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TECHSPEC[®] 12mm Dia. x 20mm FL, VIS-NIR Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#63-829** 20+ In Stock

☐ Other Coating Options

-

1

+

₹11,210

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Volume Pricing	
Qty 1-5	₹11,210 each
Qty 6-25	₹8,953 each
Qty 26-49	₹8,408 each
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Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

12.00 +0.0/-0.025	
Centering (arcmin):	<1
Bevel:	Protective as needed
Center Thickness CT (mm):	4.37 ±0.05
Edge Thickness ET (mm):	2.27
Clear Aperture CA (mm):	11.00

Optical Properties	
Back Focal Length BFL (mm):	18.44
Effective Focal Length EFL (mm):	20.00
Coating:	VIS-NIR (400-1000nm)
Coating Specification:	R _{abs} ≤0.25% @ 880nm R _{avg} ≤1.25% @ 400 - 870nm R _{avg} ≤1.25% @ 890 - 1000nm
Substrate: ☐	Fused Silica (Corning 7980)
Surface Quality:	40-20
Power (P-V) @ 632.8nm:	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4
Radius R ₁ =R ₂ (mm):	17.63
f/#:	1.67
Focal Length Specification Wavelength (nm):	587.6
Focal Length Tolerance (%):	±1
Numerical Aperture NA:	0.30
Wavelength Range (nm):	400 - 1000
Damage Threshold, Reference: ☐	5 J/cm ² @ 532nm, 10ns

Regulatory Compliance	
RoHS 2015:	Compliant
Certificate of Conformance:	View
Reach 235:	Compliant
Country of Origin:	Japan
Imported By:	Edmund Optics India Private Limited

Product Details

- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- Precision Fused Silica Substrate

TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) between 0.2 and 5. At a conjugate ratio of 1, aberrations such as spherical aberration, chromatic aberration, coma, and distortion are minimized or canceled due to the symmetric lens design. TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses have a precision fused silica substrate. These lenses are available uncoated or with UV-AR, UV-VIS, VIS-EXT, VIS-NIR, VIS 0°, NIR I, or NIR II coatings.

Technical Information



UV FS Transmission Curve

FUSED SILICA																									
Uncoated Fused Silica Typical Transmission <table border="1"><caption>Approximate data for Uncoated Fused Silica</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>200</td><td>92</td></tr><tr><td>400</td><td>94</td></tr><tr><td>600</td><td>94</td></tr><tr><td>800</td><td>94</td></tr><tr><td>1000</td><td>94</td></tr><tr><td>1200</td><td>94</td></tr><tr><td>1400</td><td>92</td></tr><tr><td>1600</td><td>94</td></tr><tr><td>1800</td><td>94</td></tr><tr><td>2000</td><td>94</td></tr><tr><td>2200</td><td>90</td></tr></tbody></table> Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra. Click Here to Download Data	Wavelength (nm)	Transmission T (%)	200	92	400	94	600	94	800	94	1000	94	1200	94	1400	92	1600	94	1800	94	2000	94	2200	90	
Wavelength (nm)	Transmission T (%)																								
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Fused Silica with MgF₂ Coating Typical Transmission <table border="1"><caption>Approximate data for Fused Silica with MgF2 Coating</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>200</td><td>94</td></tr><tr><td>400</td><td>96</td></tr><tr><td>600</td><td>96</td></tr><tr><td>800</td><td>96</td></tr><tr><td>1000</td><td>96</td></tr><tr><td>1200</td><td>96</td></tr><tr><td>1400</td><td>94</td></tr><tr><td>1600</td><td>96</td></tr><tr><td>1800</td><td>96</td></tr><tr><td>2000</td><td>96</td></tr><tr><td>2200</td><td>90</td></tr></tbody></table> 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	Wavelength (nm)	Transmission T (%)	200	94	400	96	600	96	800	96	1000	96	1200	96	1400	94	1600	96	1800	96	2000	96	2200	90	
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Fused Silica with UV-AR Coating Typical Transmission <table border="1"><caption>Approximate data for Fused Silica with UV-AR Coating</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>200</td><td>70</td></tr><tr><td>250</td><td>100</td></tr><tr><td>400</td><td>100</td></tr><tr><td>600</td><td>90</td></tr><tr><td>800</td><td>78</td></tr><tr><td>1000</td><td>75</td></tr><tr><td>1200</td><td>76</td></tr></tbody></table> 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	Wavelength (nm)	Transmission T (%)	200	70	250	100	400	100	600	90	800	78	1000	75	1200	76									
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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

Custom

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](#).

Compatible Mounts