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TECHSPEC<sup>®</sup> 25mm Dia. x 500mm, UV-VIS Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#48-852 7 In Stock**

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-

1

+

€159<sup>.00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | €159,00 each                  |
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| Qty 26-49      | €119,00 each                  |
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Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

|                      |                           |
|----------------------|---------------------------|
| 25.00 +0.0/-0.025    | Diameter (mm):            |
| <1                   | Centering (arcmin):       |
| Protective as needed | Bevel:                    |
| 3.35 ±0.10           | Center Thickness CT (mm): |
| 3.01                 | Edge Thickness ET (mm):   |
| 24.00                | Clear Aperture CA (mm):   |

|                                                                              |                                                       |
|------------------------------------------------------------------------------|-------------------------------------------------------|
| Optical Properties                                                           |                                                       |
| 498.85                                                                       | Back Focal Length BFL (mm):                           |
| 500.00                                                                       | Effective Focal Length EFL (mm):                      |
| UV-VIS (250-700nm)                                                           | Coating:                                              |
| R <sub>abs</sub> ≤1.0% @ 350 - 450nm<br>R <sub>avg</sub> ≤1.5% @ 250 - 700nm | Coating Specification:                                |
| Fused Silica (Corning 7980)                                                  | Substrate: <input type="checkbox"/>                   |
| 40-20                                                                        | Surface Quality:                                      |
| 1.5λ                                                                         | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                          | Irregularity (P-V) @ 632.8nm:                         |
| 457.93                                                                       | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 20.00                                                                        | f/#:                                                  |
| 587.6                                                                        | Focal Length Specification Wavelength (nm):           |
| ±1                                                                           | Focal Length Tolerance (%):                           |
| 0.03                                                                         | Numerical Aperture NA:                                |
| 250 - 700                                                                    | Wavelength Range (nm):                                |
| 3 J/cm <sup>2</sup> @ 355nm, 10ns<br>5 J/cm <sup>2</sup> @ 532nm, 10ns       | Damage Threshold, Reference: <input type="checkbox"/> |

|                       |                             |
|-----------------------|-----------------------------|
| 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

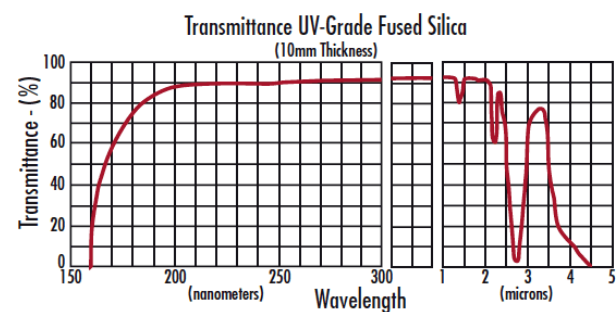
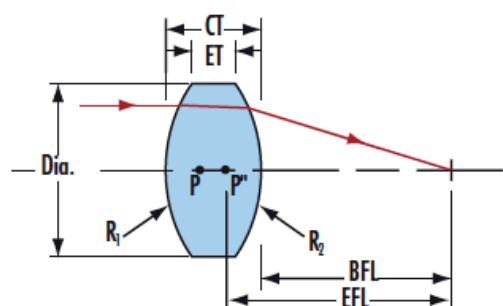
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

- 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.

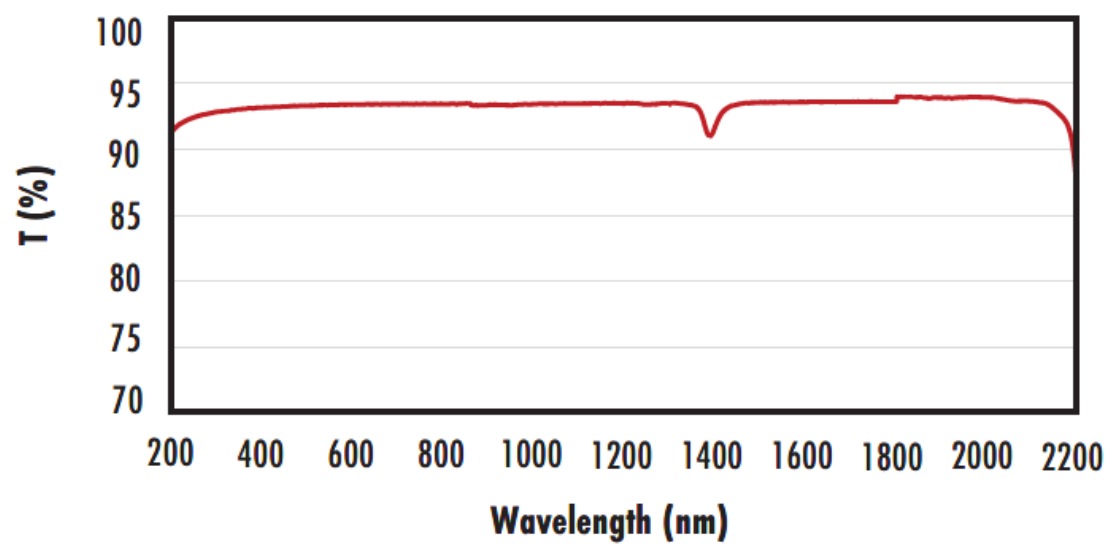
# Technical Information



UV FS Transmission Curve

## FUSED SILICA

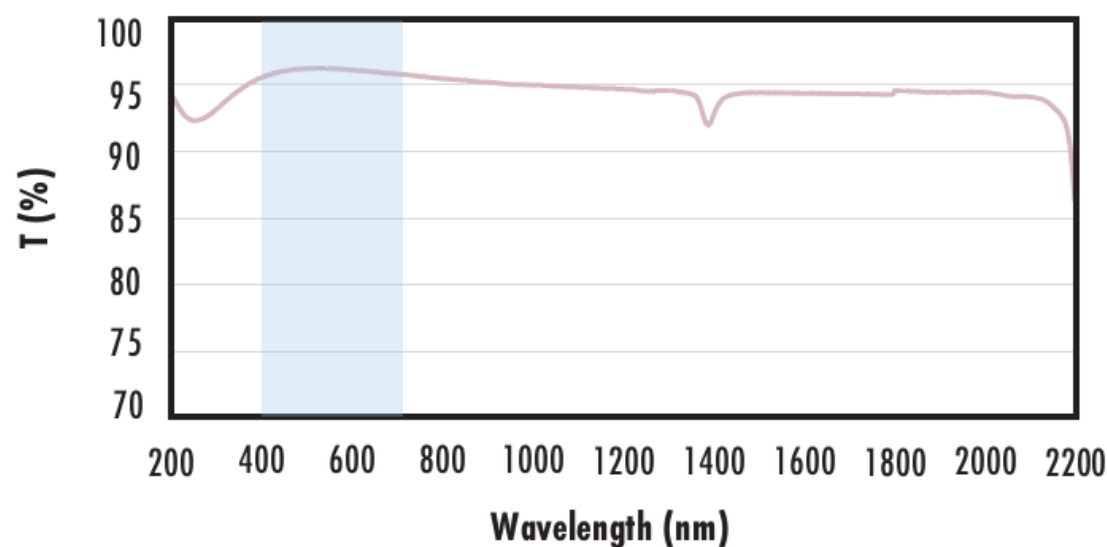
### Uncoated Fused Silica Typical Transmission



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.

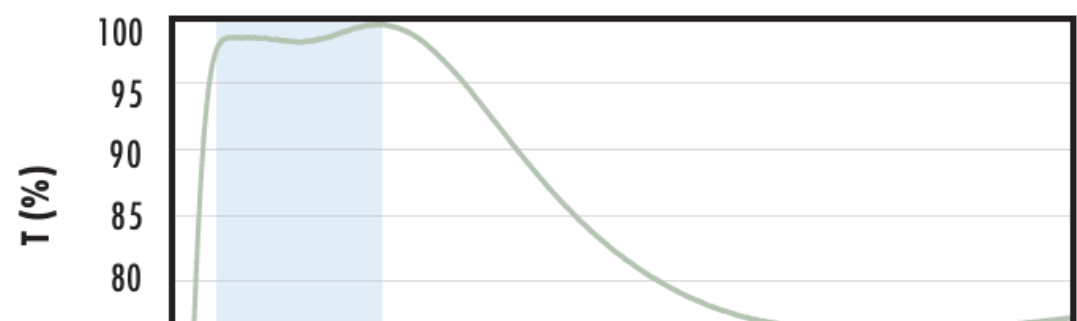
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

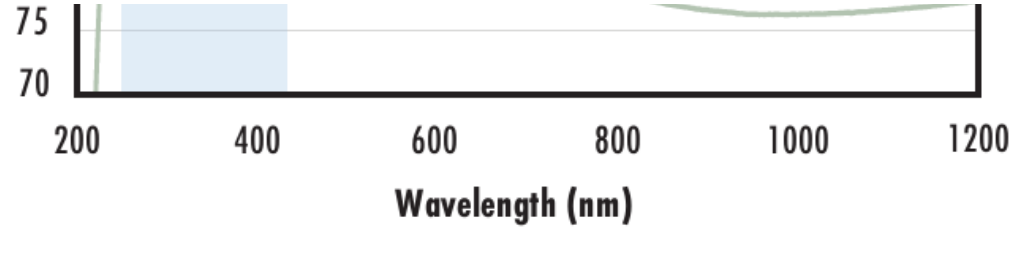
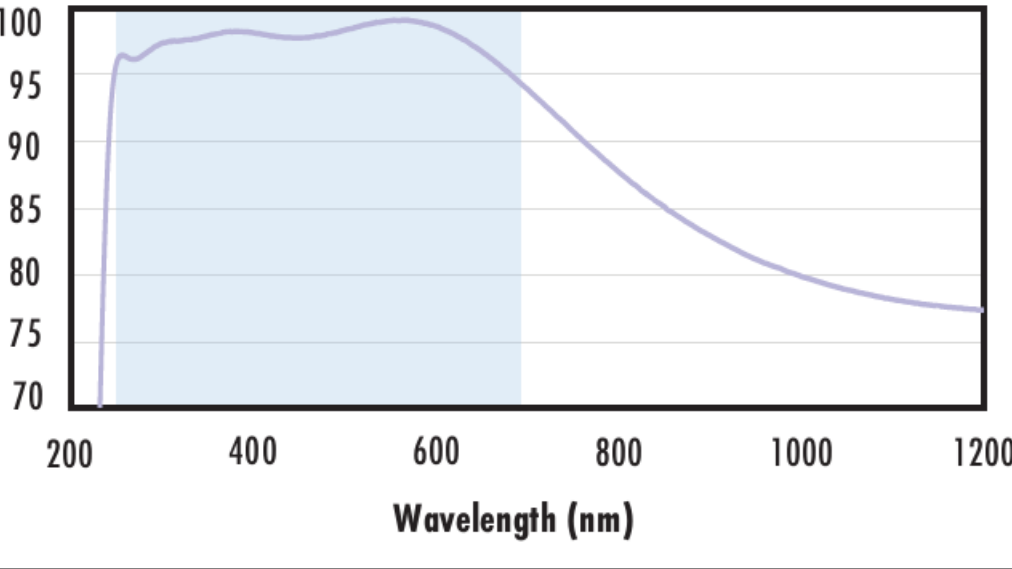
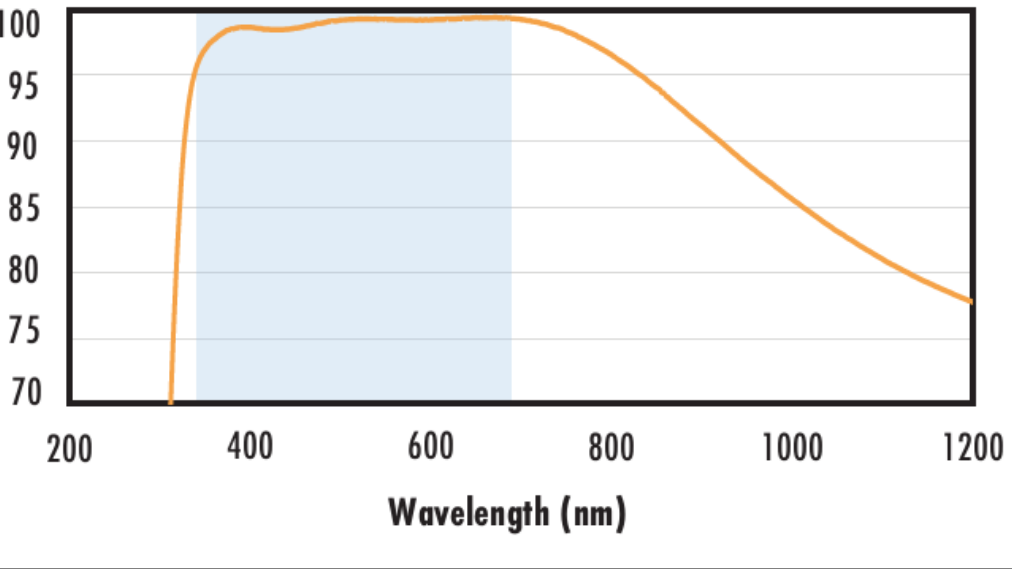
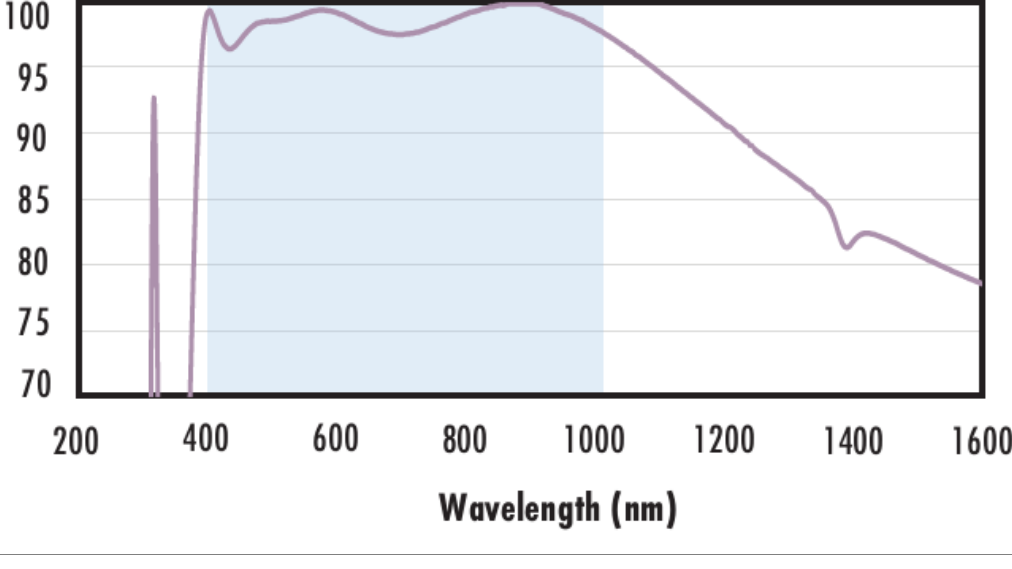
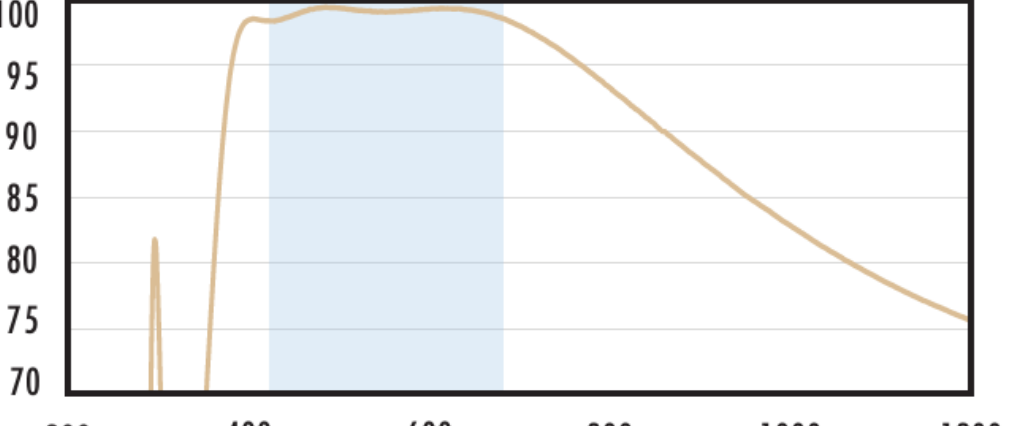
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}$$

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

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    | <a href="#">Click Here to Download Data</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p data-bbox="573 329 1083 439"><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1329 492 1850 543">Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p data-bbox="1329 557 1850 608">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 617 1703 670"><math>R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}</math><math>R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}</math></div> <p data-bbox="1329 706 1850 756">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 765 1703 789"><a href="#">Click Here to Download Data</a></p>                                                                        |
| <p data-bbox="573 1009 1083 1118"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1196 1850 1246">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1329 1261 1850 1311">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1320 1703 1347"><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <p data-bbox="1329 1359 1850 1409">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 1418 1703 1442"><a href="#">Click Here to Download Data</a></p>                                                                                                                          |
| <p data-bbox="573 1688 1083 1798"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1834 1850 1884">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1329 1899 1850 1949">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1958 1703 2033"><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></div> <p data-bbox="1329 2068 1850 2119">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2128 1703 2151"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="573 2368 1083 2478"><b>Fused Silica with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 2543 1850 2594">Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1329 2608 1850 2659">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 2668 1703 2694"><math>R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}</math></div> <p data-bbox="1329 2706 1850 2757">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2766 1703 2789"><a href="#">Click Here to Download Data</a></p>                                                                                                                           |

|                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>20040060080010001200</div> <div>Wavelength (nm)</div>                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div><div>Fused Silica with YAG-BBAR Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div>2004006008001000120014001600</div><div>Wavelength (nm)</div></div></div></div>       | <div>Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><math>R_{abs} \leq 0.25\%</math> @ 532nm</div><div><math>R_{abs} \leq 0.25\%</math> @ 1064nm</div><div><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</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>Fused Silica with NIR I Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div>2004006008001000120014001600</div><div>Wavelength (nm)</div></div></div></div>          | <div>Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</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>Fused Silica with NIR II Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div>200400600800100012001400160018002000</div><div>Wavelength (nm)</div></div></div></div> | <div>Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><div><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</div><div><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</div><div><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</div></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> |

Compatible Mounts