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TECHSPEC[®] 9mm Dia. x 18mm FL, NIR I Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses



Stock **#22-158** **5 In Stock**

☐ [Other Coating Options](#)

-

1

+

S\$208⁰⁰

ADD TO CART

Volume Pricing	
Qty 1-5	S\$208.60 each
Qty 6-25	S\$166.60 each
Qty 26-49	S\$155.40 each
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General

Double-Convex Lens

Type:

Physical & Mechanical Properties

Diameter (mm):

9.00 +0.0/-0.025	
Centering (arcmin):	<1
Bevel:	Protective as needed
Center Thickness CT (mm):	2.60 ±0.05
Edge Thickness ET (mm):	1.32
Clear Aperture CA (mm):	8.1
Optical Properties	
Back Focal Length BFL (mm):	17.09
Effective Focal Length EFL (mm):	18.00
Coating:	NIR I (600-1050nm)
Coating Specification:	R _{avg} ≤0.5% @ 600 - 1050nm
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):	16.09
f/#:	2.00
Focal Length Specification Wavelength (nm):	587.6
Focal Length Tolerance (%):	±1
Numerical Aperture NA:	0.25
Wavelength Range (nm):	600 - 1050
Damage Threshold, Reference: ☐	7 J/cm ² @ 1064nm, 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

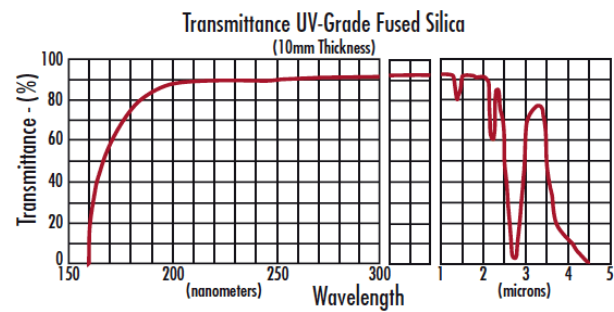
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

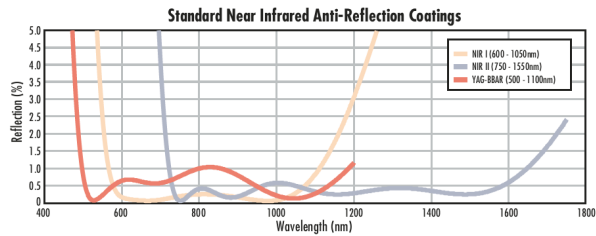
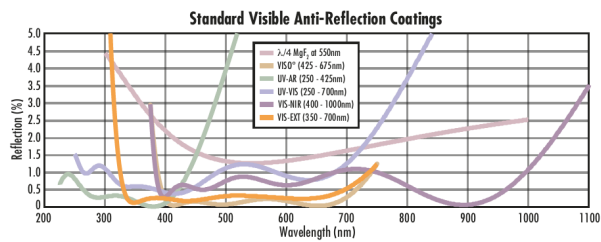
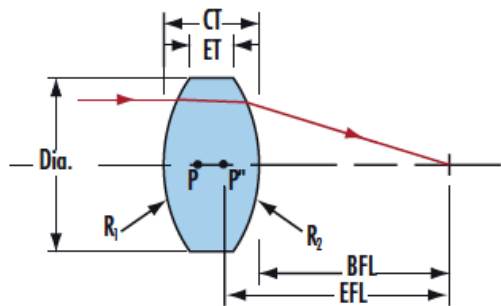
- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- Precision Fused Silica Substrate

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

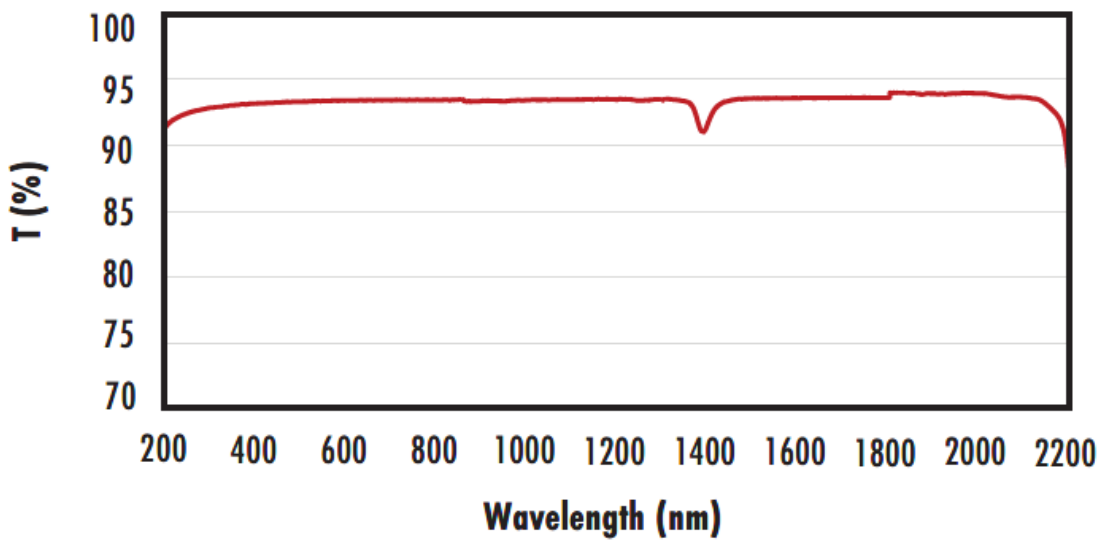


UV FS Transmission Curve



FUSED SILICA

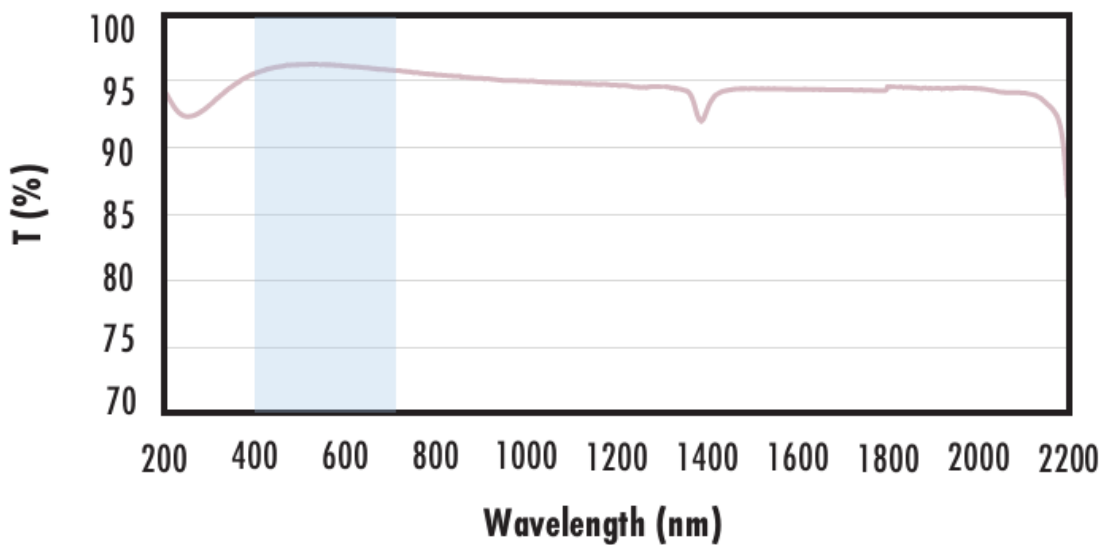
Uncoated Fused Silica
Typical Transmission



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



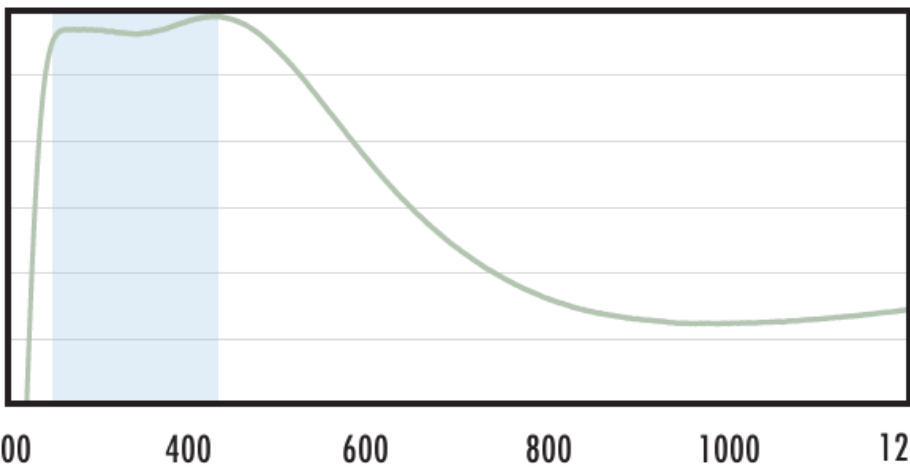
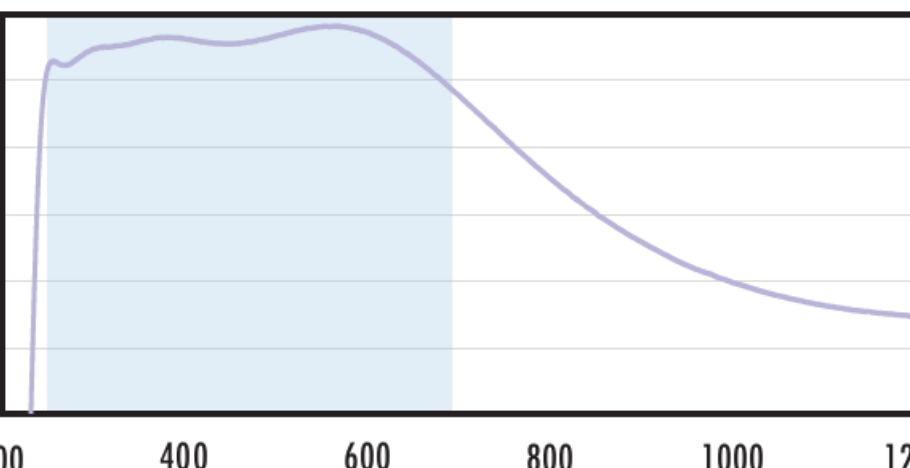
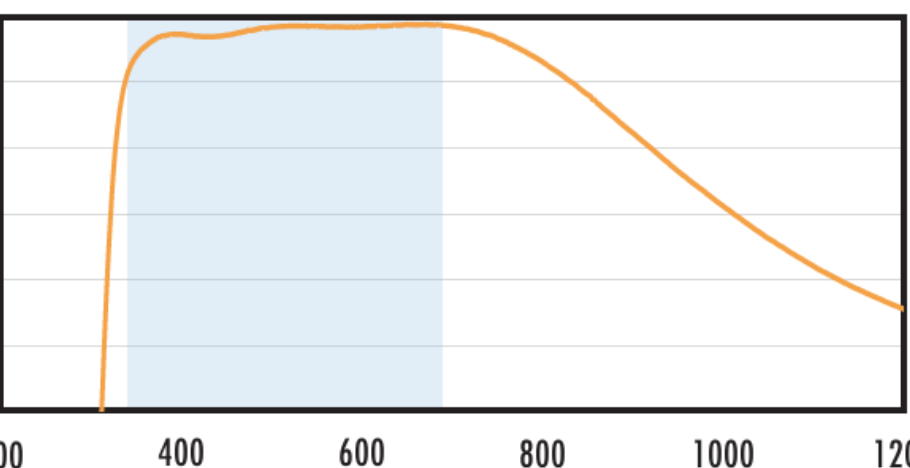
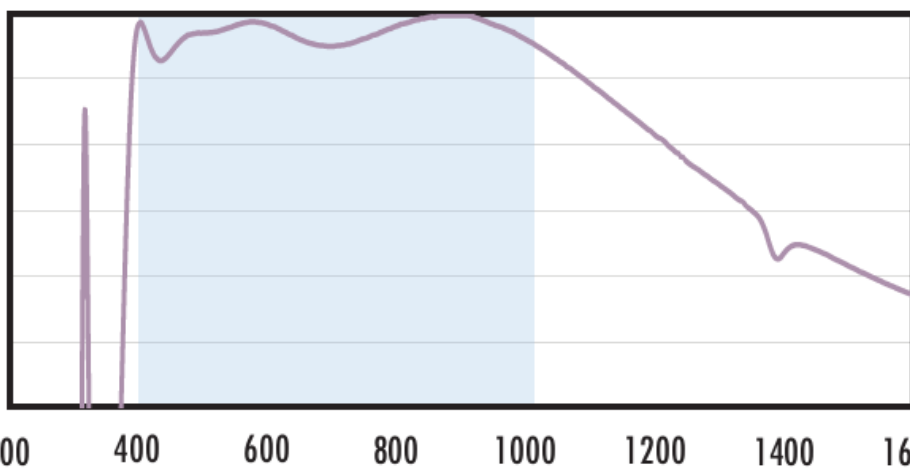
Typical transmission of a 3mm thick fused silica window with MgF₂ (400-700nm) coating at 0° AOI.

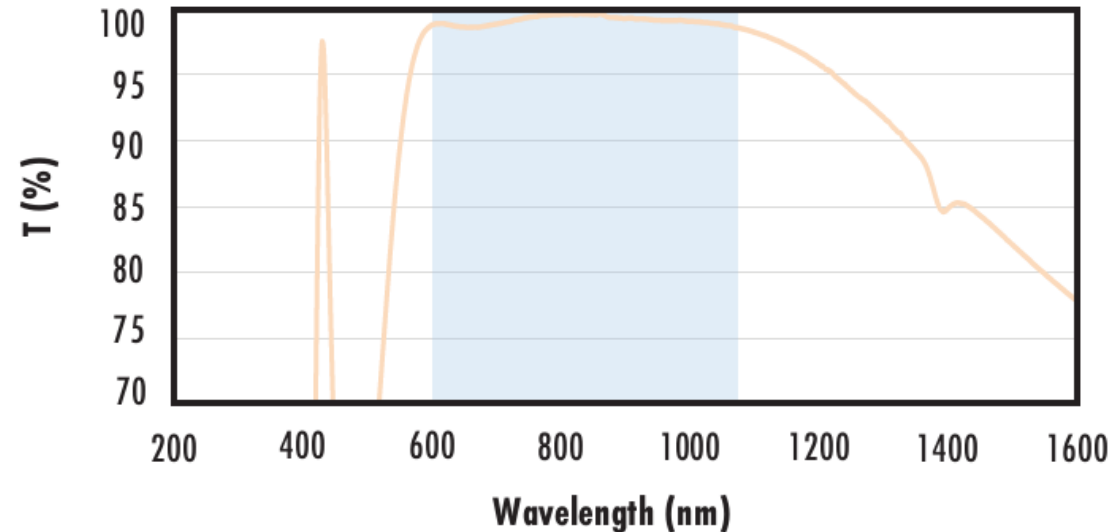
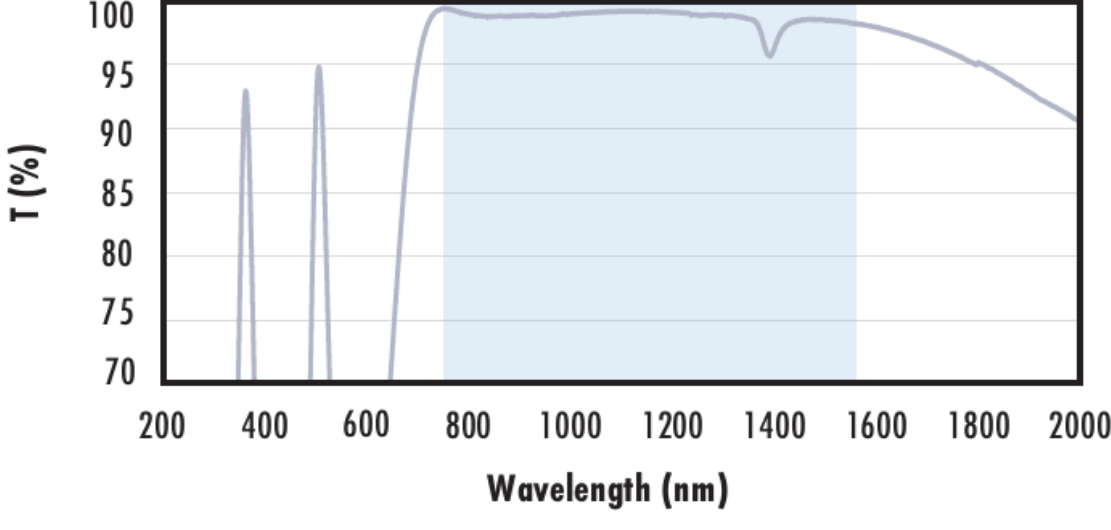
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{avg} \leq 1.75\%$ @ 400 - 700nm (N-BK7)

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

[Click Here to Download Data](#)

Fused Silica with UV-AR Coating Typical Transmission <table border="1"><caption>Approximate data for 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>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>82</td></tr><tr><td>800</td><td>78</td></tr><tr><td>900</td><td>76</td></tr><tr><td>1000</td><td>75</td></tr><tr><td>1200</td><td>76</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	200	70	250	100	300	99	350	99	400	100	425	100	500	98	600	90	700	82	800	78	900	76	1000	75	1200	76	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																		
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Fused Silica with UV-VIS Coating Typical Transmission <table border="1"><caption>Approximate data for UV-VIS 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>97</td></tr><tr><td>300</td><td>98</td></tr><tr><td>350</td><td>98</td></tr><tr><td>400</td><td>99</td></tr><tr><td>450</td><td>98</td></tr><tr><td>500</td><td>99</td></tr><tr><td>550</td><td>100</td></tr><tr><td>600</td><td>100</td></tr><tr><td>650</td><td>98</td></tr><tr><td>700</td><td>95</td></tr><tr><td>800</td><td>85</td></tr><tr><td>900</td><td>78</td></tr><tr><td>1000</td><td>76</td></tr><tr><td>1200</td><td>75</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	200	70	250	97	300	98	350	98	400	99	450	98	500	99	550	100	600	100	650	98	700	95	800	85	900	78	1000	76	1200	75	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														
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Fused Silica with VIS-EXT Coating Typical Transmission <table border="1"><caption>Approximate data for VIS-EXT 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>300</td><td>95</td></tr><tr><td>350</td><td>98</td></tr><tr><td>400</td><td>99</td></tr><tr><td>450</td><td>99</td></tr><tr><td>500</td><td>100</td></tr><tr><td>550</td><td>100</td></tr><tr><td>600</td><td>100</td></tr><tr><td>650</td><td>100</td></tr><tr><td>700</td><td>100</td></tr><tr><td>800</td><td>95</td></tr><tr><td>900</td><td>85</td></tr><tr><td>1000</td><td>78</td></tr><tr><td>1200</td><td>75</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	200	70	300	95	350	98	400	99	450	99	500	100	550	100	600	100	650	100	700	100	800	95	900	85	1000	78	1200	75	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																
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Fused Silica with VIS 0° Coating Typical Transmission																																															

	Typical transmission of a 3mm thick fused silica window with MS 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. 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: $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$ 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