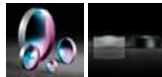


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TECHSPEC® 12mm Dia. x -20mm FL, UV-AR Coated, UV DCV Lens



UV Fused Silica Plano-Concave (PCV) Lenses



Stock **#48-058** [CONTACT US](#)

[Other Coating Options](#)

- 1 + C\$224.⁰⁰

ADD TO CART

Volume Pricing	
Qty 1-5	C\$224.00 each
Qty 6-25	C\$179.20 each
Qty 26-49	C\$169.40 each
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Product Downloads

General

Double-Concave Lens

Type:

Max Flat Annulus is 0.3mm

Note:

Physical & Mechanical Properties

Diameter (mm):
12.00 +0.0/-0.025

Center Thickness CT (mm):
2.00

Center Thickness Tolerance (mm):
±0.05

Centering (arcmin):
<1

Clear Aperture CA (mm):
11.0

Edge Thickness ET (mm):
3.78

Optical Properties

Effective Focal Length EFL (mm):
-20.00

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

f#:
1.67

Numerical Aperture NA:
0.30

Coating:
UV-AR (250-425nm)

Wavelength Range (nm):
250 - 425

Back Focal Length BFL (mm):
-20.67

Coating Specification:
R_{abs} ≤1.0% @ 250 - 425nm
R_{avg} ≤0.75% @ 250 - 425nm
R_{avg} ≤0.5% @ 370 - 420nm

Focal Length Specification Wavelength (nm):
587.6

Focal Length Tolerance (%):
±2

Radius R₁=R₂ (mm):
-18.64

Surface Quality:
40-20

Damage Threshold, Reference:
3 J/cm² @ 355nm, 10ns

Power (P-V) @ 632.8nm:
1.5λ

Irregularity (P-V) @ 632.8nm:
λ/4

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

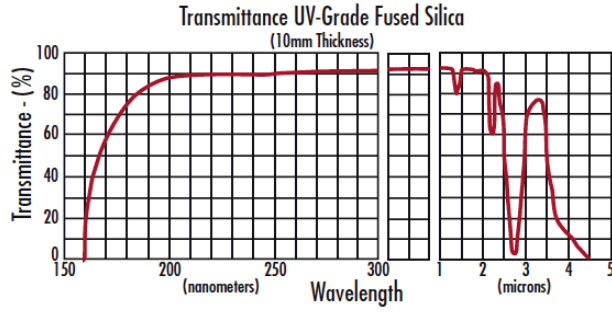
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

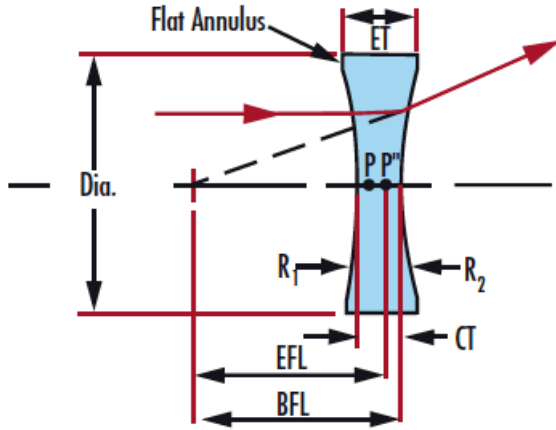
- Negative Focal Lengths for Beam Expansion or Light Projection Applications
- Wavelength Range of 200 - 2200nm
- Popular UV-AR Coating Option Available

TECHSPEC® UV Fused Silica Double-Concave (DCV) Lenses are manufactured utilizing state-of-the-art CNC equipment. Zygo's GPI-XP Interferometer is used to ensure the surface accuracy and performance of these optics. UV Grade lenses are precision manufactured using research-grade synthetic fused silica. TECHSPEC® UV Fused Silica Double-Concave (DCV) Lenses, in addition to providing excellent transmission characteristics and higher operating temperatures, synthetic fused silica lenses also exhibit exceptional inclusion specification and chemical purity. These lenses make a superior 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.

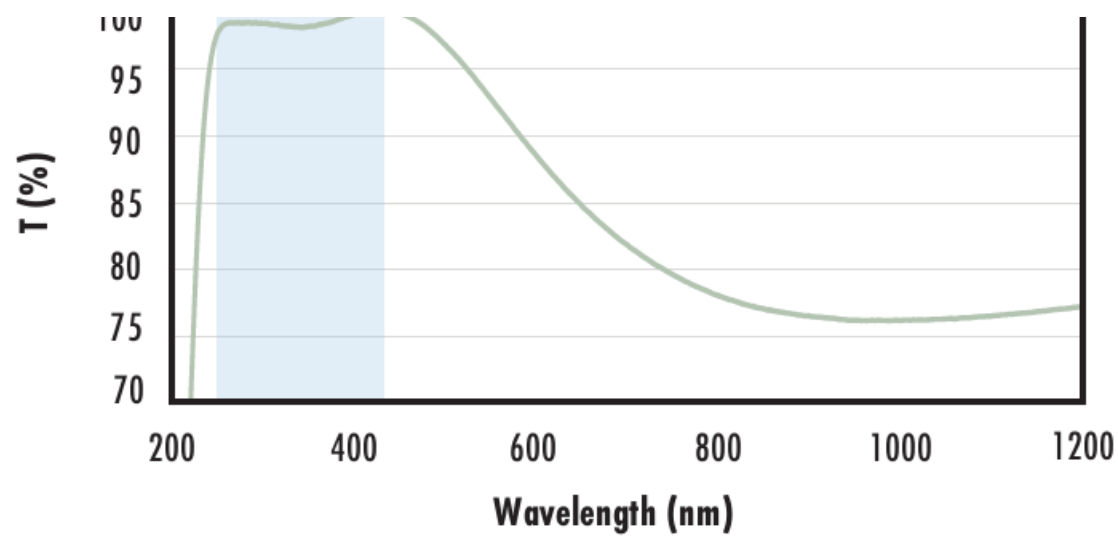
Technical Information



UV FS Transmission Curve



FUSED SILICA	
<p style="text-align: center;">Uncoated Fused Silica Typical Transmission</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 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;">Click Here to Download Data</p>
<p style="text-align: center;">Fused Silica with MgF₂ Coating Typical Transmission</p> <p>The graph shows typical transmission for fused silica with MgF₂ coating. The y-axis is T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region highlights the coating design wavelength range from 400nm to 700nm, where transmission is slightly higher than the uncoated version.</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 style="text-align: center;">$R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">Fused Silica with UV-AR Coating Typical Transmission</p> <p>The graph shows typical transmission for fused silica with UV-AR coating. The y-axis is T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. The transmission is high, around 95%, with a small dip at 1400nm.</p>	



Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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

$$R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$$

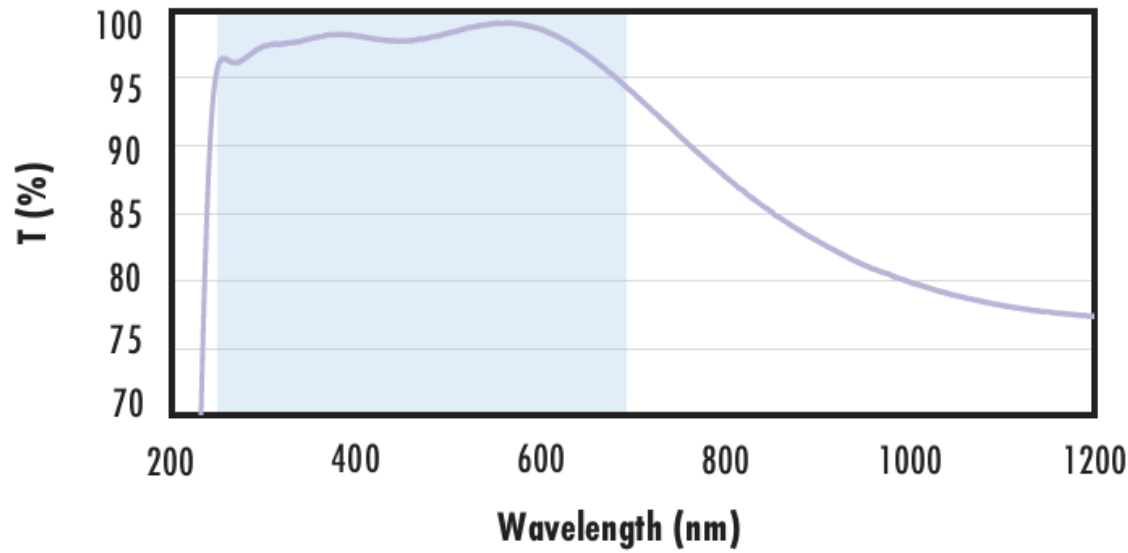
$$R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$$

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.

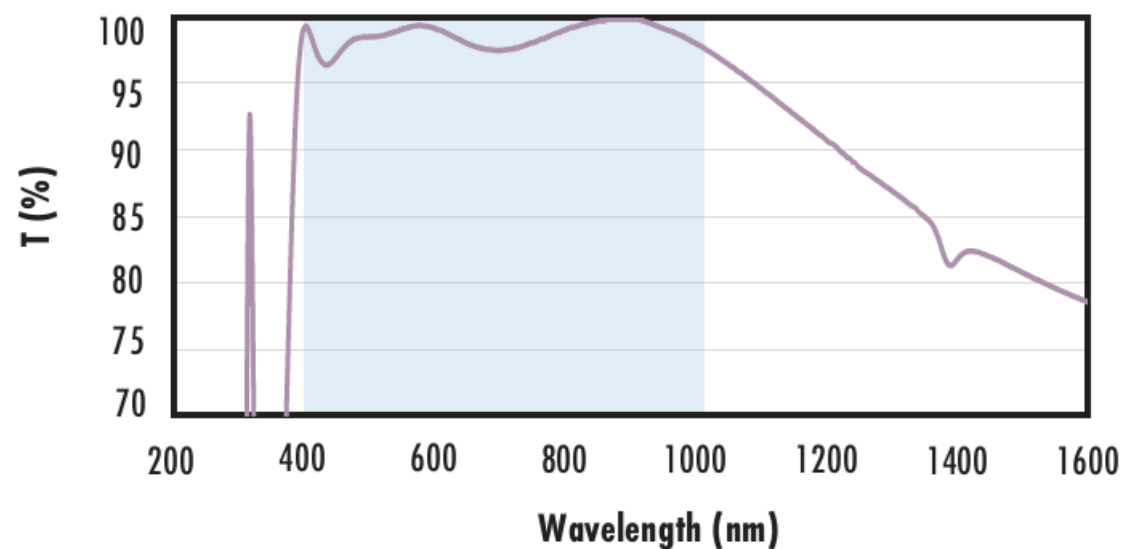
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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:

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

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

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

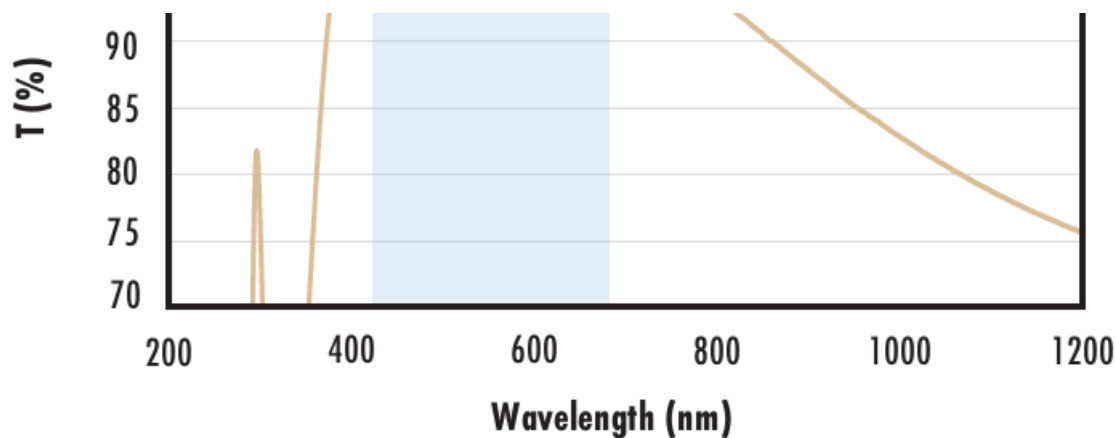
Data outside this range is not guaranteed and is for reference only.

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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.



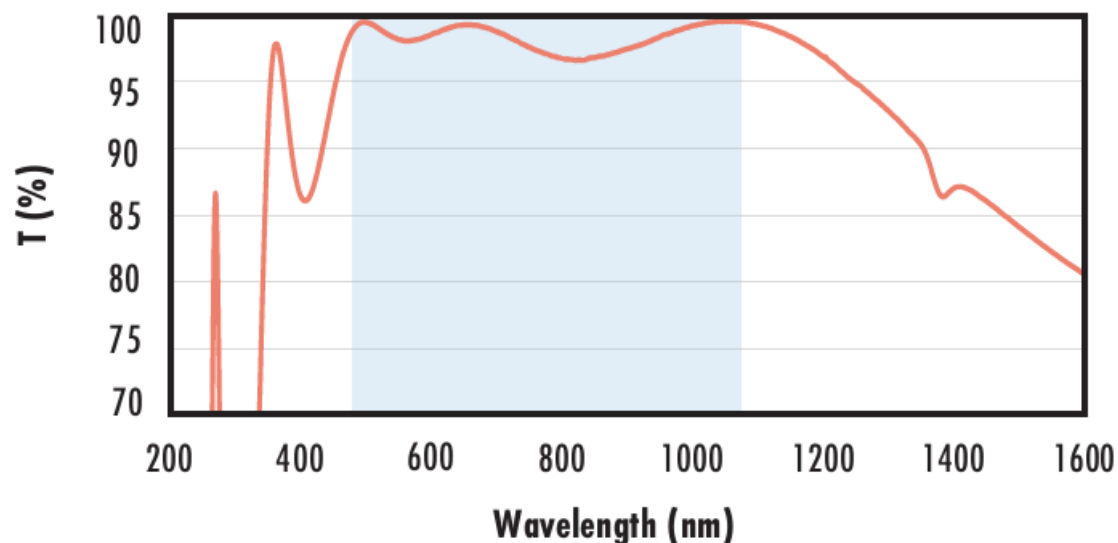
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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:

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

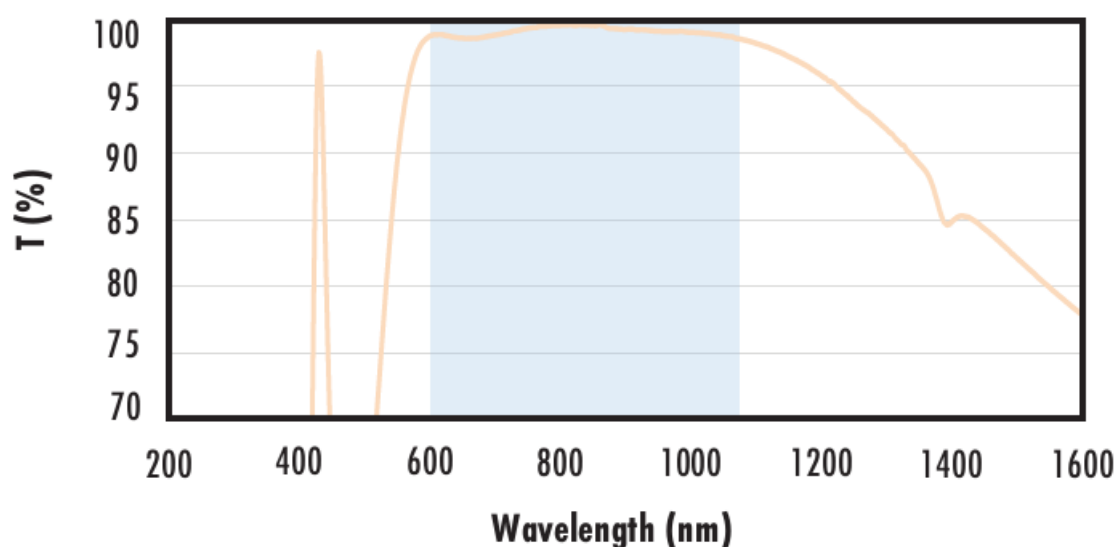
$$R_{abs} \leq 0.25\% @ 1064\text{nm}$$

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

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.

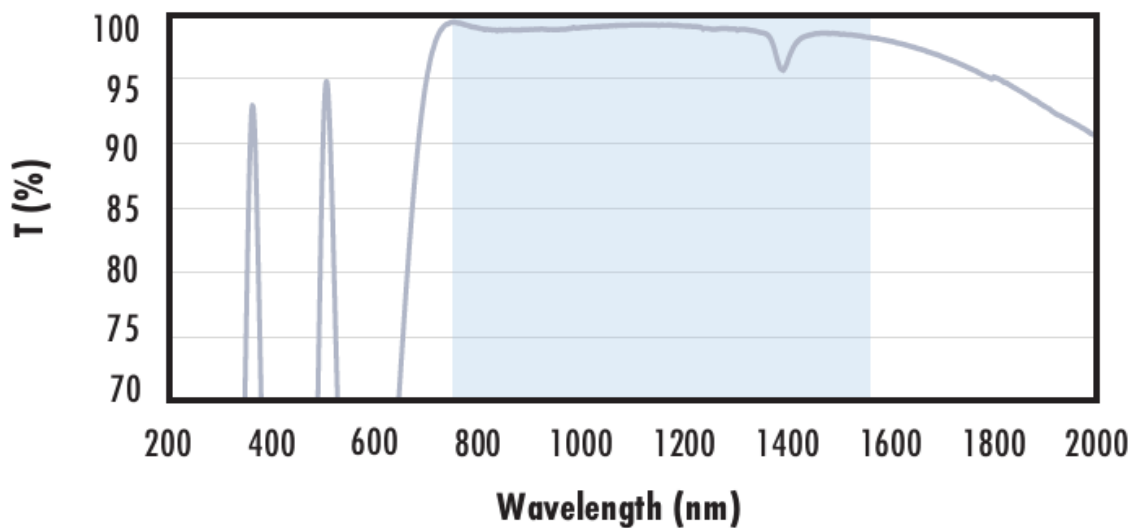
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{abs} \leq 1.5\% @ 750 - 800\text{nm}$$

$$R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$$

$$R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$$

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

[Click Here to Download Data](#)

Compatible Mounts