

TECHSPEC<sup>®</sup> 50mm Dia., 5mm Thick, NIR I Coated  $\lambda$ /10 Fused Silica Window



Stock **#84-468** 1 In Stock

-

1

+

S\$443<sup>.80</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | S\$443.80 each                |
| Qty 6-25       | S\$352.80 each                |
| Qty 26-49      | S\$331.80 each                |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

General

Type:Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):40.00

Diameter (mm):50.00 +0.00/-0.20

|                      |                             |
|----------------------|-----------------------------|
| 5.00 ±0.10           | Thickness (mm):             |
| +0.00/-0.20          | Dimensional Tolerance (mm): |
| Protective as needed | Bevel:                      |
| 80                   | Clear Aperture (%):         |
| Fine Ground          | Edges:                      |
| <5                   | Parallelism (arcsec):       |
| 0.16                 | Poisson's Ratio:            |
| 73                   | Young's Modulus (GPa):      |
| 522.00               | Knoop Hardness (kg/mm²):    |

Optical Properties

|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| NIR I (600-1050nm)                    | Coating:                                              |
| Fused Silica (Corning 7980)           | Substrate: <input type="checkbox"/>                   |
| 1.458                                 | Index of Refraction (n <sub>d</sub> ):                |
| 20-10                                 | Surface Quality:                                      |
| λ/10                                  | Transmitted Wavefront, P-V:                           |
| 67.8                                  | Abbe Number (v <sub>d</sub> ):                        |
| R <sub>avg</sub> ≤0.5% @ 600 - 1050nm | Coating Specification:                                |
| 600 - 1050                            | Wavelength Range (nm):                                |
| 7 J/cm² @ 1064nm, 10ns                | Damage Threshold, Reference: <input type="checkbox"/> |

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): |
| 7980 0G                                                           | Fused Silica Grade:                                          |

Regulatory Compliance

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

## Need different specs or modifications?

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](#).

## Product Details

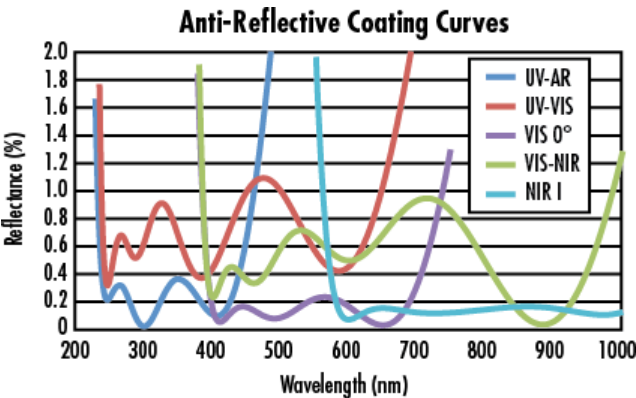
- UV, Visible, and NIR Anti-Reflection Coated Versions Available
- λ/10 Transmitted Wavefront Distortion
- Circular and Square Sizes from 2mm to 150mm
- [1λ](#) or [λ/4](#) UV Fused Silica Windows Also Available

TECHSPEC® N10 UV Fused Silica Windows feature laser-grade surface quality and parallelism. In addition, these windows will limit the transmitted wavefront distortion to  $\lambda/10$ . The superior transmission characteristics, excellent thermal properties, and high tolerance manufacturing specifications make these windows an excellent choice for more demanding applications. TECHSPEC N10 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.

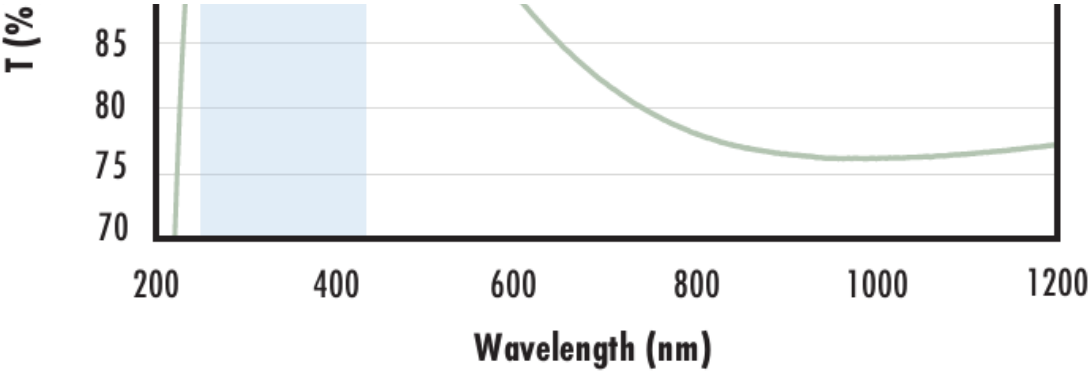
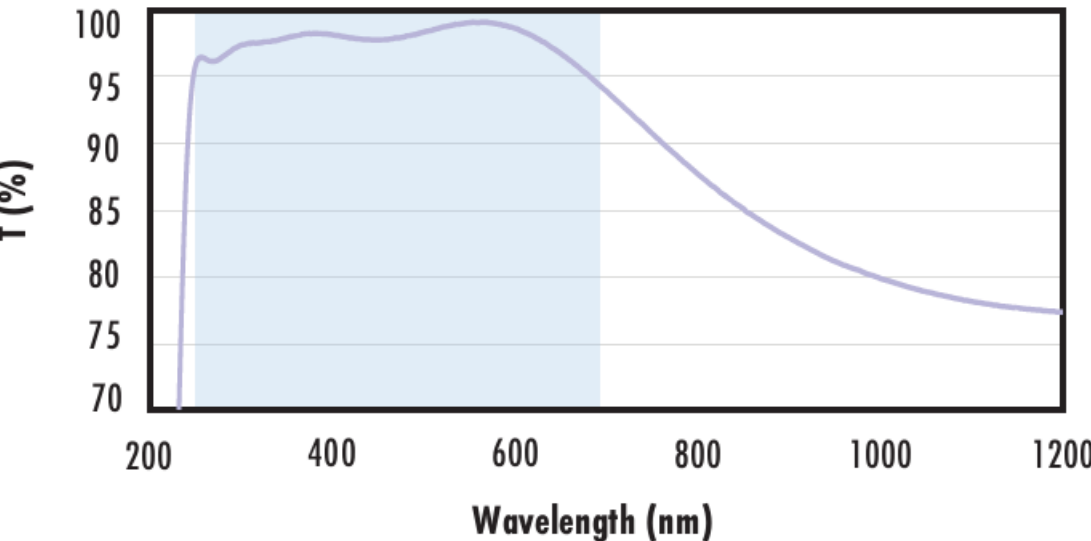
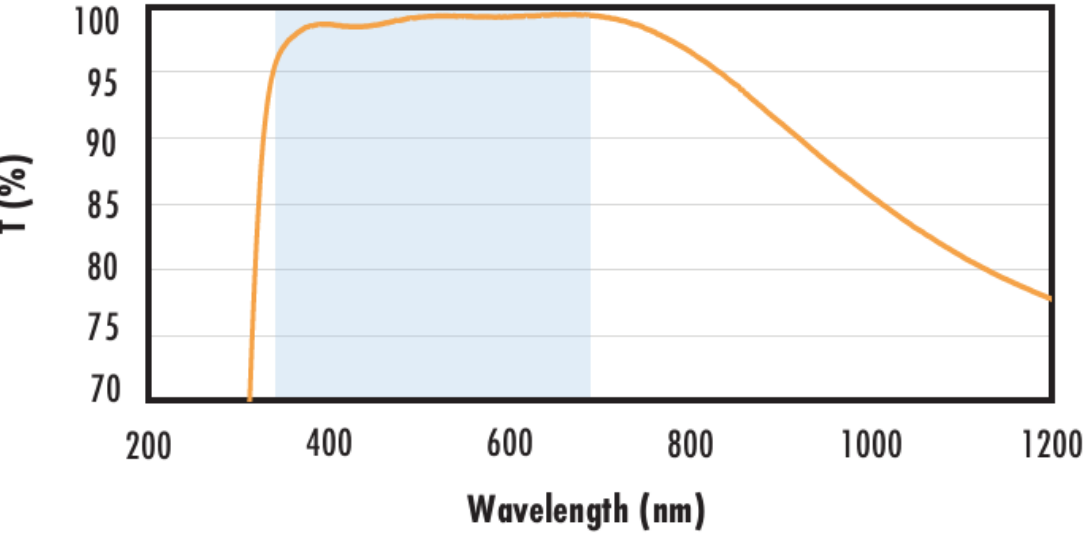
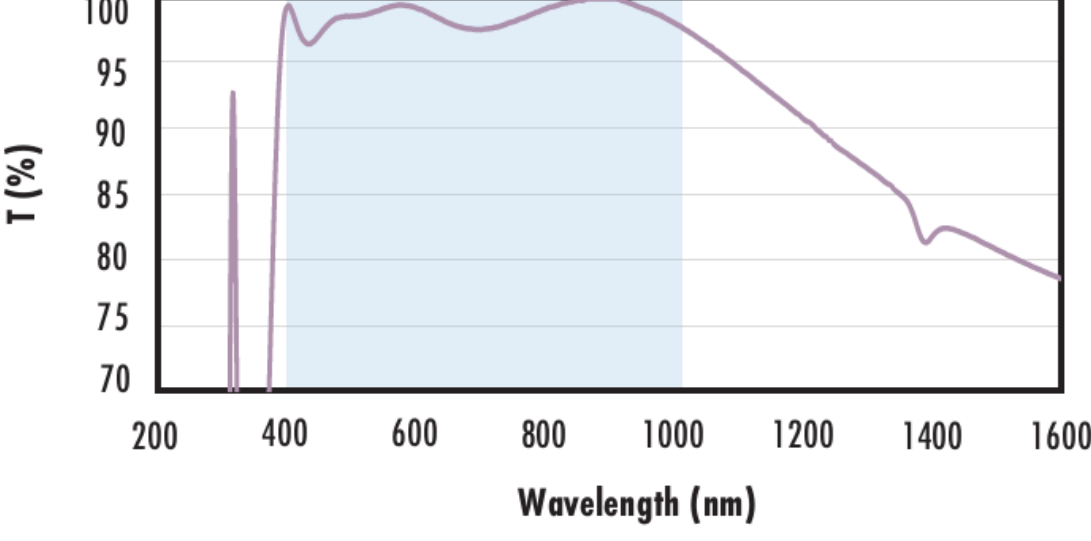
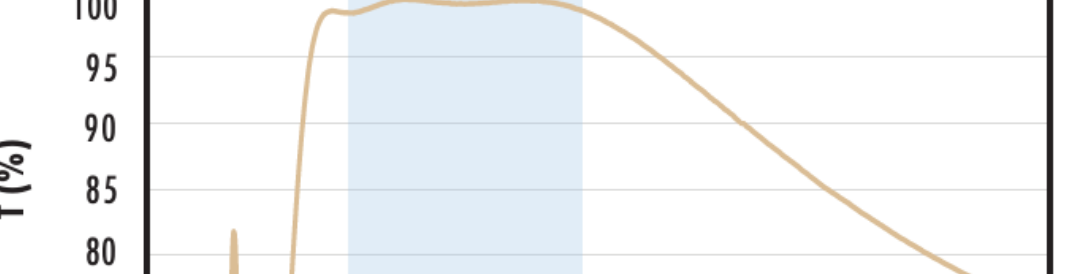
Technical Information

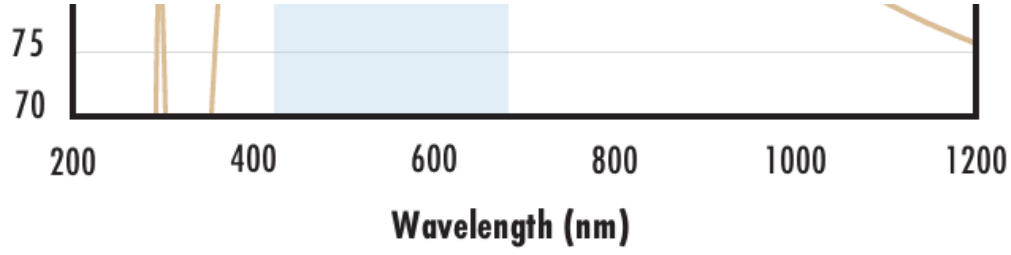
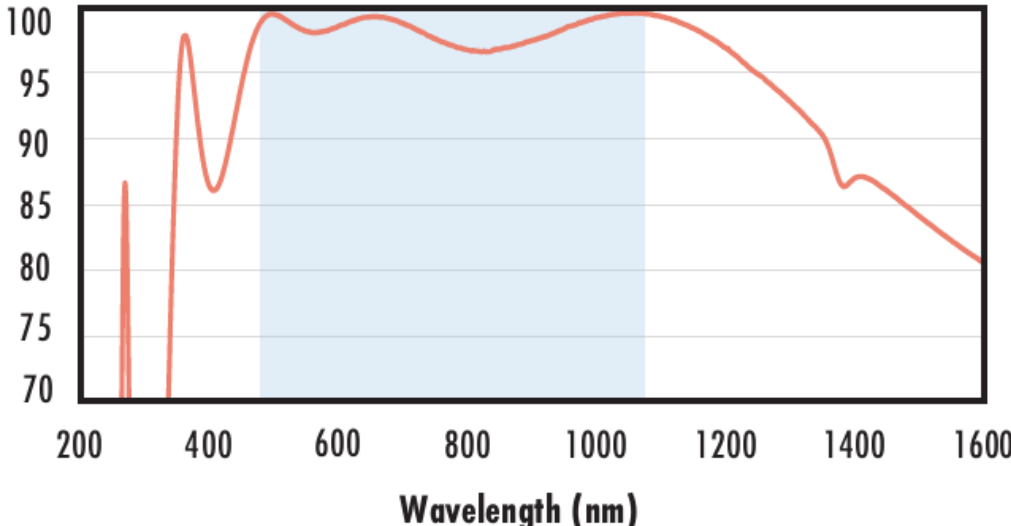
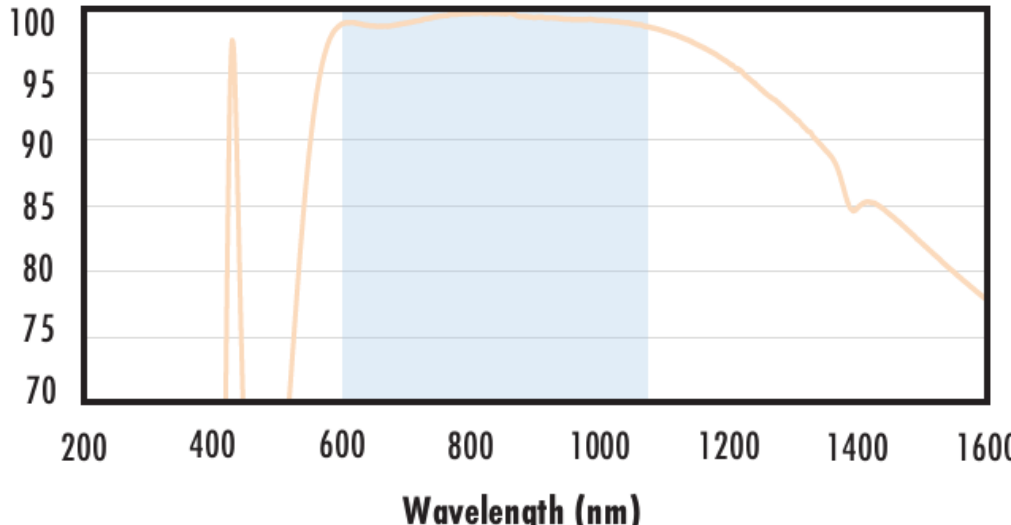
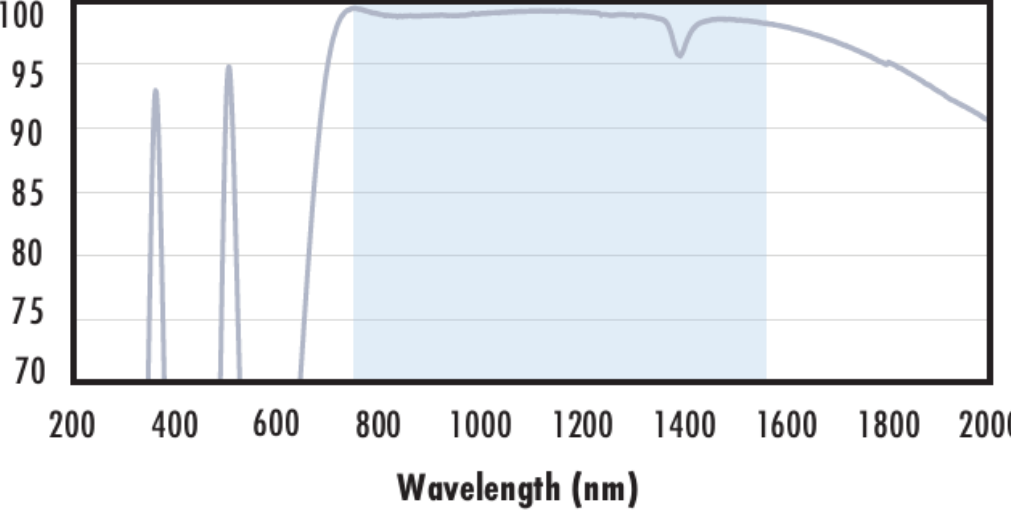


UV FS Transmission Curve



| FUSED SILICA                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>Uncoated Fused Silica<br/>Typical Transmission</div><div><div><div>T (%)</div><div><div></div></div><div>2004006008001000120014001600180020002200</div><div><div>Wavelength (nm)</div></div></div></div></div>                     | <div><div>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</div><div><a href="#">Click Here to Download Data</a></div></div>                                                                                                                                                                                                                                                                                                                |
| <div><div>Fused Silica with MgF<sub>2</sub> Coating<br/>Typical Transmission</div><div><div><div>T (%)</div><div><div></div></div><div>2004006008001000120014001600180020002200</div><div><div>Wavelength (nm)</div></div></div></div></div> | <div><div>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:<div><div><div><math>R_{avg} \leq 1.75\%</math></div><div>@ 400 - 700nm (N-BK7)</div></div></div><div>Data outside this range is not guaranteed and is for reference only.</div><div><a href="#">Click Here to Download Data</a></div></div></div> |
| <div><div>Fused Silica with UV-AR Coating<br/>Typical Transmission</div><div><div><div></div><div><div></div></div><div></div></div></div></div>                                                                                             | <div><div>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</div><div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div></div>                                                                                                                                                                                                                                                 |

|                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | <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> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 0.5\% @ 350 - 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-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p>Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) 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\% @ 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 890 - 1000\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 0° Coating</b><br/><b>Typical Transmission</b></p>   | <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>                                                                                                                                                                      |

|                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                   | <a href="#">Click Here to Download Data</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p data-bbox="548 341 1108 448"><b>Fused Silica with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1339 498 1850 546">Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1339 560 1850 608">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 623 1717 697"><p><math>R_{abs} \leq 0.25\% @ 532nm</math></p><p><math>R_{abs} \leq 0.25\% @ 1064nm</math></p><p><math>R_{avg} \leq 1.0\% @ 500 - 1100nm</math></p></div> <p data-bbox="1339 709 1850 756">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 771 1717 792"><a href="#">Click Here to Download Data</a></p>                     |
| <p data-bbox="594 1018 1066 1124"><b>Fused Silica with NIR I Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 1196 1860 1243">Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1329 1258 1860 1305">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1320 1717 1347"><p><math>R_{avg} \leq 0.5\% @ 600 - 1050nm</math></p></div> <p data-bbox="1329 1359 1860 1406">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1421 1717 1442"><a href="#">Click Here to Download Data</a></p>                                                                                                           |
| <p data-bbox="581 1700 1075 1807"><b>Fused Silica with NIR II Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1837 1860 1884">Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1329 1899 1860 1947">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1961 1717 2036"><p><math>R_{abs} \leq 1.5\% @ 750 - 800nm</math></p><p><math>R_{abs} \leq 1.0\% @ 800 - 1550nm</math></p><p><math>R_{avg} \leq 0.7\% @ 750 - 1550nm</math></p></div> <p data-bbox="1329 2068 1860 2116">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 2131 1717 2151"><a href="#">Click Here to Download Data</a></p> |

Compatible Mounts