

TECHSPEC<sup>®</sup> 25mm Dia. x 50mm FL, NIR I Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#22-173** **5 In Stock**

[Other Coating Options](#)

-

1

+

£134<sup>40</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | £134.40 each                  |
| Qty 6-25       | £108.00 each                  |
| Qty 26-49      | £100.80 each                  |
| Need More?     | <a href="#">Request Quote</a> |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

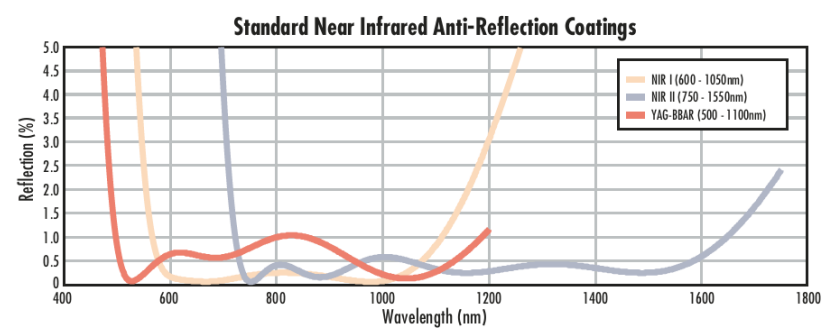
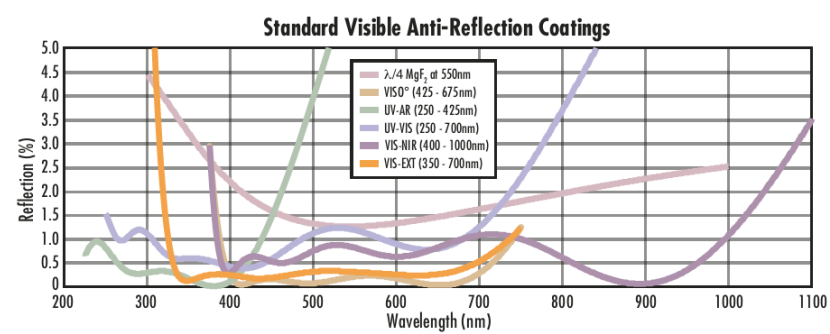
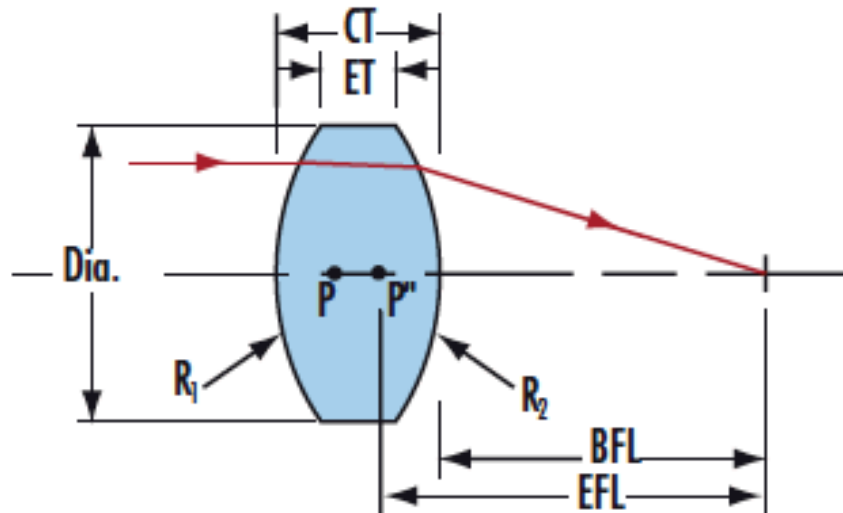
| General                                     |                                                       |
|---------------------------------------------|-------------------------------------------------------|
| Double-Convex Lens                          | Type:                                                 |
| Physical & Mechanical Properties            |                                                       |
| 25.00 +0.0/-0.025                           | Diameter (mm):                                        |
| <1                                          | Centering (arcmin):                                   |
| Protective as needed                        | Bevel:                                                |
| 5.66 ±0.10                                  | Center Thickness CT (mm):                             |
| 2.11                                        | Edge Thickness ET (mm):                               |
| 24.00                                       | Clear Aperture CA (mm):                               |
| Optical Properties                          |                                                       |
| 48.02                                       | Back Focal Length BFL (mm):                           |
| 50.00                                       | Effective Focal Length EFL (mm):                      |
| NIR I (600-1050nm)                          | Coating:                                              |
| R <sub>avg</sub> ≤0.5% @ 600 - 1050nm       | Coating Specification:                                |
| <a href="#">Fused Silica</a> (Corning 7980) | Substrate: <input type="checkbox"/>                   |
| 40-20                                       | Surface Quality:                                      |
| 1.5λ                                        | Power (P-V) @ 632.8nm:                                |
| λ/4                                         | Irregularity (P-V) @ 632.8nm:                         |
| 44.94                                       | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 2.00                                        | f/#:                                                  |
| 587.6                                       | Focal Length Specification Wavelength (nm):           |
| ±1                                          | Focal Length Tolerance (%):                           |
| 0.25                                        | Numerical Aperture NA:                                |
| 600 - 1050                                  | Wavelength Range (nm):                                |
| 7 J/cm² @ 1064nm, 10ns                      | Damage Threshold, Reference: <input type="checkbox"/> |
| Regulatory Compliance                       |                                                       |
| <a href="#">Compliant</a>                   | RoHS 2015:                                            |
| <a href="#">View</a>                        | Certificate of Conformance:                           |
| <a href="#">Compliant</a>                   | Reach 235:                                            |

## 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



## FUSED SILICA

### Uncoated Fused Silica Typical Transmission



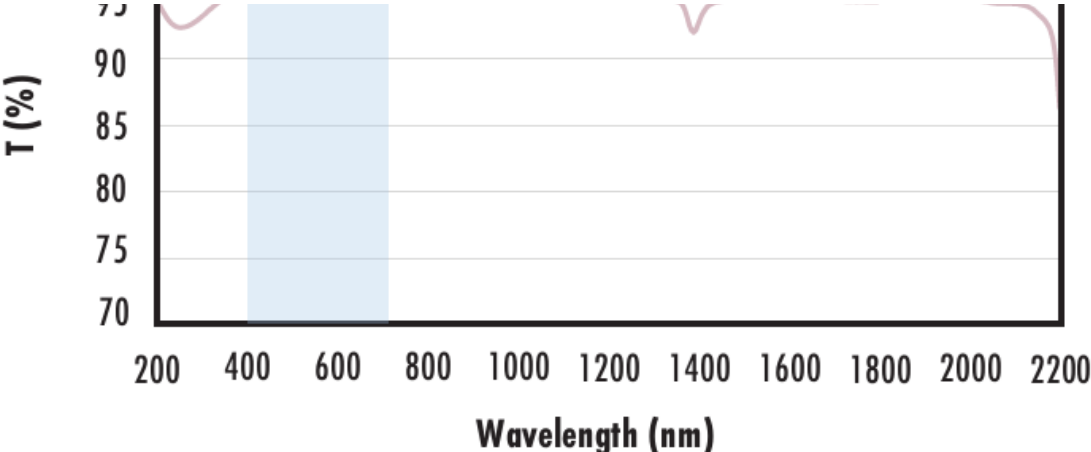
Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.

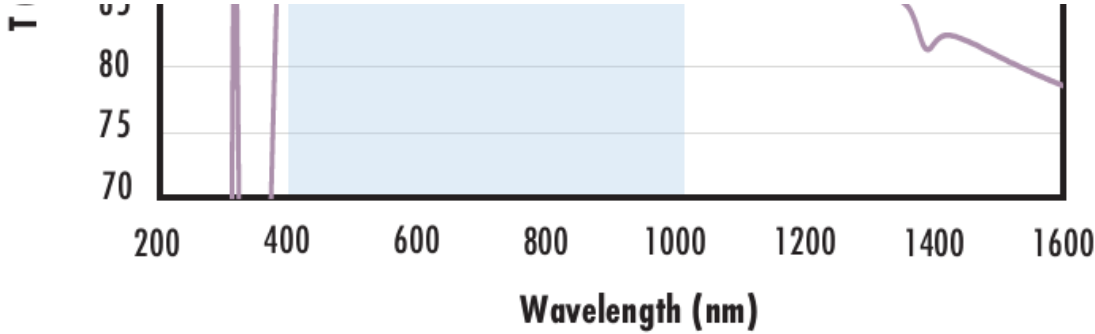
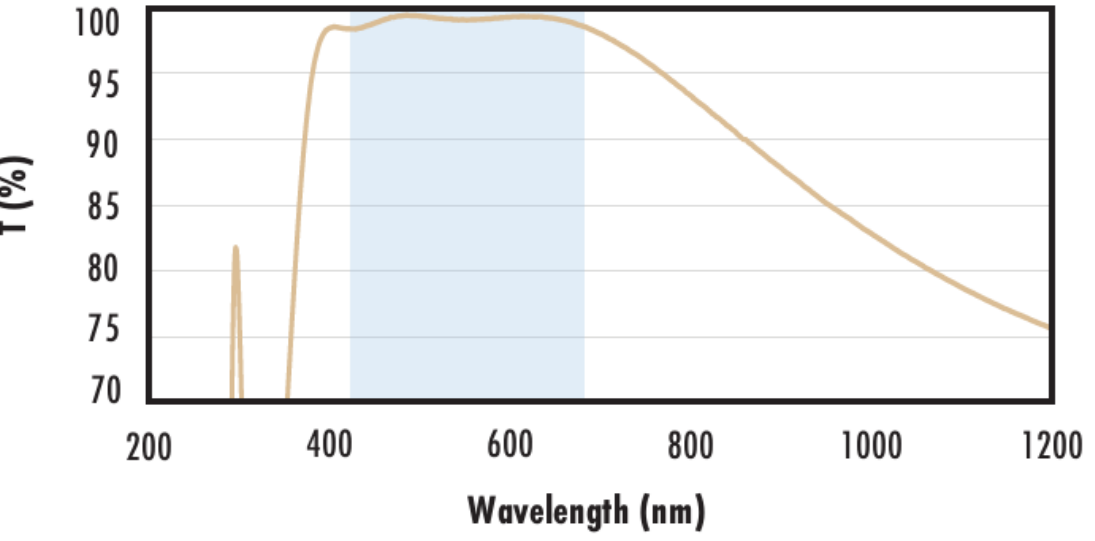
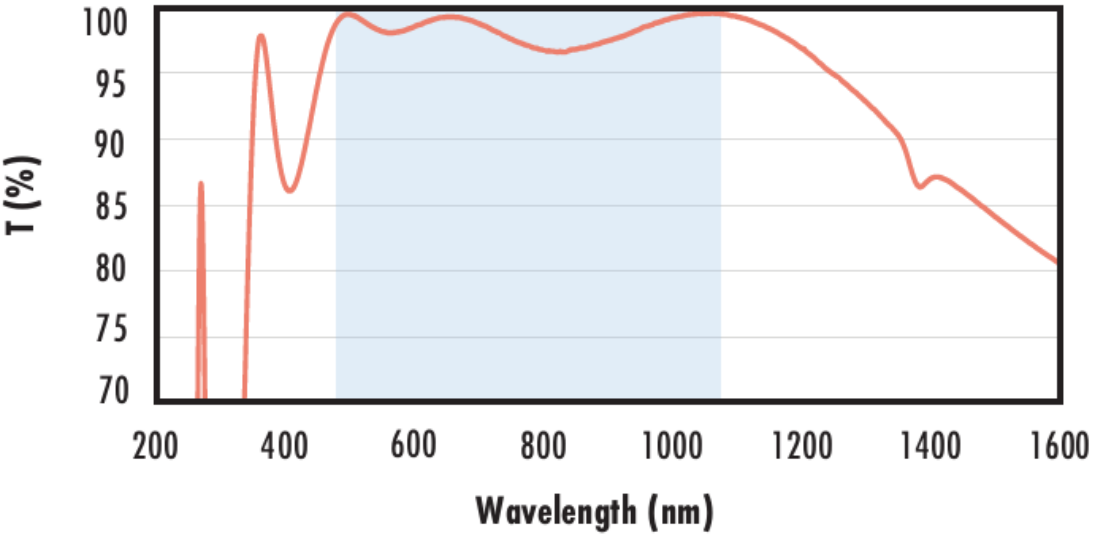
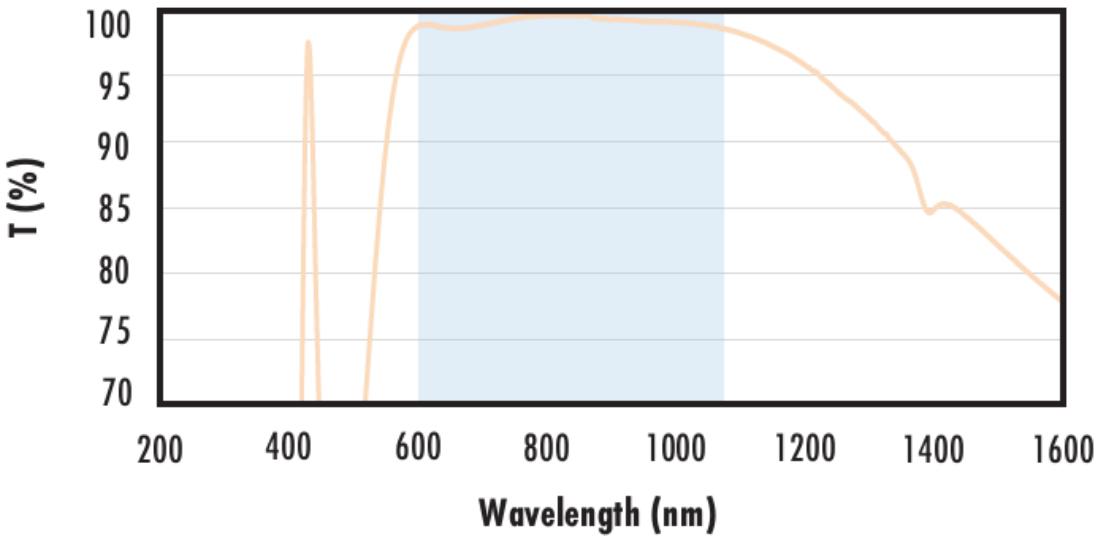
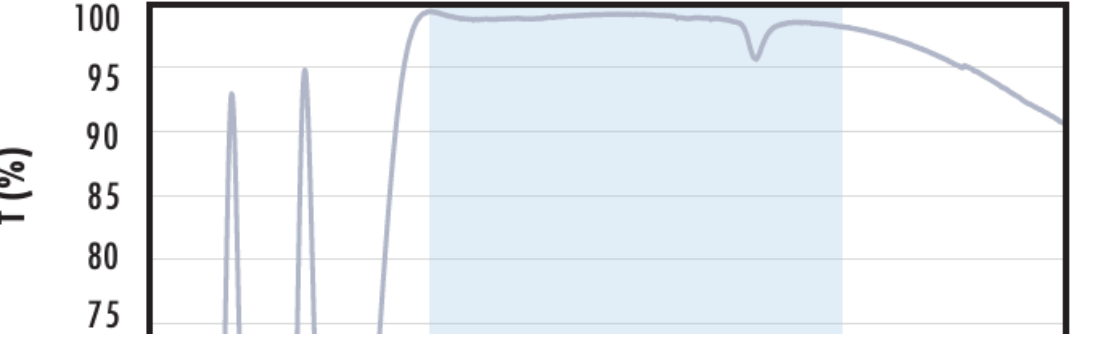
[Click Here to Download Data](#)

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



Typical transmission of a 3mm thick fused silica window with

|                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | <p>MgF2 (400-700nm) 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 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</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-AR Coating</b><br/><b>Typical Transmission</b></p>     | <p>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) 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\% @ 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></p>                                                                                                                                                                                           |

|                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                      | <p><math>R_{avg} \leq 1.25\% \text{ @ } 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\% \text{ @ } 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>                                                                                                                                |
| <p><b>Fused Silica with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>  | <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\% \text{ @ } 532\text{nm}</math><br/><math>R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}</math><br/><math>R_{avg} \leq 1.0\% \text{ @ } 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> |
| <p><b>Fused Silica with NIR I Coating</b><br/><b>Typical Transmission</b></p>     | <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\% \text{ @ } 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>                                                                                                                             |
| <p><b>Fused Silica with NIR II Coating</b><br/><b>Typical Transmission</b></p>    | <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\% \text{ @ } 750 - 800\text{nm}</math><br/><math>R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}</math><br/><math>R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</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

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