

TECHSPEC® 50mm Dia. x 150mm FL VIS-NIR Coated, UV Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses



Stock #67-240 **2 In Stock**

⊖ 1 ⊕ €337⁰⁰

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Volume Pricing	
Qty 1-5	€337,00 each
Qty 6-25	€269,00 each
Qty 26-49	€253,00 each
Need More?	Request Quote

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Plano-Convex Lens **Type:**

Physical & Mechanical Properties

Diameter (mm):

50.00 +0.0/-0.025

Centering (arcmin):

<1

Center Thickness CT (mm):

7.00 ±0.10

Edge Thickness ET (mm):

2.29

Clear Aperture CA (mm):

49

Bevel:

Protective as needed

Optical Properties

Effective Focal Length EFL (mm):

150.00 @587.6nm

Back Focal Length BFL (mm):

145.20

Coating:

VIS-NIR (400-1000nm)

Coating Specification:

$R_{\text{abs}} \leq 0.25\%$ @ 880nm
 $R_{\text{avg}} \leq 1.25\%$ @ 400 - 870nm
 $R_{\text{avg}} \leq 1.25\%$ @ 890 - 1000nm

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 R₁ (mm):

68.77

f#:

3

Numerical Aperture NA:

0.17

Wavelength Range (nm):

400 - 1000

Damage Threshold, Reference:

5 J/cm² @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

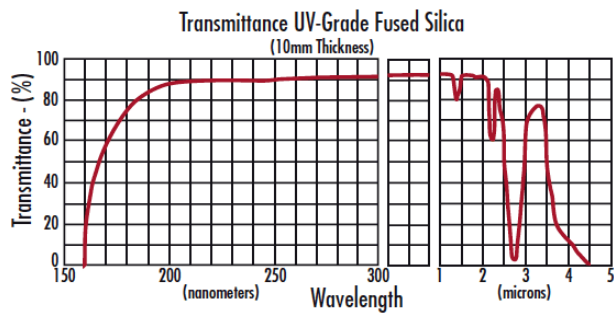
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

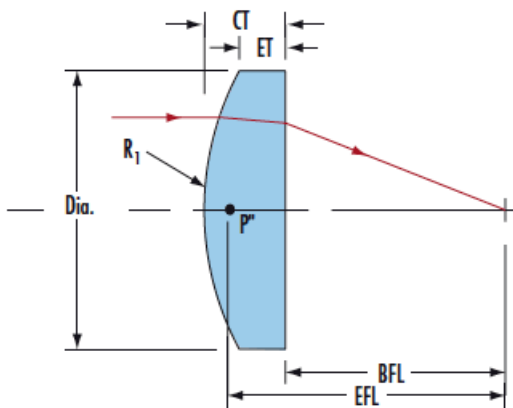
- AR Coated to Provide <1.25% Reflection per Surface for 400 - 870nm and for 890 – 1000nm
- Precision Fused Silica Substrate
- Various Coating Options: [Uncoated](#), [MgF₂](#), [UV-AR](#), [UV-VIS](#), [VIS-EXT](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses VIS-NIR 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 VIS-NIR Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are VIS-NIR coated to increase their coating performance in the visible and near infrared region.

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) in percent, ranging from 70 to 100. The x-axis is Wavelength in nanometers, ranging from 200 to 2200. The transmission is consistently high, around 92-95%, with a small dip at approximately 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 MgF₂ Coating Typical Transmission</h3> <p>The graph shows the typical transmission of a 3mm thick fused silica window with MgF₂ coating. The axes are the same as the uncoated graph. A blue shaded region highlights the coating design wavelength range from 400 nm to 700 nm. The transmission is higher than the uncoated version, reaching up to 97% in the shaded region.</p>	<p>Typical transmission of a 3mm thick fused silica window with 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>$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (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>The graph shows the typical transmission of a 3mm thick fused silica window with UV-AR coating. The axes are the same as the uncoated graph. A blue shaded region highlights the coating design wavelength range from 250 nm to 425 nm. The transmission is very high, reaching 100% in the shaded region.</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>$R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$ $R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$ $R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$</p>



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.

[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:

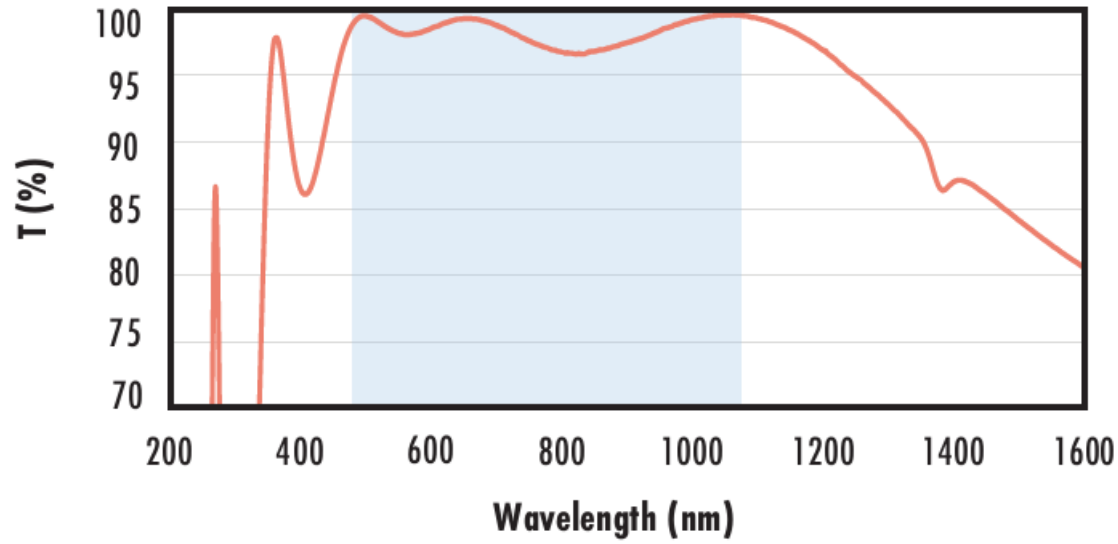
$$R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$$

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:

$$R_{abs} \leq 0.25\% @ 532nm$$

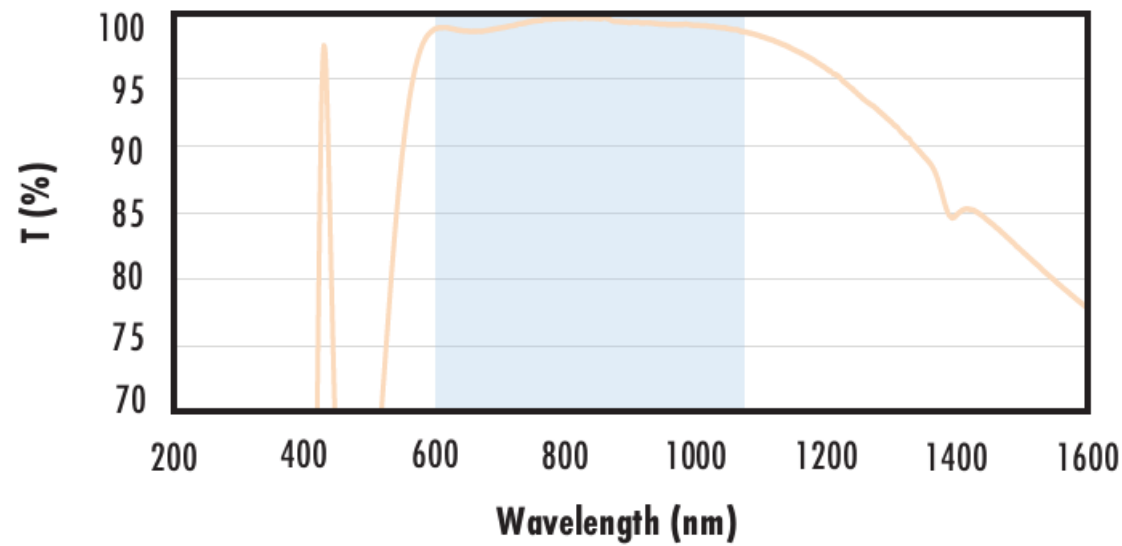
$$R_{abs} \leq 0.25\% @ 1064nm$$

$$R_{avg} \leq 1.0\% @ 500 - 1100nm$$

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.

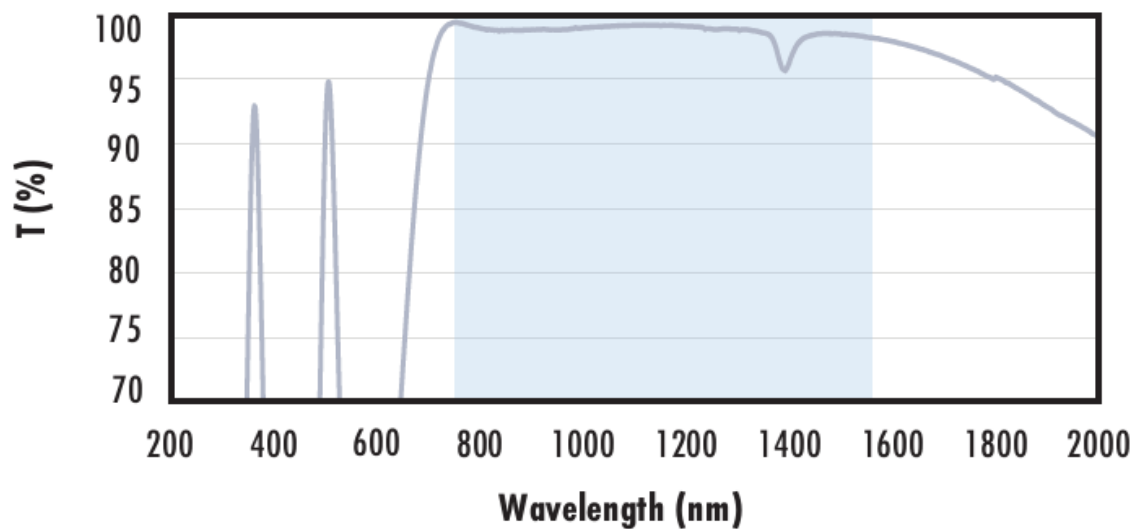
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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