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**TECHSPEC® 20mm Dia. x 50mm FL VIS 0° Coated, UV Plano-Convex Lens**



UV Fused Silica Plano-Convex (PCX) Lenses



Stock **#49-980** **5 In Stock**

⊖ 1 ⊕ £133.<sup>60</sup>

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Volume Pricing	
Qty 1-5	£133.60 each
Qty 6-25	£106.40 each
Qty 26-49	£100.80 each
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**!** Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Plano-Convex Lens **Type:**

**Physical & Mechanical Properties**

**Diameter (mm):**

20.00 +0.0/-0.025

**Centering (arcmin):**

<1

**Center Thickness CT (mm):**

4.00 ±0.10

**Edge Thickness ET (mm):**

1.70

**Clear Aperture CA (mm):**

19

**Bevel:**

Protective as needed

## Optical Properties

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

50.00 @587.6nm

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

47.25

**Coating:**

MS 0° (425-675nm)

**Coating Specification:**

R<sub>avg</sub> ≤0.4% @425 - 675nm

**Substrate:**

**Fused Silica** (Coming 7980)

**Surface Quality:**

40-20

**Power (P-V) @ 632.8nm:**

1.5λ

**Irregularity (P-V) @ 632.8nm:**

λ/4

**Focal Length Tolerance (%):**

±1

**Radius R<sub>1</sub> (mm):**

22.92

**f#:**

2.5

**Numerical Aperture NA:**

0.20

**Wavelength Range (nm):**

425 - 675

**Damage Threshold, Reference:**

5 J/cm<sup>2</sup> @532nm, 10ns

## Regulatory Compliance

**RoHS 2015:**

**Compliant**

**Certificate of Conformance:**

**View**

**Reach 235:**

**Compliant**

## 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

- AR Coated to Provide <0.4% Reflection per Surface for 425 - 675nm
- Precision Fused Silica Substrate
- Various Coating Options: [Uncoated](#), [MgF<sub>2</sub>](#), [UV-AR](#), [UV-VIS](#), [VIS-EXT](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses MS 0° Coated feature precision specifications and a [variety of coating options](#) on a broadband substrate. Fused Silica is commonly used in applications from the Ultraviolet (UV) through the Near-Infrared (NIR). Its low index of refraction, low coefficient of thermal expansion, and low inclusion content make it ideal for laser applications and harsh environmental conditions. TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses MS 0° Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are MS 0° coated to increase their coating performance in the visible region and are designed for 0 degrees angle of incidence.

# Technical Information



UV FS Transmission Curve



FUSED SILICA	
<p style="text-align: center;"><b>Uncoated Fused Silica Typical Transmission</b></p> <p>The graph shows typical transmission for uncoated fused silica. The y-axis is 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 at 1400nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with MgF<sub>2</sub> Coating Typical Transmission</b></p> <p>The graph shows typical transmission for fused silica with MgF<sub>2</sub> coating. The y-axis is 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 400 to 700 nm. Transmission is high, around 95-98%, with a dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;"><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with UV-AR Coating Typical Transmission</b></p> <p>The graph shows typical transmission for fused silica with UV-AR coating. The y-axis is T (%) from 85 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from 250 to 425 nm. Transmission is high, around 95-100%, with a dip at 1400nm.</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 style="text-align: center;"><math>R_{abs} \leq 1.0\% @ 250 - 425\text{nm}</math> <math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math></p>



$R_{avg} \leq 0.5\%$  @ 370 - 420nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**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:  
 $R_{abs} \leq 1.0\%$  @ 350 - 450nm  
 $R_{avg} \leq 1.5\%$  @ 250 - 700nm  
 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:  
 $R_{avg} \leq 0.5\%$  @ 350 - 700nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**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:  
 $R_{abs} \leq 0.25\%$  @ 880nm  
 $R_{avg} \leq 1.25\%$  @ 400 - 870nm  
 $R_{avg} \leq 1.25\%$  @ 890 - 1000nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**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:  
 $R_{avg} \leq 0.4\%$  @ 425 - 675nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)



**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:

- $R_{abs} \leq 0.25\% @ 532nm$
- $R_{abs} \leq 0.25\% @ 1064nm$
- $R_{avg} \leq 1.0\% @ 500 - 1100nm$

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

[Click Here to Download Data](#)

**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:

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

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

[Click Here to Download Data](#)

**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:

- $R_{abs} \leq 1.5\% @ 750 - 800nm$
- $R_{abs} \leq 1.0\% @ 800 - 1550nm$
- $R_{avg} \leq 0.7\% @ 750 - 1550nm$

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

[Click Here to Download Data](#)

**Coating Curves**

**Compatible Mounts**