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TECHSPEC® 12.0mm Dia. x -50 FL, UV-AR Coated, UV Plano-Concave Lens



UV Fused Silica Plano-Concave (PCV) Lenses



Stock **#71-100 8 In Stock**

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⊖ 1 ⊕ **S\$219⁰⁰**

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Volume Pricing	
Qty 1-5	S\$219.80 each
Qty 6-25	S\$176.40 each
Qty 26-49	S\$165.20 each
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General

Plano-Concave Lens **Type:**

Max. Flat Annulus is 0.3mm **Note:**

Physical & Mechanical Properties

12.00 +0.0/-0.025 **Diameter (mm):**

2.00 ±0.05 **Center Thickness CT (mm):**

<1 **Centering (arcmin):**

11.00 **Clear Aperture CA (mm):**

2.72 **Edge Thickness ET (mm):**

Optical Properties

-50.00 **Effective Focal Length EFL (mm):**

Substrate:
Fused Silica (Corning 7980)

4.17 **f#:**

0.12 **Numerical Aperture NA:**

UV-VIS (250-700nm) **Coating:**

250 - 700 **Wavelength Range (nm):**

-51.37 **Back Focal Length BFL (mm):**

Coating Specification:
R_{abs} ≤1.0% @ 350 - 450nm
R_{avg} ≤1.5% @ 250 - 700nm

587.6 ±1 **Focal Length Specification Wavelength (nm):**

22.92 **Radius R₁ (mm):**

40-20 **Surface Quality:**

1.5λ **Power (P-V) @ 632.8nm:**

λ/4 **Irregularity (P-V) @ 632.8nm:**

Regulatory Compliance

[View](#) **Certificate of Conformance:**

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

- 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	
<h3>Uncoated Fused Silica Typical Transmission</h3> <p>Graph showing typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra. The y-axis is Transmittance T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. The transmission is high, around 90-95%, with a small dip around 1400 nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p>Click Here to Download Data</p>
<h3>Fused Silica with MgF_2 Coating Typical Transmission</h3> <p>Graph showing typical transmission of a 3mm thick fused silica window with MgF_2 (400-700nm) coating at 0° AOI. The y-axis is Transmittance T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from approximately 400 nm to 700 nm. The transmission is high, around 90-95%, with a small dip around 1400 nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with MgF_2 (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p>$R_{avg} \leq 1.75\% @ 400 - 700nm$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>
<h3>Fused Silica with UV-AR Coating Typical Transmission</h3> <p>Graph showing typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI. The y-axis is Transmittance T (%) from 75 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from approximately 250 nm to 425 nm. The transmission is high, around 90-95%, with a small dip around 1400 nm.</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>$R_{abs} \leq 1.0\% @ 250 - 425nm$ $R_{avg} \leq 0.75\% @ 250 - 425nm$ $R_{avg} \leq 0.5\% @ 370 - 420nm$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>



Fused Silica with UV-VIS Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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

$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

$$R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}$$

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

[Click Here to Download Data](#)

Fused Silica with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.

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

$$R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}$$

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

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Fused Silica with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

$$R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}$$

$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}$$

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

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Fused Silica with VIS 0° Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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

$$R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}$$

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

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Wavelength (nm)

Fused Silica with YAG-BBAR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

$$\begin{aligned} R_{\text{abs}} &\leq 0.25\% @ 532\text{nm} \\ R_{\text{abs}} &\leq 0.25\% @ 1064\text{nm} \\ R_{\text{avg}} &\leq 1.0\% @ 500 - 1100\text{nm} \end{aligned}$$

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

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Fused Silica with NIR I Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.

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

$$R_{\text{avg}} \leq 0.5\% @ 600 - 1050\text{nm}$$

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

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Fused Silica with NIR II Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.

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

$$\begin{aligned} R_{\text{abs}} &\leq 1.5\% @ 750 - 800\text{nm} \\ R_{\text{abs}} &\leq 1.0\% @ 800 - 1550\text{nm} \\ R_{\text{avg}} &\leq 0.7\% @ 750 - 1550\text{nm} \end{aligned}$$

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

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