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TECHSPEC[®] 18mm Dia. x 20mm FL, Uncoated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#08-083** 20+ In Stock

☐ Other Coating Options

-

1

+

₹9,965

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Volume Pricing	
Qty 1-5	₹9,965 each
Qty 6-25	₹7,941 each
Qty 26-49	₹7,474 each
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Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

18.00 +0.0/-0.025	
	Centering (arcmin):
<1	
	Bevel:
Protective as needed	
	Center Thickness CT (mm):
7.64 ±0.10	
	Edge Thickness ET (mm):
2.50	
	Clear Aperture CA (mm):
17.00	

Optical Properties	
	Back Focal Length BFL (mm):
17.18	
	Effective Focal Length EFL (mm):
20.00	
	Coating:
Uncoated	
	Coating Specification:
Uncoated	
	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):
17.05	
	f#:
1.11	
	Focal Length Specification Wavelength (nm):
587.6	
	Focal Length Tolerance (%):
±1	
	Numerical Aperture NA:
0.45	
	Wavelength Range (nm):
200 - 2200	

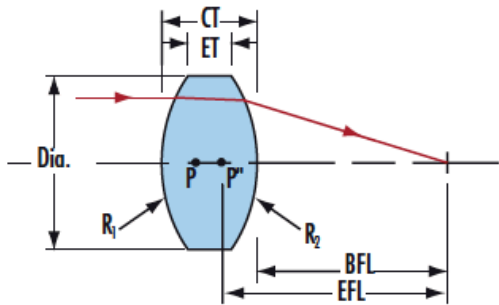
Regulatory Compliance	
	RoHS 2015:
Compliant	
	Certificate of Conformance:
View	
	Reach 250:
Compliant	
	Country of Origin:
Japan	
	Imported By:
Edmund Optics India Private Limited	

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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800	94																														
1000	94																														
1200	94																														
1400	92																														
1600	94																														
1800	94																														
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2200	90																														
Fused Silica with MgF₂ Coating Typical Transmission <table border="1"><caption>Approximate data for MgF2 Coated Fused Silica</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>95</td></tr><tr><td>1000</td><td>95</td></tr><tr><td>1200</td><td>95</td></tr><tr><td>1400</td><td>93</td></tr><tr><td>1600</td><td>95</td></tr><tr><td>1800</td><td>95</td></tr><tr><td>2000</td><td>95</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 - 700nm (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	95	1000	95	1200	95	1400	93	1600	95	1800	95	2000	95	2200	90							
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1600	95																														
1800	95																														
2000	95																														
2200	90																														
Fused Silica with UV-AR Coating Typical Transmission <table border="1"><caption>Approximate data for UV-AR Coated Fused Silica</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>99</td></tr><tr><td>300</td><td>99</td></tr><tr><td>350</td><td>99</td></tr><tr><td>400</td><td>100</td></tr><tr><td>425</td><td>100</td></tr><tr><td>500</td><td>98</td></tr><tr><td>600</td><td>90</td></tr><tr><td>700</td><td>80</td></tr><tr><td>800</td><td>75</td></tr><tr><td>900</td><td>75</td></tr><tr><td>1000</td><td>75</td></tr><tr><td>1100</td><td>76</td></tr><tr><td>1200</td><td>77</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 - 425nm $R_{avg} \leq 0.75\%$ @ 250 - 425nm $R_{avg} \leq 0.5\%$ @ 370 - 420nm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data	Wavelength (nm)	Transmission T (%)	200	70	250	99	300	99	350	99	400	100	425	100	500	98	600	90	700	80	800	75	900	75	1000	75	1100	76	1200	77	
Wavelength (nm)	Transmission T (%)																														
200	70																														
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300	99																														
350	99																														
400	100																														
425	100																														
500	98																														
600	90																														
700	80																														
800	75																														
900	75																														
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1100	76																														
1200	77																														

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
Fused Silica with YAG-BBAR Coating Typical Transmission	

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

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

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Compatible Mounts