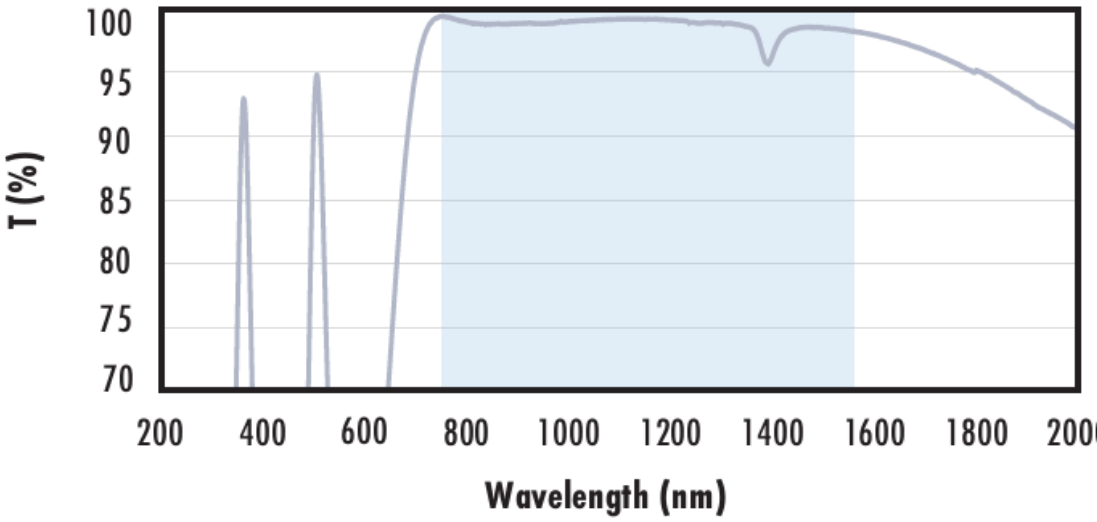
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p data-bbox="583 326 1075 430"><b>Fused Silica with UV-AR Coating</b><br/><b>Typical Transmission</b></p>        | <p data-bbox="1329 486 1854 534">Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p data-bbox="1329 549 1854 596">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1474 611 1709 685"><p><math>R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}</math></p><p><math>R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}</math></p><p><math>R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}</math></p></div> <p data-bbox="1329 697 1854 744">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 756 1709 780"><a href="#">Click Here to Download Data</a></p>           |
| <p data-bbox="573 1006 1085 1110"><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 1166 1854 1213">Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p data-bbox="1329 1228 1854 1276">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1474 1291 1709 1338"><p><math>R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}</math></p><p><math>R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}</math></p></div> <p data-bbox="1329 1377 1854 1424">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1436 1709 1460"><a href="#">Click Here to Download Data</a></p>                                                                     |
| <p data-bbox="567 1685 1079 1789"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1866 1854 1914">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1329 1929 1854 1976">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1474 1991 1709 2015"><p><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></p></div> <p data-bbox="1329 2030 1854 2077">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2089 1709 2113"><a href="#">Click Here to Download Data</a></p>                                                                                                                                        |
| <p data-bbox="573 2365 1085 2469"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 2504 1854 2552">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1329 2567 1854 2614">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1474 2629 1709 2703"><p><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math></p><p><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math></p><p><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></p></div> <p data-bbox="1329 2739 1854 2786">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2798 1709 2822"><a href="#">Click Here to Download Data</a></p> |

| 2004006008001000120014001600                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wavelength (nm)                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <div>Fused Silica with VIS 0° Coating</div> <div>Typical Transmission</div> <div></div>     |  | <p>Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) 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 0.4\% @ 425 - 675\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>                                                                                                                        |
| <div>Fused Silica with YAG-BBAR Coating</div> <div>Typical Transmission</div> <div></div> |  | <p>Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) 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 0.25\% @ 532\text{nm}</math><br/><math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math><br/><math>R_{avg} \leq 1.0\% @ 500 - 1100\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>           |
| <div>Fused Silica with NIR I Coating</div> <div>Typical Transmission</div> <div></div>    |  | <p>Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) 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 0.5\% @ 600 - 1050\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>                                                                                                                     |
| <div>Fused Silica with NIR II Coating</div> <div>Typical Transmission</div> <div></div>   |  | <p>Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) 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 1.5\% @ 750 - 800\text{nm}</math><br/><math>R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}</math><br/><math>R_{avg} \leq 0.7\% @ 750 - 1550\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> |

# 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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