

TECHSPEC[®] 50mm Dia. x 250mm FL VIS-NIR Coated, UV Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses



Stock **#67-242** [CONTACT US](#)

-

1

+

C\$471⁰⁰

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Volume Pricing	
Qty 1-5	C\$471.80 each
Qty 6-25	C\$376.60 each
Qty 26-49	C\$354.20 each
Need More?	Request Quote

Product Downloads

General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

50.00 +0.0/-0.025

<1	Centering (arcmin):
7.00 ±0.10	Center Thickness CT (mm):
4.24	Edge Thickness ET (mm):
49	Clear Aperture CA (mm):
Protective as needed	Bevel:

Optical Properties	
250.00 @ 587.6nm	Effective Focal Length EFL (mm):
245.21	Back Focal Length BFL (mm):
VIS-NIR (400-1000nm)	Coating:
R _{abs} ≤0.25% @ 880nm R _{avg} ≤1.25% @ 400 - 870nm R _{avg} ≤1.25% @ 890 - 1000nm	Coating Specification:
Fused Silica (Corning 7980)	Substrate: □
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
N4	Irregularity (P-V) @ 632.8nm:
±1	Focal Length Tolerance (%):
114.62	Radius R ₁ (mm):
5	f/#:
0.10	Numerical Aperture NA:
400 - 1000	Wavelength Range (nm):
5 J/cm² @ 532nm, 10ns	Damage Threshold, Reference: □

Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

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

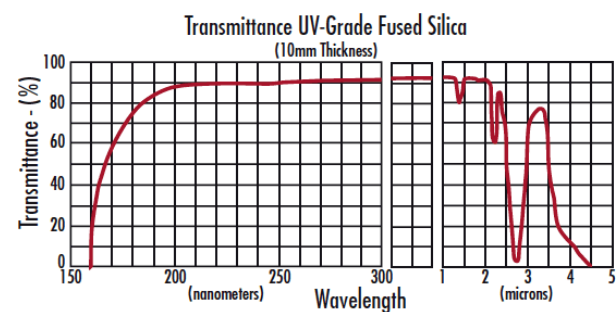
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

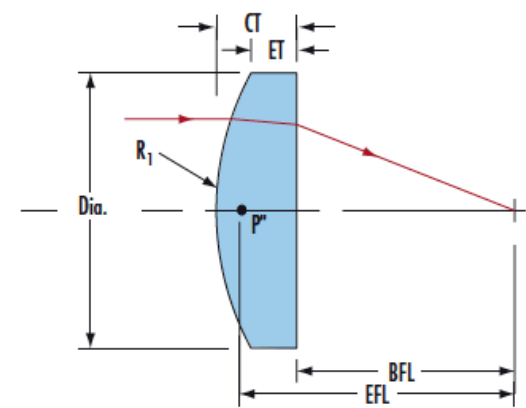
- AR Coated to Provide <1.25% Reflection per Surface for 400 - 870nm and for 890 – 1000nm
- Precision Fused Silica Substrate
- Various Coating Options: [Uncoated](#), [MgF₂](#), [UV-AR](#), [UV-VIS](#), [VIS-EXT](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

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.

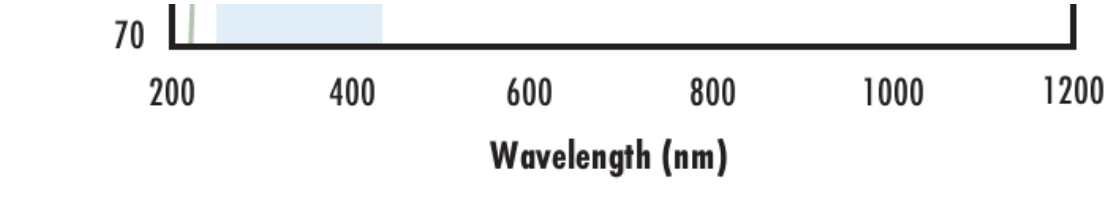
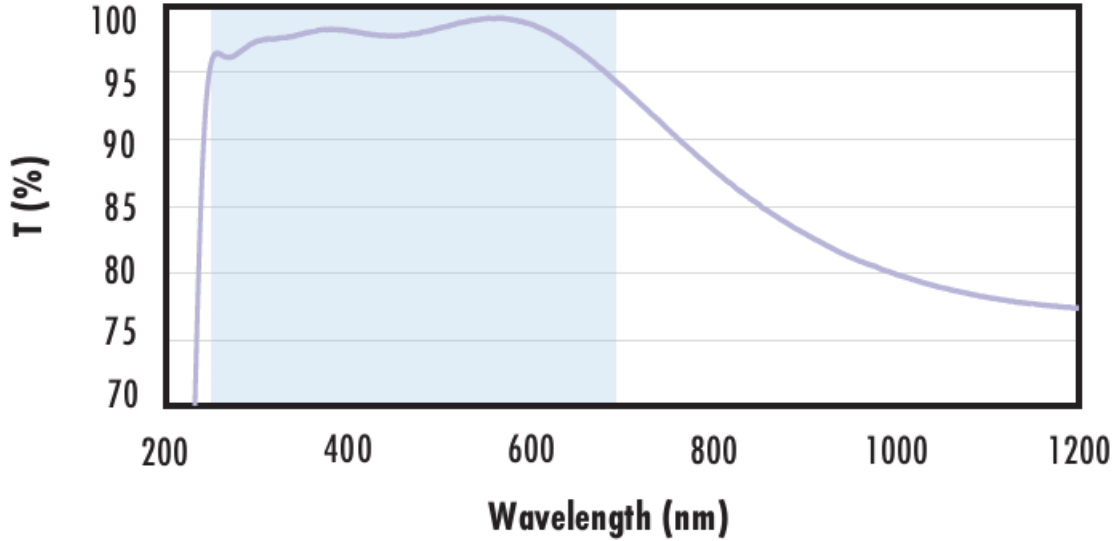
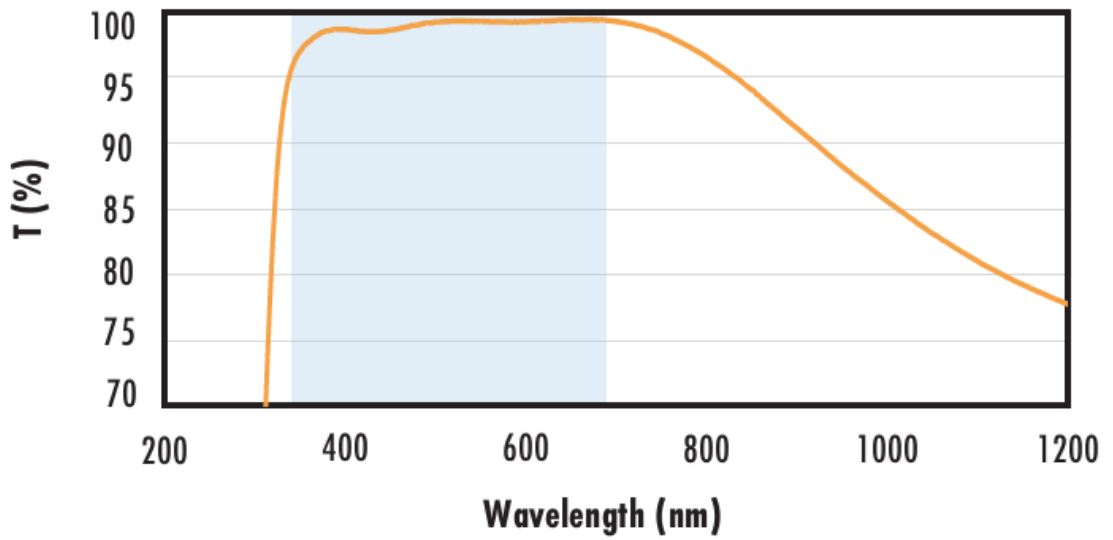
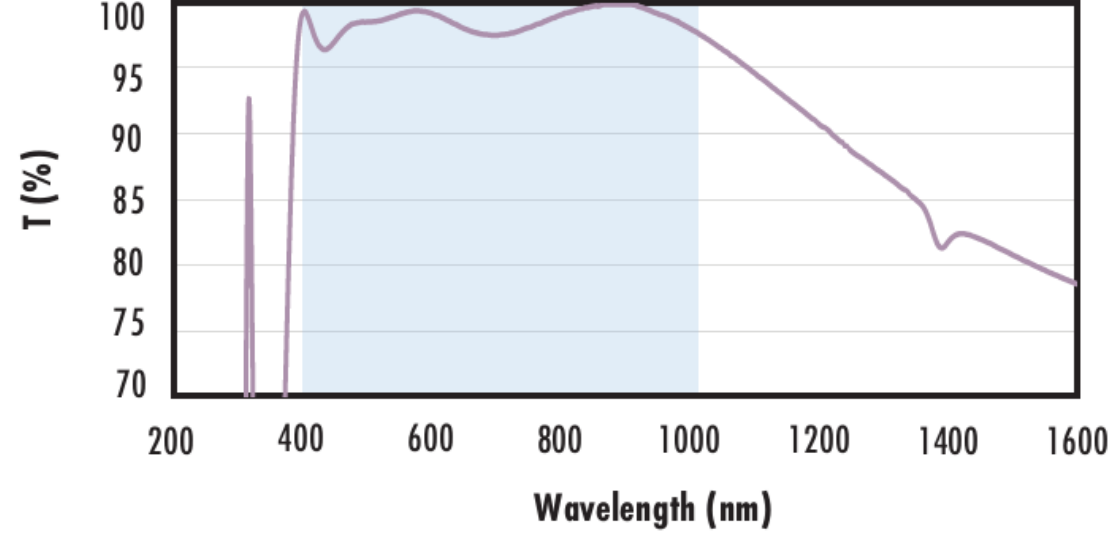
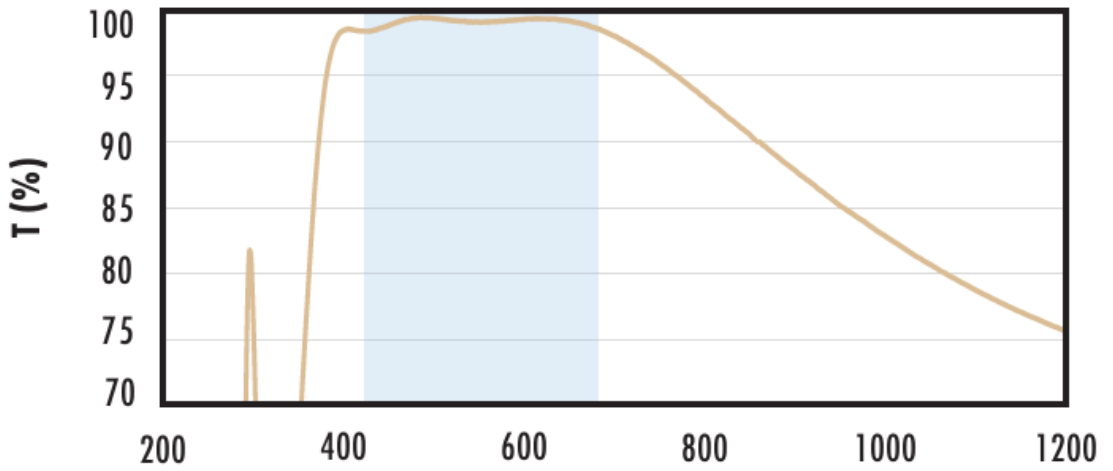
Technical Information



UV FS Transmission Curve



FUSED SILICA	
Uncoated Fused Silica Typical Transmission The graph shows transmittance (%) on the y-axis (70 to 100) against wavelength (nm) on the x-axis (200 to 2200). The curve is relatively flat, staying above 90% transmittance across the entire range, with a slight dip around 1400 nm.	Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra. Click Here to Download Data
Fused Silica with MgF₂ Coating Typical Transmission The graph shows transmittance (%) on the y-axis (70 to 100) against wavelength (nm) on the x-axis (200 to 2200). A blue shaded region indicates the coating design wavelength range from approximately 400 nm to 700 nm. The transmittance is high (above 95%) in this range and remains high across the rest of the spectrum.	Typical transmission of a 3mm thick fused silica window with MgF₂ (400-700nm) coating at 0° AOI. The blue shaded region indicates the coating design wavelength range, with the following specification: $R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (N-BK7) Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
Fused Silica with UV-AR Coating Typical Transmission The graph shows transmittance (%) on the y-axis (75 to 100) against wavelength (nm) on the x-axis (200 to 2200). A blue shaded region indicates the coating design wavelength range from approximately 250 nm to 425 nm. The transmittance is high (above 95%) in this range and then drops significantly towards longer wavelengths.	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\% \text{ @ } 350 - 450\text{nm}$$R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
Fused Silica with VIS-EXT Coating Typical Transmission 	Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI. The blue shaded region indicates the coating design wavelength range, with the following specification: $R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
Fused Silica with VIS-NIR Coating Typical Transmission 	Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI. The blue shaded region indicates the coating design wavelength range, with the following specification: $R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}$$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. 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: $R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data

Wavelength (nm) Fused Silica with YAG-BBAR Coating Typical Transmission T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 Wavelength (nm)	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 T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 Wavelength (nm)	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 T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 1800 2000 Wavelength (nm)	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