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TECHSPEC<sup>®</sup> 9mm Dia. x 27mm FL, VIS 0° Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#49-997 7 In Stock**

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-

1

+

₹10,354

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| Volume Pricing |                               |
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| Qty 1-5        | ₹10,354 each                  |
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Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

|                      |                           |
|----------------------|---------------------------|
| 9.00 +0.0/-0.025     |                           |
| <1                   | Centering (arcmin):       |
|                      | Bevel:                    |
| Protective as needed |                           |
|                      | Center Thickness CT (mm): |
| 2.50 ±0.05           |                           |
|                      | Edge Thickness ET (mm):   |
| 1.66                 |                           |
|                      | Clear Aperture CA (mm):   |
| 8.1                  |                           |

|                                      |                                                       |
|--------------------------------------|-------------------------------------------------------|
| Optical Properties                   |                                                       |
|                                      | Back Focal Length BFL (mm):                           |
| 26.13                                |                                                       |
|                                      | Effective Focal Length EFL (mm):                      |
| 27.00                                |                                                       |
|                                      | Coating:                                              |
| VIS 0° (425-675nm)                   |                                                       |
|                                      | Coating Specification:                                |
| R <sub>avg</sub> ≤0.4% @ 425 - 675nm |                                                       |
|                                      | Substrate: <input type="checkbox"/>                   |
| Fused Silica (Corning 7980)          |                                                       |
|                                      | Surface Quality:                                      |
| 40-20                                |                                                       |
|                                      | Power (P-V) @ 632.8nm:                                |
| 1.5λ                                 |                                                       |
|                                      | Irregularity (P-V) @ 632.8nm:                         |
| λ/4                                  |                                                       |
|                                      | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 24.36                                |                                                       |
|                                      | f/#:                                                  |
| 3.00                                 |                                                       |
|                                      | Focal Length Specification Wavelength (nm):           |
| 587.6                                |                                                       |
|                                      | Focal Length Tolerance (%):                           |
| ±1                                   |                                                       |
|                                      | Numerical Aperture NA:                                |
| 0.17                                 |                                                       |
|                                      | Wavelength Range (nm):                                |
| 425 - 675                            |                                                       |
|                                      | Damage Threshold, Reference: <input type="checkbox"/> |
| 5 J/cm <sup>2</sup> @ 532nm, 10ns    |                                                       |

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

## 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](#).

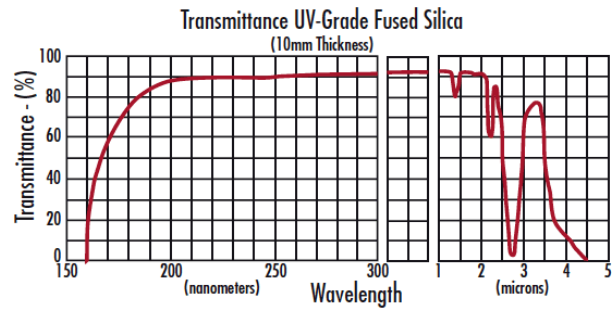
## Product Details

- 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.

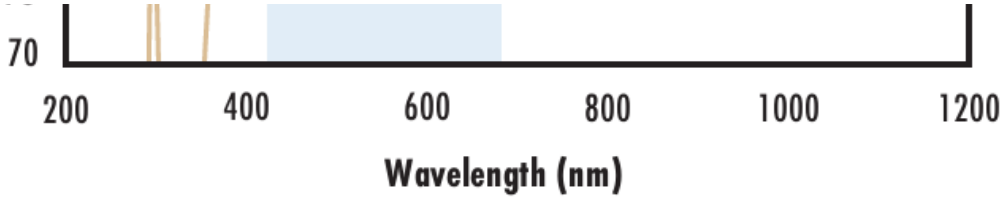
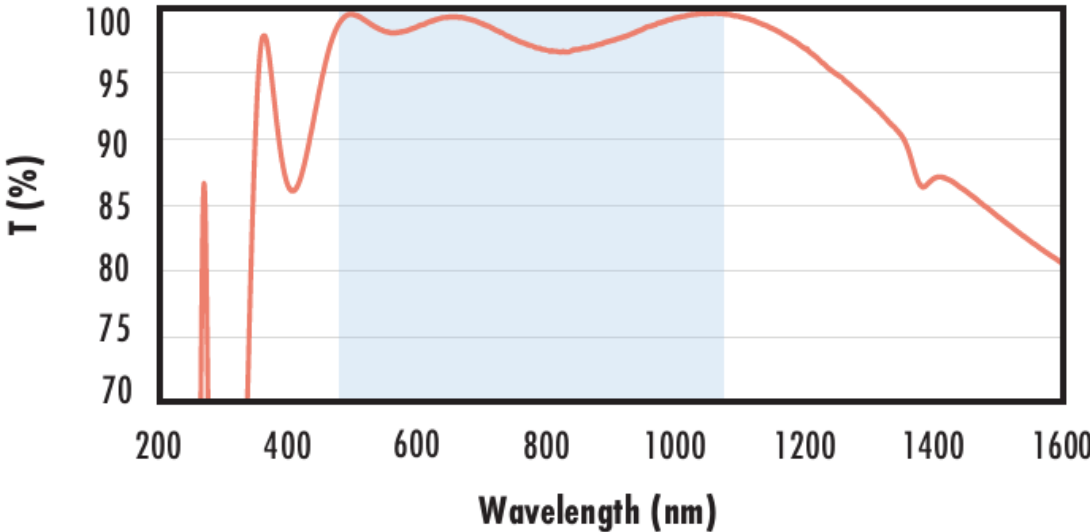
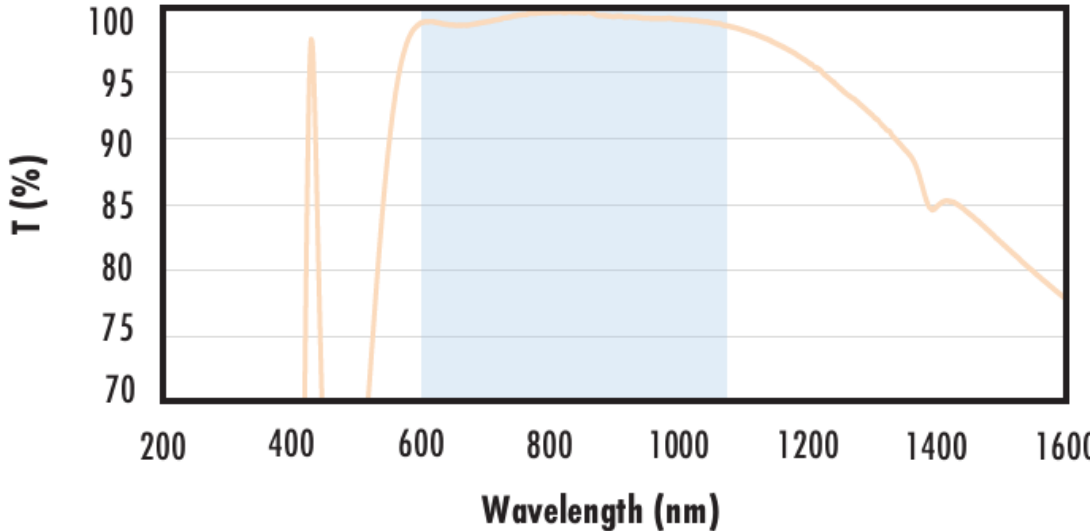
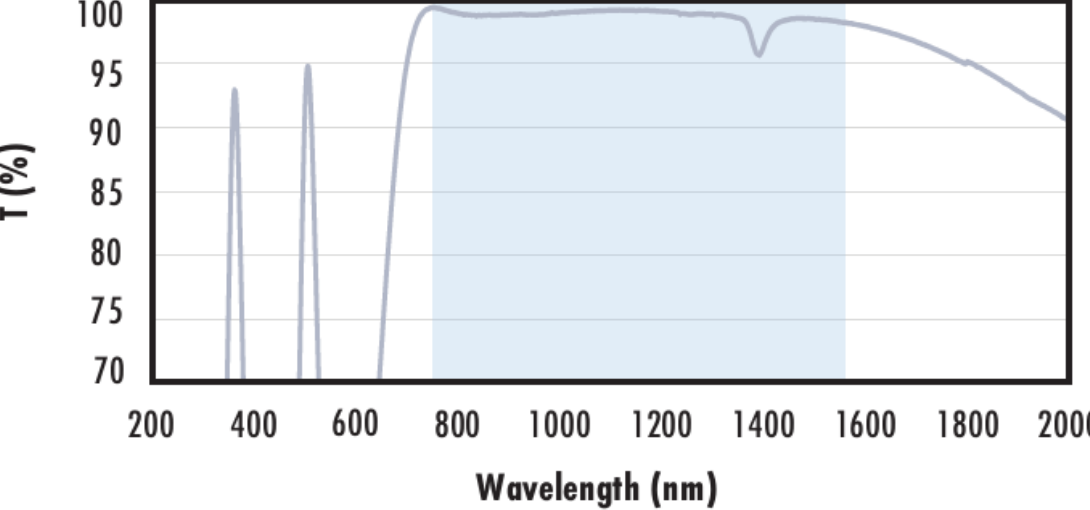
Technical Information



UV FS Transmission Curve

| FUSED SILICA                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>Uncoated Fused Silica<br/>Typical Transmission</div><div><div><div>T (%)</div><div>100<br/>95<br/>90<br/>85<br/>80<br/>75<br/>70</div><div><div>2004006008001000120014001600180020002200</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>100<br/>95<br/>90<br/>85<br/>80<br/>75<br/>70</div><div><div>2004006008001000120014001600180020002200</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><div><div><div>R<sub>avg</sub> ≤ 1.75% @ 400 - 700nm (N-BK7)</div></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></div> |
| <div><div>Fused Silica with UV-AR Coating<br/>Typical Transmission</div><div><div><div>(%)</div><div>100<br/>95<br/>90<br/>85</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><div><div><div><div>R<sub>abs</sub> ≤ 1.0% @ 250 - 425nm</div><div>R<sub>avg</sub> ≤ 0.75% @ 250 - 425nm</div></div></div></div></div></div>                                                                                                         |

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    | <p><math>R_{avg} \leq 0.5\% @ 370 - 420nm</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 data-bbox="573 418 1083 522"><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 - 450nm</math><br/><math>R_{avg} \leq 1.5\% @ 250 - 700nm</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 data-bbox="569 1101 1087 1205"><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 - 700nm</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 data-bbox="573 1774 1083 1878"><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\% @ 880nm</math><br/><math>R_{avg} \leq 1.25\% @ 400 - 870nm</math><br/><math>R_{avg} \leq 1.25\% @ 890 - 1000nm</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 data-bbox="573 2451 1083 2555"><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 - 675nm</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 data-bbox="548 290 1108 397"><b>Fused Silica with YAG-BBAR Coating<br/>Typical Transmission</b></p>    | <p data-bbox="1341 448 1839 498">Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1341 513 1850 560">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 572 1713 647"><p><math>R_{abs} \leq 0.25\%</math> @ 532nm</p><p><math>R_{abs} \leq 0.25\%</math> @ 1064nm</p><p><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</p></div> <p data-bbox="1341 661 1839 709">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 724 1709 744"><a href="#">Click Here to Download Data</a></p>                     |
| <p data-bbox="594 967 1066 1074"><b>Fused Silica with NIR I Coating<br/>Typical Transmission</b></p>    | <p data-bbox="1329 1148 1858 1196">Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1329 1210 1850 1258">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1273 1709 1297"><p><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p></div> <p data-bbox="1329 1311 1839 1359">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1374 1709 1394"><a href="#">Click Here to Download Data</a></p>                                                                                                           |
| <p data-bbox="581 1650 1075 1757"><b>Fused Silica with NIR II Coating<br/>Typical Transmission</b></p>  | <p data-bbox="1329 1789 1858 1840">Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1329 1855 1850 1902">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1914 1713 1985"><p><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</p><p><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</p><p><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p></div> <p data-bbox="1329 2024 1839 2071">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 2086 1709 2107"><a href="#">Click Here to Download Data</a></p> |

Coating Curves

Compatible Mounts