

**TECHSPEC® 9.0mm Dia. x -13.5 FL, Uncoated, UV Plano-Concave Lens**



UV Fused Silica Plano-Concave (PCV) Lenses



Stock **#45-700** **20+ In Stock**

[Other Coating Options](#)

1 €126<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-5	€126,00 each
Qty 6-25	€101,00 each
Qty 26-49	€95,00 each
Need More?	<a href="#">Request Quote</a>

Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Plano-Concave Lens **Type:**

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

## Physical & Mechanical Properties

Diameter (mm):  
9.00 +0.0/-0.025

Center Thickness CT (mm):  
2.00

Center Thickness Tolerance (mm):  
±0.05

Centering (arcmin):  
<1

Clear Aperture CA (mm):  
8.1

Edge Thickness ET (mm):  
3.64

## Optical Properties

Effective Focal Length EFL (mm):  
-13.50

Substrate:   
[Fused Silica](#) (Coming 7980)

f#:  
1.5

Numerical Aperture NA:  
0.33

Coating:  
Uncoated

Wavelength Range (nm):  
200 - 2200

Back Focal Length BFL (mm):  
-14.89

Focal Length Specification Wavelength (nm):  
587.6

Focal Length Tolerance (%):  
±1

Radius R<sub>1</sub> (mm):  
-6.20

Surface Quality:  
40-20

Power (P-V) @ 632.8nm:  
1.5λ

Irregularity (P-V) @ 632.8nm:  
λ/4

## Regulatory Compliance

RoHS 2015:  
[Compliant](#)

Reach 223:  
[Compliant](#)

Certificate of Conformance:  
[View](#)

## 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

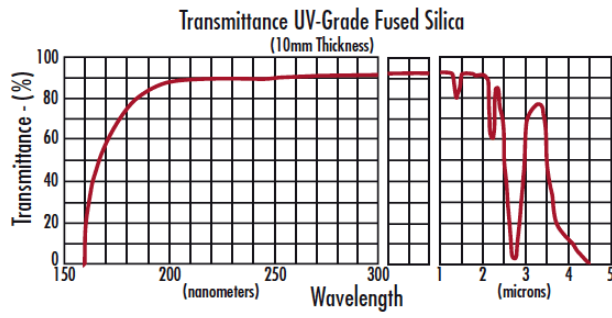
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

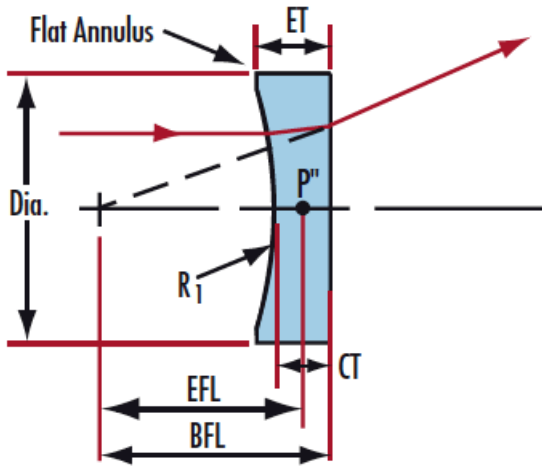
- Negative Focal Lengths for Beam Expansion or Light Projection Applications
- Wavelength Range of 200 - 2200nm
- Popular UV-AR Coating Option Available

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.

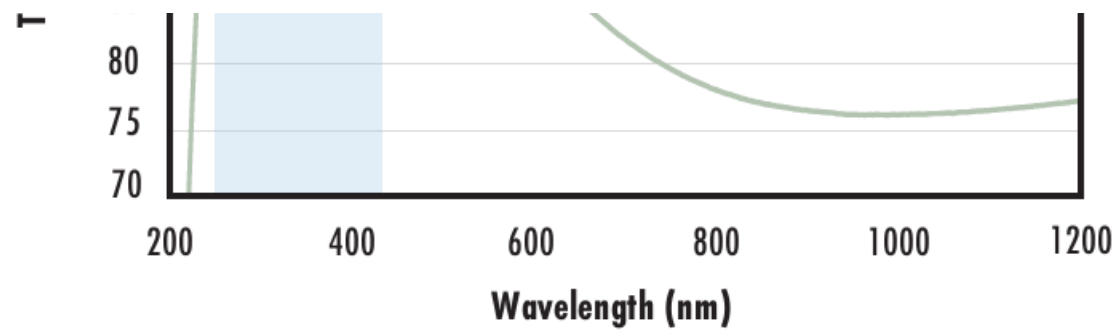
# Technical Information



UV FS Transmission Curve

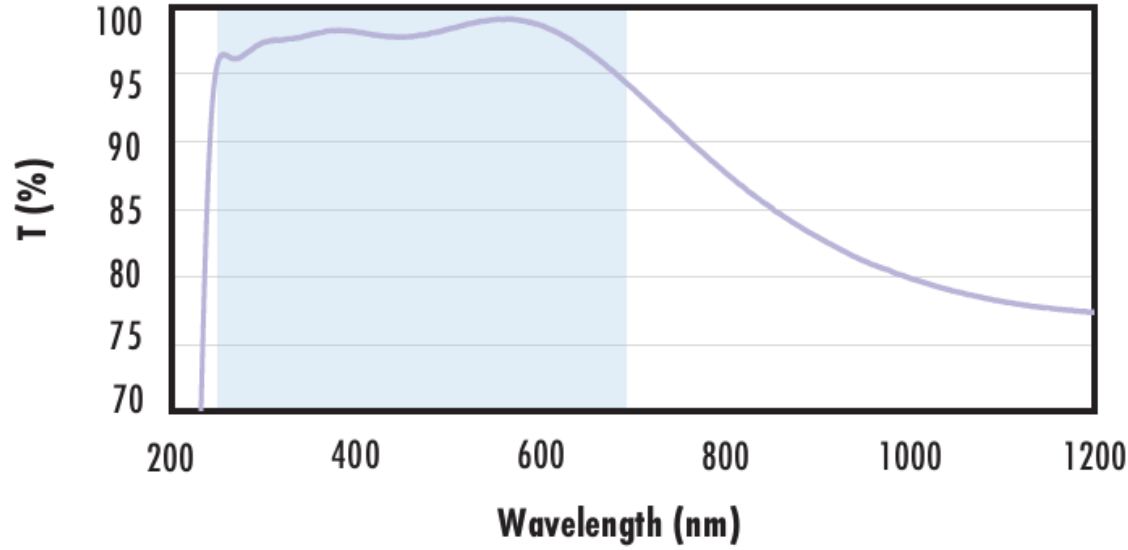


FUSED SILICA	
<h3>Uncoated Fused Silica Typical Transmission</h3> <p>The graph shows the typical transmission of a 3mm thick, uncoated fused silica window. The y-axis is Transmittance T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. The transmission is high, starting at ~92% at 200nm, rising to ~94% by 400nm, and remaining stable until 2000nm, where it drops to ~90% at 2200nm. There is a small dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p><a href="#">Click Here to Download Data</a></p>
<h3>Fused Silica with MgF<sub>2</sub> Coating Typical Transmission</h3> <p>The graph shows the typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating. The axes are the same as the uncoated graph. The transmission is higher than the uncoated version, starting at ~94% at 200nm and reaching ~97% at 400nm. A blue shaded region from 400nm to 700nm indicates the coating design wavelength range. The transmission remains high until 2000nm, then drops to ~90% at 2200nm.</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><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><a href="#">Click Here to Download Data</a></p>
<h3>Fused Silica with UV-AR Coating Typical Transmission</h3> <p>The graph shows the typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating. The axes are the same as the uncoated graph. The transmission is very high, starting at ~98% at 200nm and reaching ~100% at 250nm. A blue shaded region from 250nm to 425nm indicates the coating design wavelength range. The transmission remains near 100% until 1000nm, then gradually decreases to ~85% at 2200nm.</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>  <math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math></p>



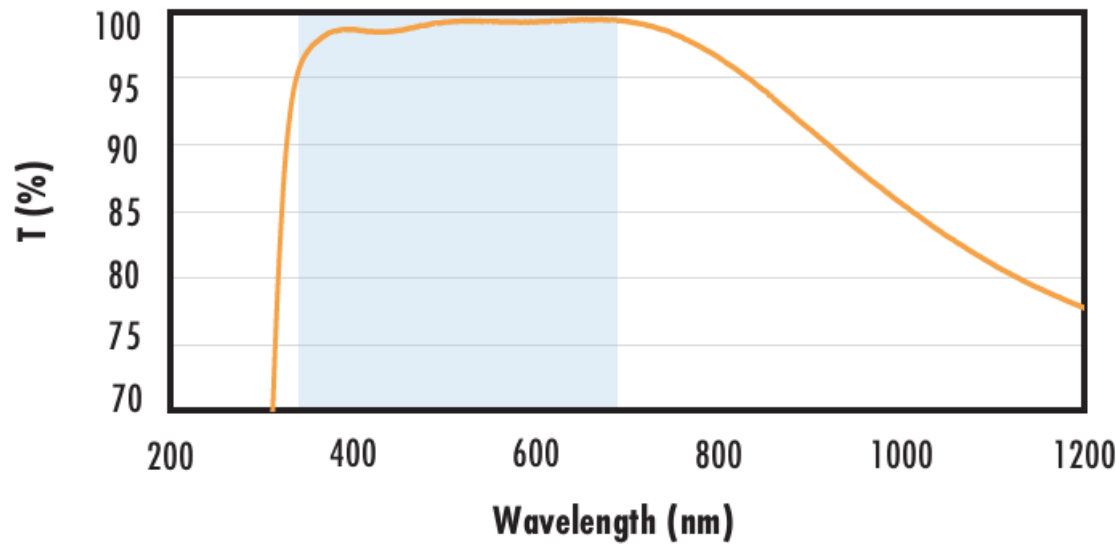
$R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

### Fused Silica with UV-VIS Coating Typical Transmission



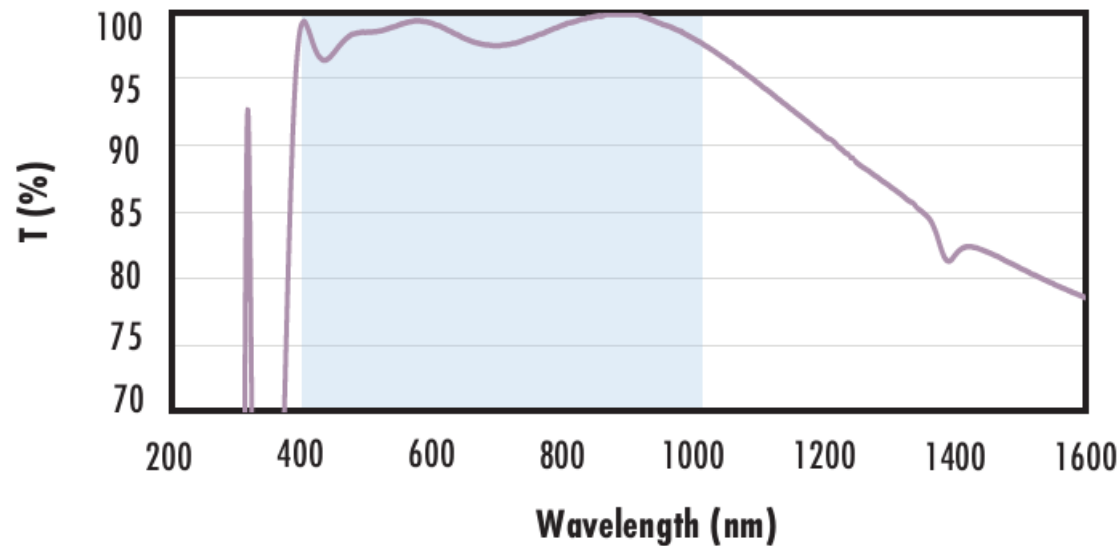
Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$   
 $R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$   
 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



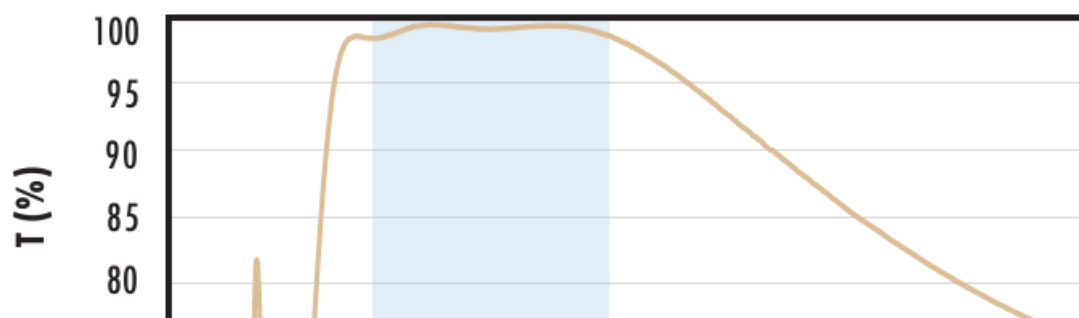
Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
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### Fused Silica with VIS-NIR Coating Typical Transmission

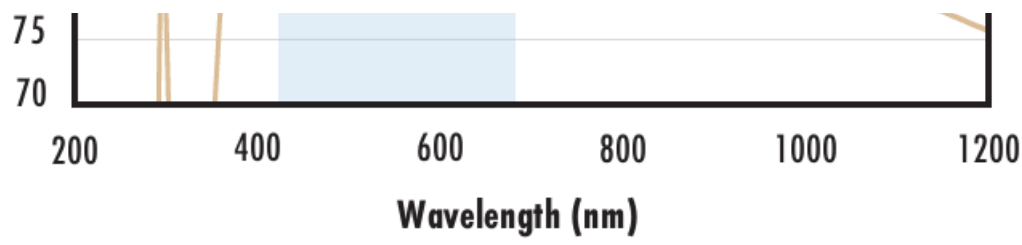


Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{abs} \leq 0.25\% @ 880\text{nm}$   
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$   
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
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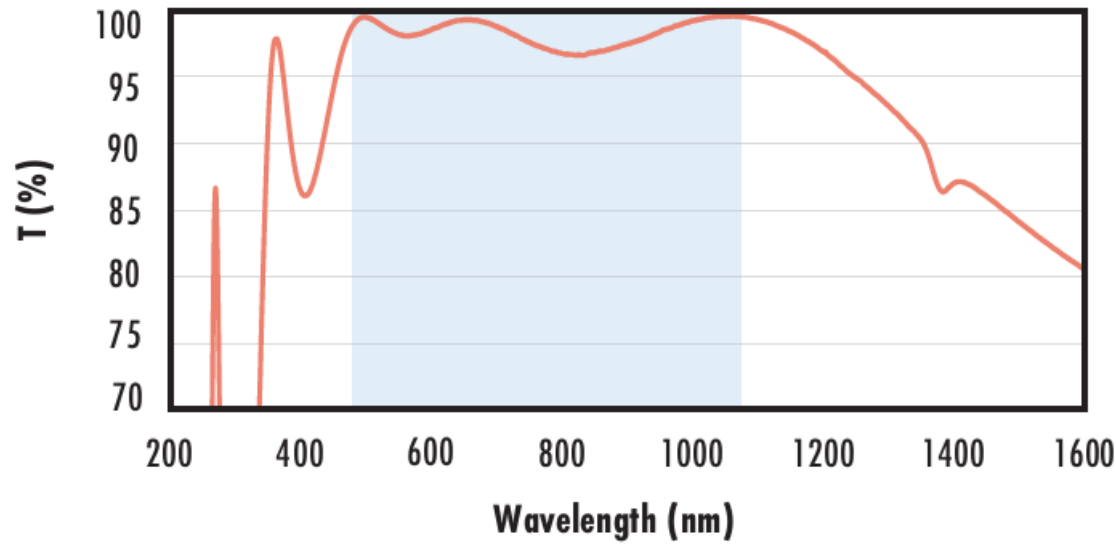
### Fused Silica with VIS 0° Coating Typical Transmission



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:  
 $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
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**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.

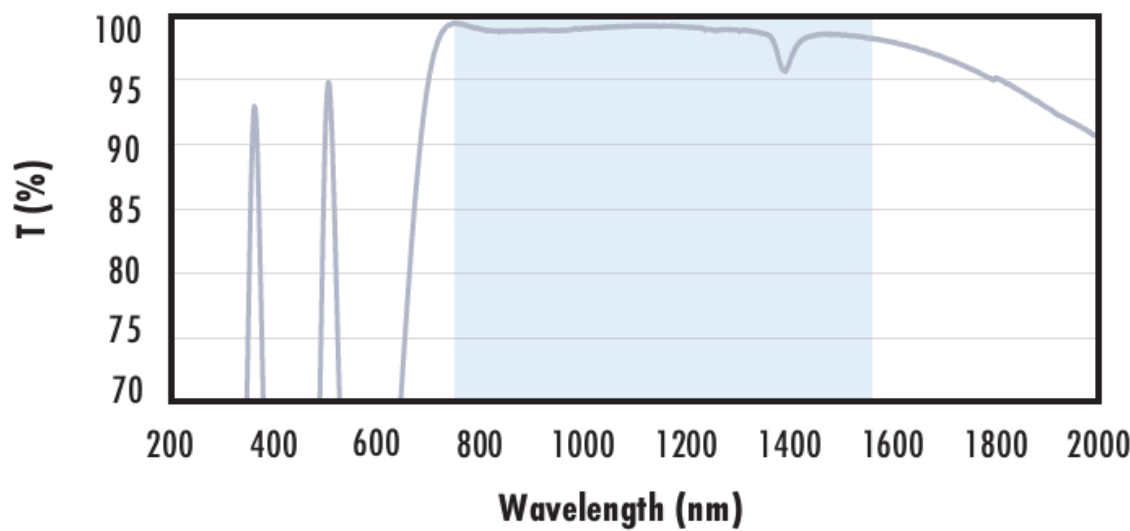
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{avg} \leq 0.5\%$  @ 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](#)

**Compatible Mounts**