

[See all 68 Products in Family](#)

TECHSPEC<sup>®</sup> 9.0mm Dia. x -18 FL, VIS-NIR, UV Plano-Concave Lens



UV Fused Silica Plano-Concave (PCV) Lenses



Stock #21-047 1 In Stock

[Other Coating Options](#)

-

1

+

C\$210<sup>00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | C\$210.00 each                |
| Qty 6-25       | C\$168.00 each                |
| Qty 26-49      | C\$158.20 each                |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

General

Plano-Concave Lens

Type:

Max. Flat Annulus is 0.3mm

Note:

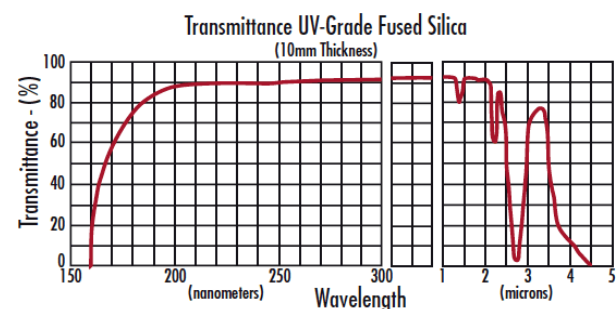
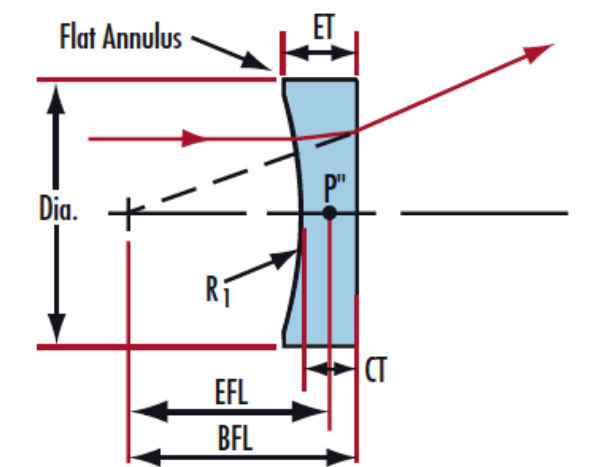
| Physical & Mechanical Properties                                                                                   |                                                       |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 9.00 +0.0/-0.025                                                                                                   | Diameter (mm):                                        |
| 2.00                                                                                                               | Center Thickness CT (mm):                             |
| ±0.05                                                                                                              | Center Thickness Tolerance (mm):                      |
| <1                                                                                                                 | Centering (arcmin):                                   |
| 8.1                                                                                                                | Clear Aperture CA (mm):                               |
| 3.15                                                                                                               | Edge Thickness ET (mm):                               |
| Optical Properties                                                                                                 |                                                       |
| -18.00                                                                                                             | Effective Focal Length EFL (mm):                      |
| <a href="#">Fused Silica</a> (Corning 7980)                                                                        | Substrate: <input type="checkbox"/>                   |
| 2.00                                                                                                               | f/#:                                                  |
| 0.25                                                                                                               | Numerical Aperture NA:                                |
| VIS-NIR (400-1000nm)                                                                                               | Coating:                                              |
| 400 - 1000                                                                                                         | Wavelength Range (nm):                                |
| -19.37                                                                                                             | Back Focal Length BFL (mm):                           |
| R <sub>abs</sub> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm | Coating Specification:                                |
| 587.6                                                                                                              | Focal Length Specification Wavelength (nm):           |
| ±1                                                                                                                 | Focal Length Tolerance (%):                           |
| -8.25                                                                                                              | Radius R <sub>1</sub> (mm):                           |
| 40-20                                                                                                              | Surface Quality:                                      |
| 5 J/cm <sup>2</sup> @ 532nm, 10ns                                                                                  | Damage Threshold, Reference: <input type="checkbox"/> |
| 1.5λ                                                                                                               | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                                | Irregularity (P-V) @ 632.8nm:                         |
| Regulatory Compliance                                                                                              |                                                       |
| <a href="#">Compliant</a>                                                                                          | RoHS 2015:                                            |
| <a href="#">View</a>                                                                                               | Certificate of Conformance:                           |
| <a href="#">Compliant</a>                                                                                          | Reach 235:                                            |

## Product Details

- Negative Focal Lengths for Beam Expansion or Light Projection Applications
- Wavelength Range of 200 - 2200nm
- Popular UV-AR Coating Option Available

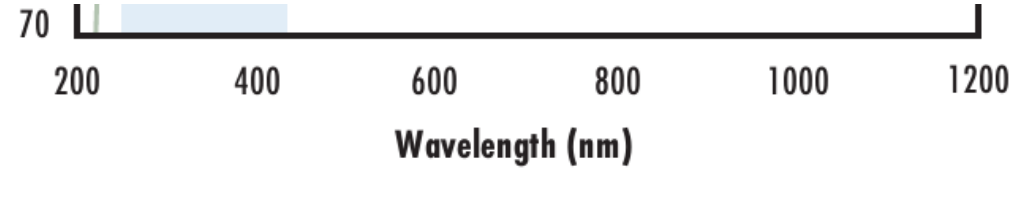
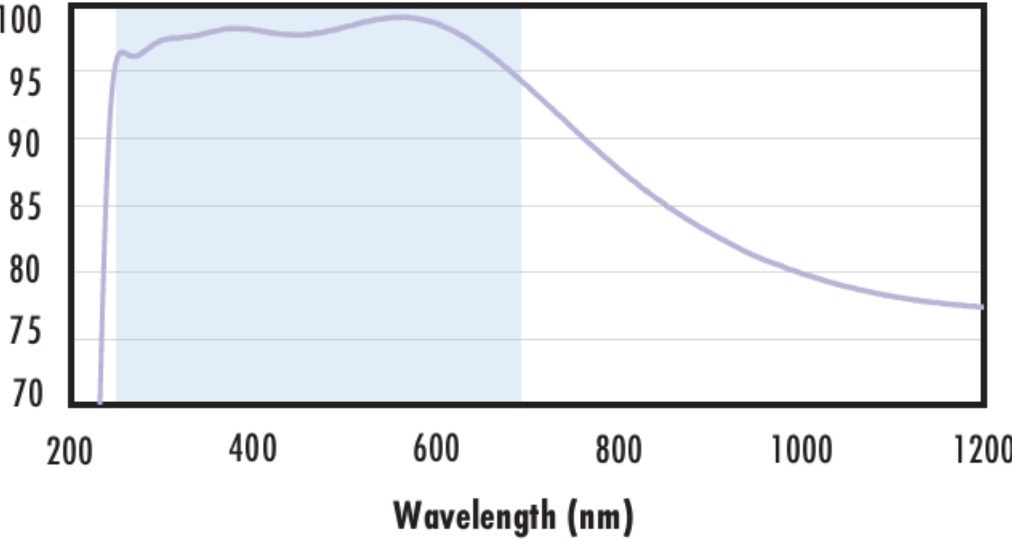
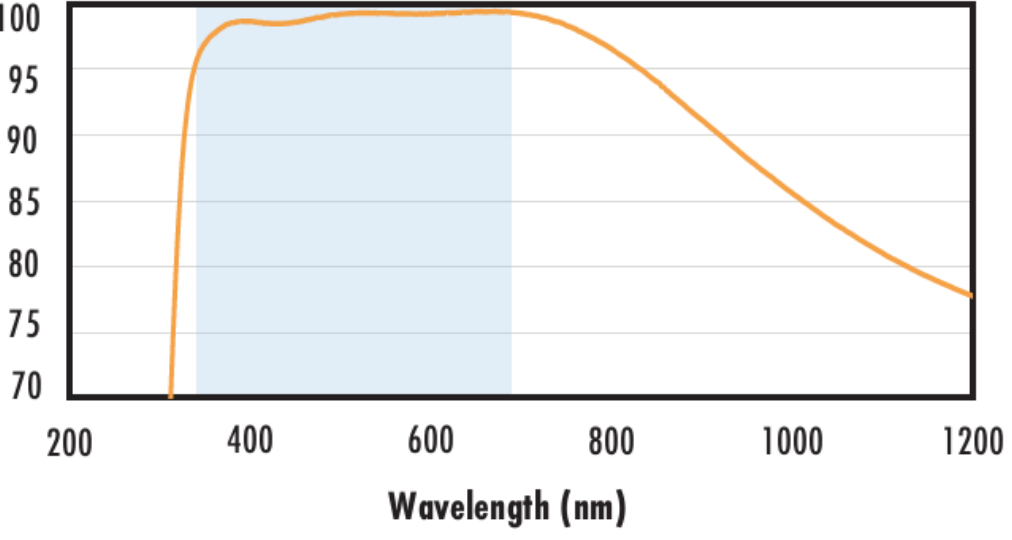
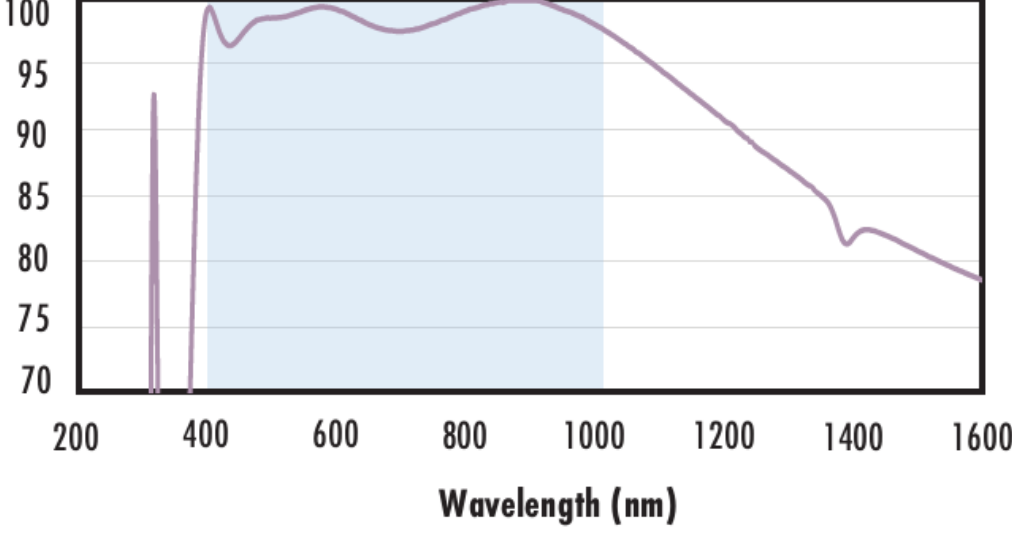
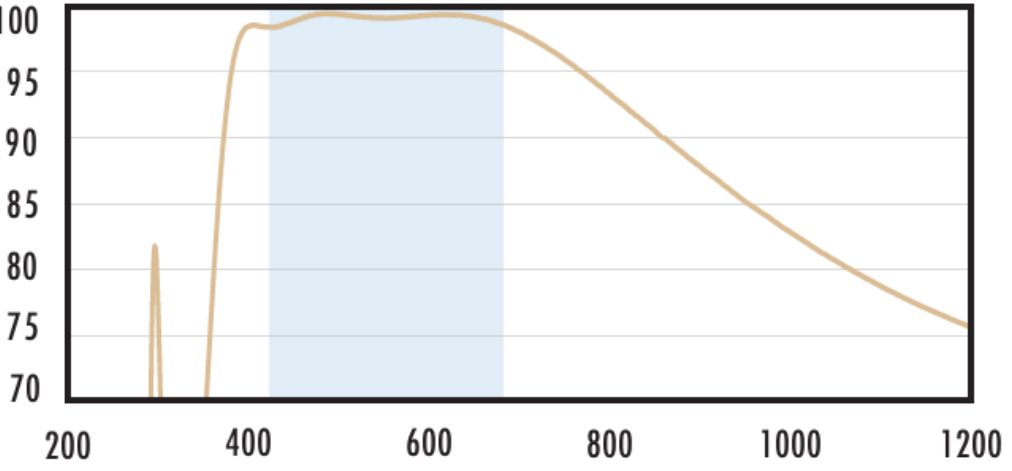
TECHSPEC® UV Fused Silica Plano-Concave (PCV) Lenses are high performance UV optic elements, manufactured utilizing state of the art CNC equipment. Zygo's GPI-XP Interferometer is used to assure the surface accuracy and performance of these UV optics. UV Grade lenses are precision manufactured using research-grade synthetic fused silica. In addition to providing excellent transmission characteristics and higher operating temperatures, synthetic fused silica also exhibits an exceptional inclusion specification and chemical purity. TECHSPEC® UV Fused Silica Plano-Concave (PCV) Lenses are an ideal choice for many laser and imaging applications, particularly those involving ultraviolet wavelengths. A broadband anti-reflection coating is available for optimized throughput in the ultraviolet spectrum.

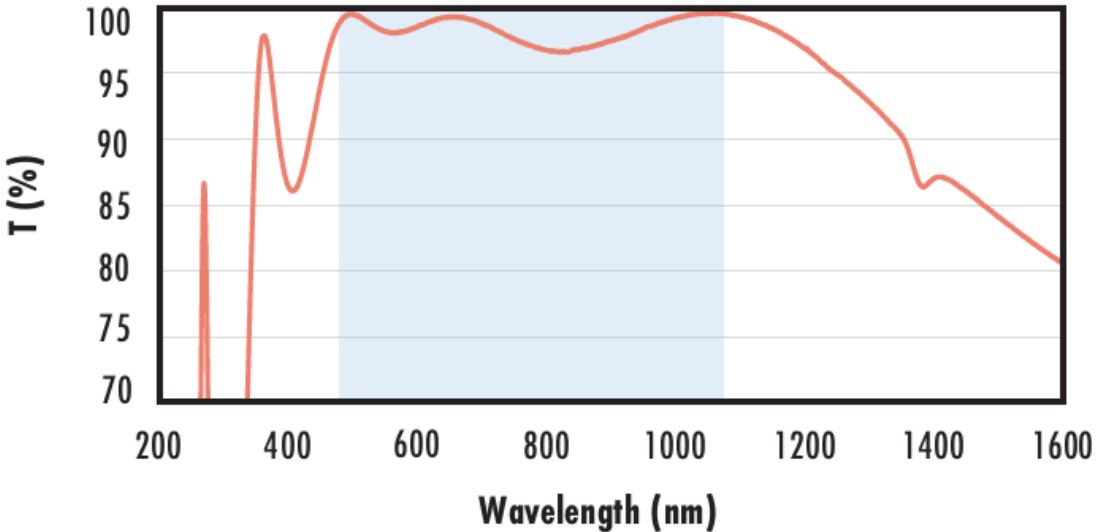
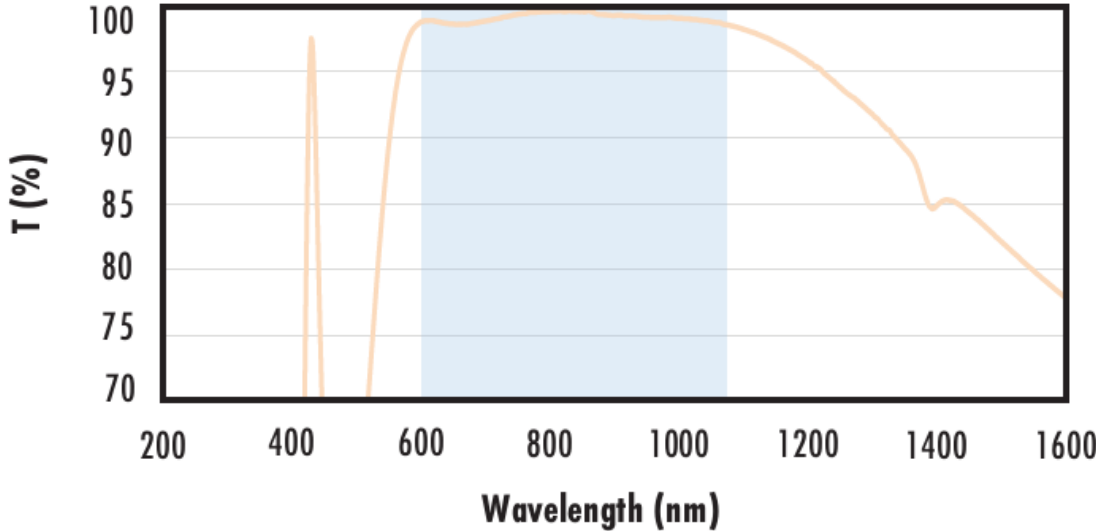
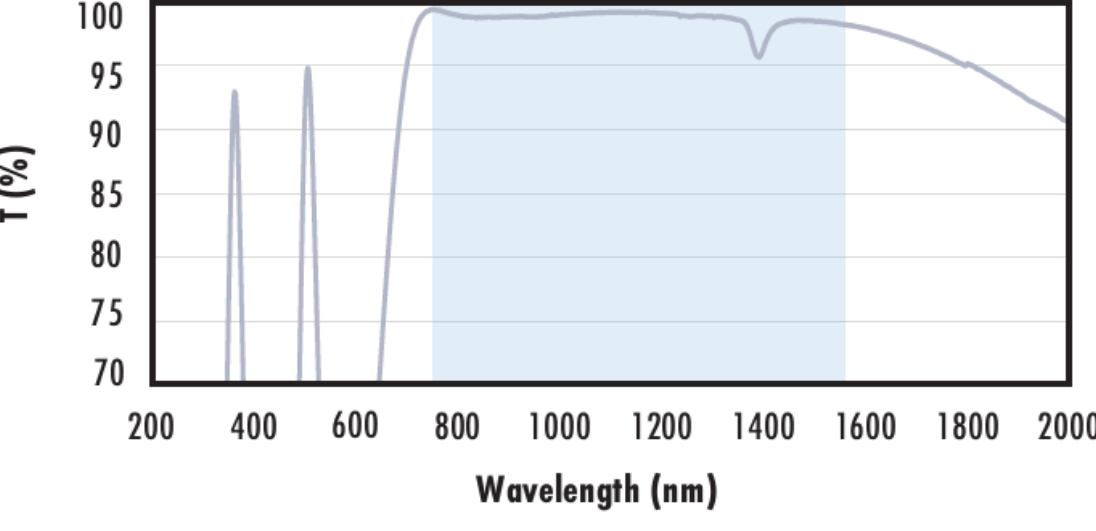
## Technical Information



UV FS Transmission Curve

| FUSED SILICA                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>Uncoated Fused Silica<br/>Typical Transmission</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>Fused Silica with MgF<sub>2</sub> Coating<br/>Typical Transmission</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><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</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 UV-AR Coating<br/>Typical Transmission</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><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></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> |

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p data-bbox="573 278 1083 385"><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1329 439 1854 489">Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p data-bbox="1329 501 1854 552">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1478 563 1705 614"><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 649 1854 700">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 712 1705 736"><a href="#">Click Here to Download Data</a></p>                                                                        |
| <p data-bbox="567 958 1079 1065"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 1142 1854 1193">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1329 1205 1854 1255">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1478 1267 1705 1291"><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <p data-bbox="1329 1302 1854 1353">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 1365 1705 1389"><a href="#">Click Here to Download Data</a></p>                                                                                                                          |
| <p data-bbox="573 1638 1083 1745"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1780 1854 1831">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1329 1843 1854 1893">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1467 1905 1715 1979"><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 2015 1854 2065">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 2077 1705 2101"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="569 2309 1073 2415"><b>Fused Silica with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 2487 1854 2537">Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1329 2549 1854 2599">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1478 2611 1705 2635"><math>R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}</math></div> <p data-bbox="1329 2647 1854 2697">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 2709 1705 2733"><a href="#">Click Here to Download Data</a></p>                                                                                                                           |

| Wavelength (nm)                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div><div>Fused Silica with YAG-BBAR Coating</div><div>Typical Transmission</div><div></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\%</math> @ 532nm<br/><math>R_{abs} \leq 0.25\%</math> @ 1064nm<br/><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</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><div><div>Fused Silica with NIR I Coating</div><div>Typical Transmission</div><div></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\%</math> @ 600 - 1050nm</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><div><div>Fused Silica with NIR II Coating</div><div>Typical Transmission</div><div></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\%</math> @ 750 - 800nm<br/><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm<br/><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</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> |

Coating Curves

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

