

TECHSPEC[®] 50mm Dia. 4mm Thick MgF₂ Coated, 1λ Fused Silica Window



Stock **#11-927** 7 In Stock

-

1

+

A\$246^{.40}

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Volume Pricing	
Qty 1-5	A\$246.40 each
Qty 6-25	A\$195.20 each
Qty 26-49	A\$184.00 each
Need More?	Request Quote

Product Downloads

General

Protective Window

Type:

Physical & Mechanical Properties

45.00

Clear Aperture CA (mm):

50.00 +0.00/-0.20

Diameter (mm):

4.00 ±0.38	Thickness (mm):
<5	Parallelism (arcmin):
+0.00/-0.20	Dimensional Tolerance (mm):
Protective as needed	Bevel:
90	Clear Aperture (%):
Fine Ground	Edges:
0.16	Poisson's Ratio:
73	Young's Modulus (GPa):
522.00	Knoop Hardness (kg/mm²):

Optical Properties

MgF ₂ (400-700nm)	Coating:
Fused Silica (Corning 7980)	Substrate: □
1.458	Index of Refraction (n _d):
60-40	Surface Quality:
67.8	Abbe Number (v _d):
R _{avg} ≤1.75% @ 400 - 700nm	Coating Specification:
400 - 700	Wavelength Range (nm):
1λ	Surface Flatness (P-V):
10 J/cm² @ 532nm, 10ns	Damage Threshold, By Design: □

Material Properties

2.20	Density (g/cm³):
0.52 (+5 to +35°C) 0.57 (0 to +200°C) 0.48 (-100 to +200°C)	Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):
7980 0G	Fused Silica Grade:

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

- Available Uncoated or with Broadband Anti-Reflection Coatings
- Ideal for Cost Sensitive Broadband Applications
- Circular and Square Sizes from 5mm to 100mm
- [λ/4](#) or [λ/10](#) UV Fused Silica Windows Also Available

TECHSPEC® 1λ UV Fused Silica Windows are precision manufactured using UV-grade synthetic fused silica. In addition to superior transmission, the synthetic fused silica of these optical windows exhibits higher thermal properties, exceptional purity, and excellent environmental durability for demanding applications. The windows are ideal for cost-sensitive broadband applications and are available uncoated or with broadband anti-reflection coatings. TECHSPEC® 1λ UV Fused Silica Windows have circular and square sizes ranging from 5mm to 100mm. [λ/4](#) or [λ/10](#) UV Fused Silica Windows are also available.

Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

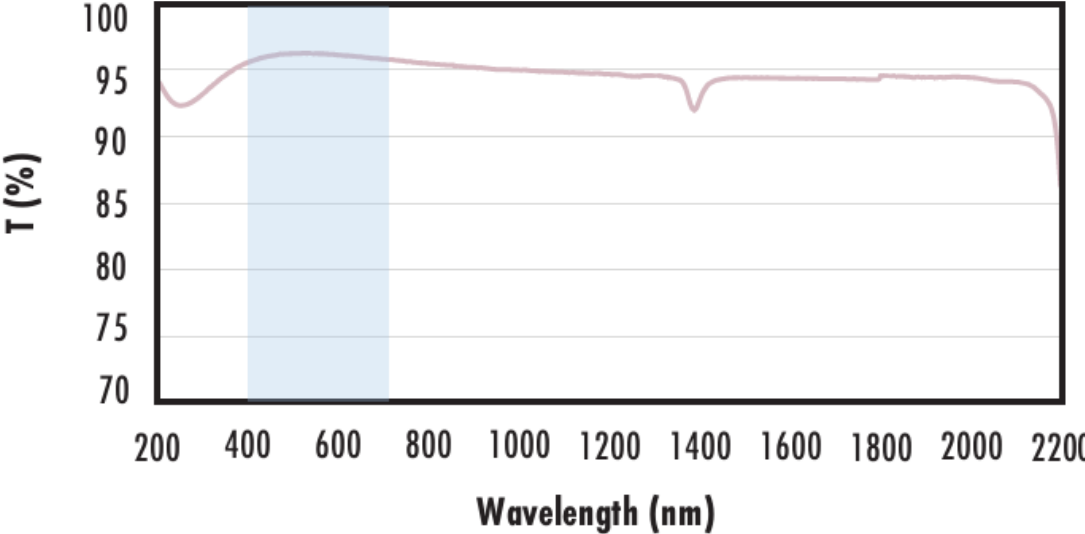
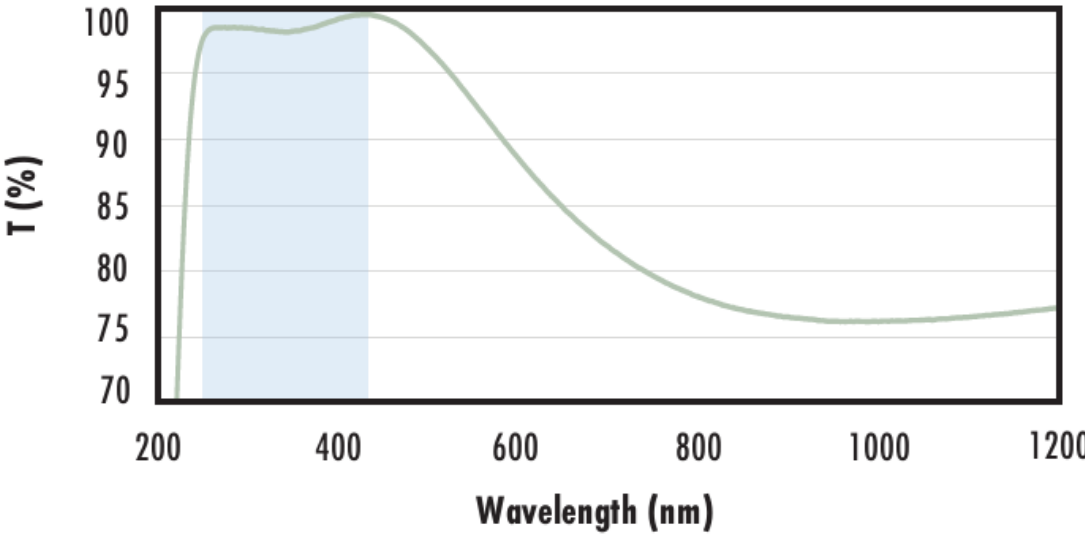
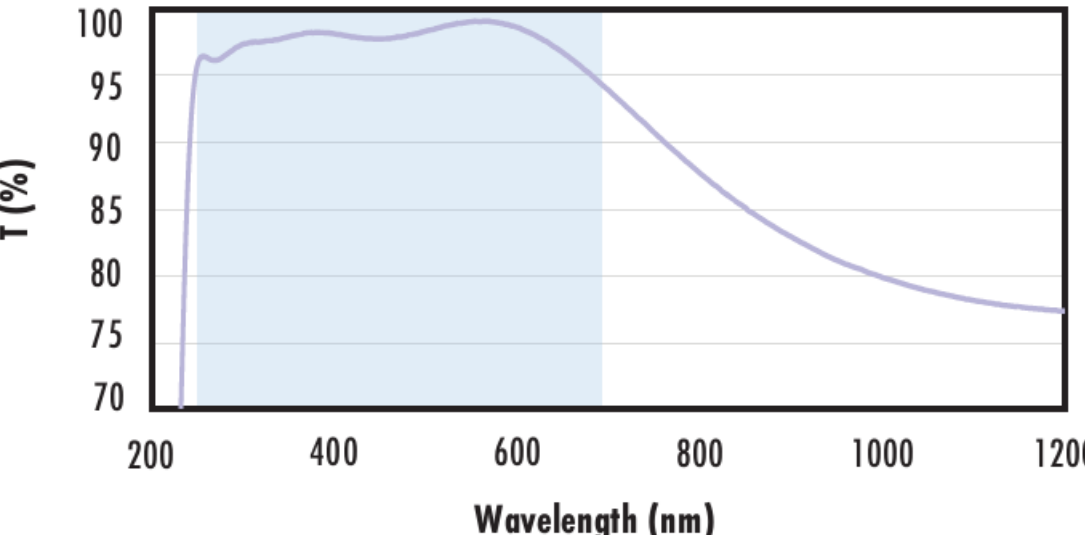
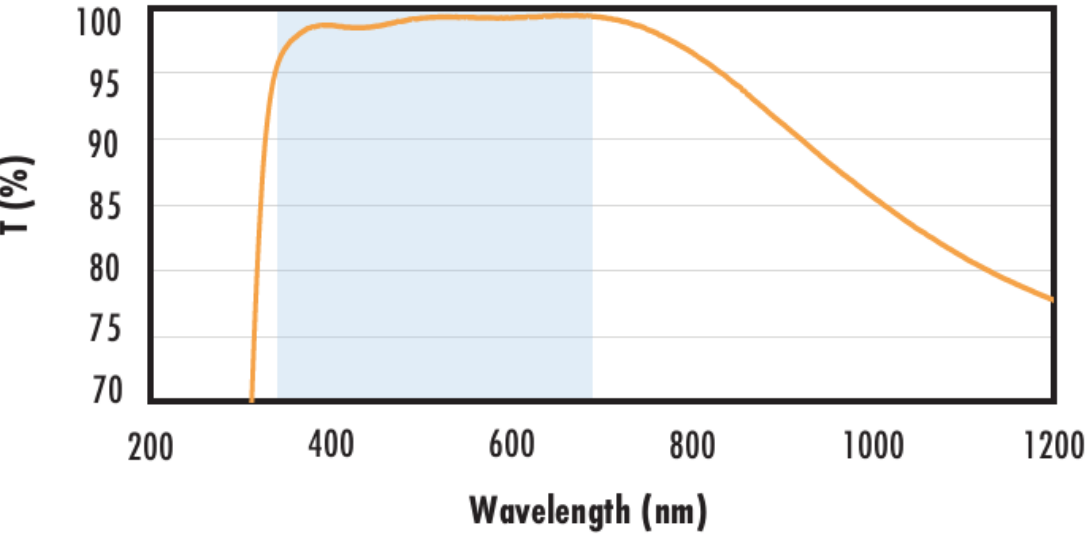
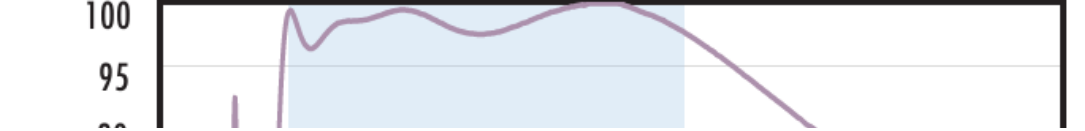
Technical Information

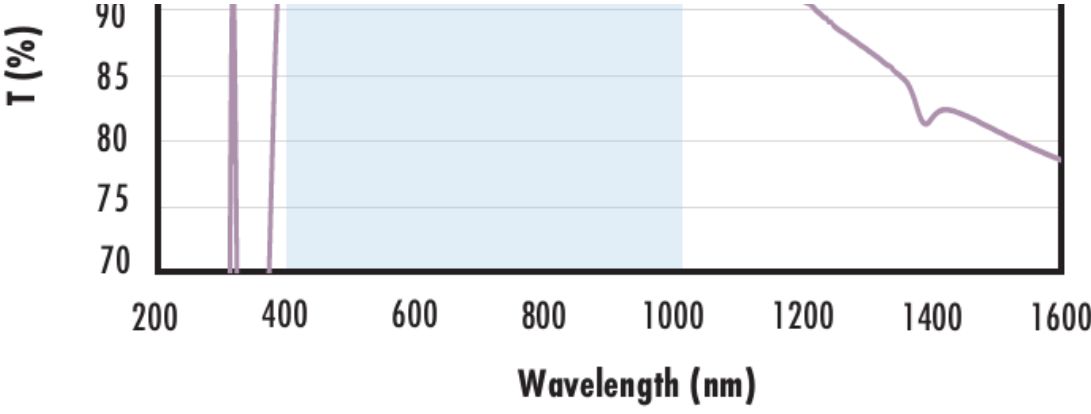
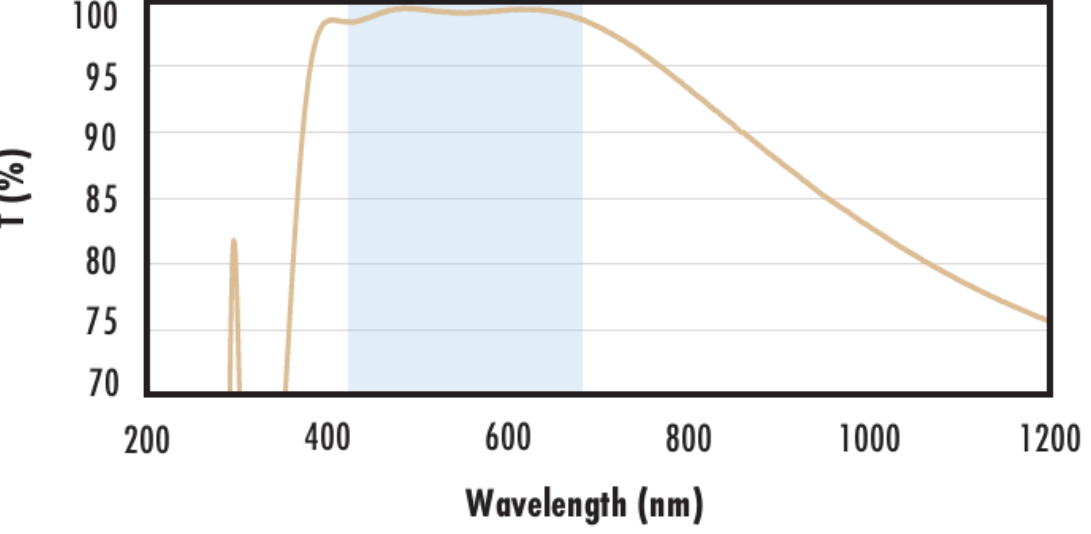
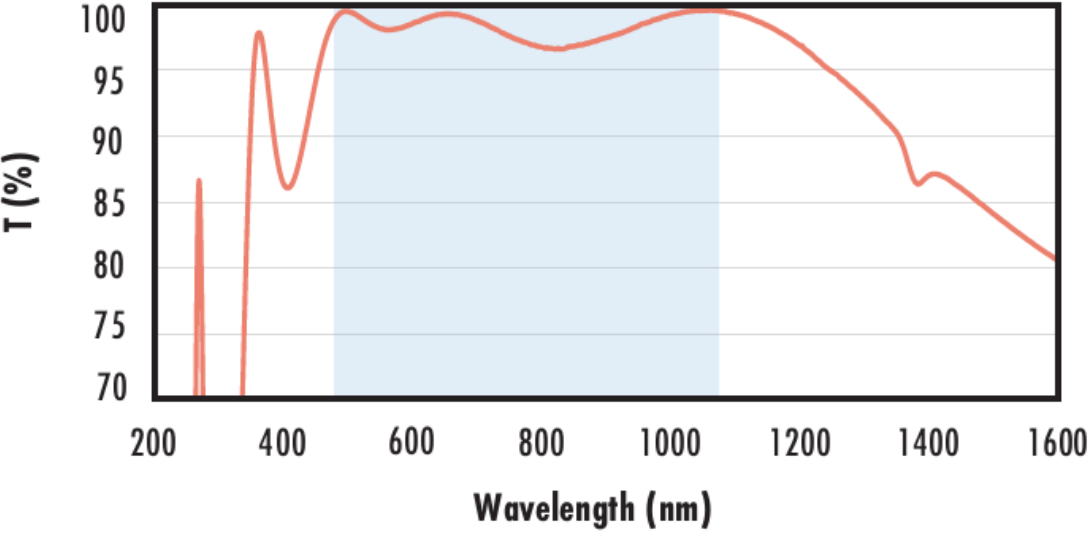
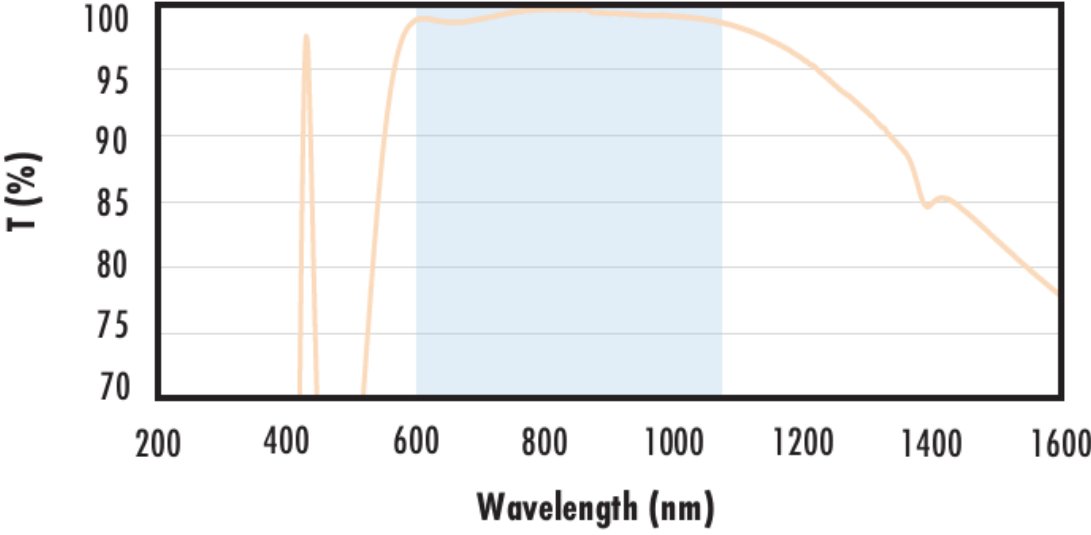
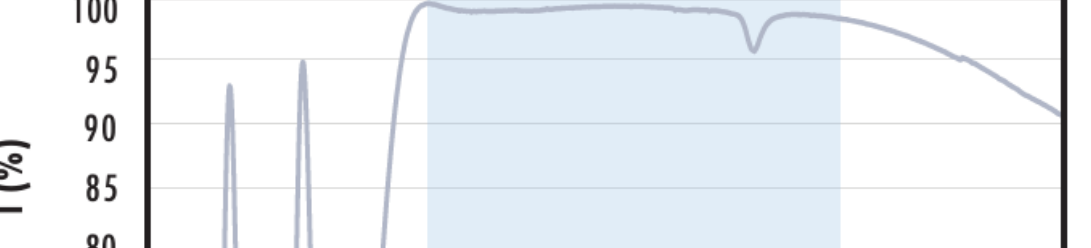


UV FS Transmission Curve



FUSED SILICA		
Uncoated Fused Silica Typical Transmission T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 Wavelength (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 typical transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 2200). A blue shaded region indicates the coating design wavelength range from 400 nm to 700 nm. The transmission curve is relatively flat, starting around 93% at 200 nm, peaking near 97% at 500 nm, and showing a small dip around 1400 nm before dropping sharply after 2000 nm.	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 typical transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 1200). A blue shaded region indicates the coating design wavelength range from 250 nm to 425 nm. The transmission curve rises sharply from 200 nm to 250 nm, remains near 100% until 425 nm, and then gradually decreases to about 76% at 1200 nm.	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  The graph shows typical transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 1200). A blue shaded region indicates the coating design wavelength range from 250 nm to 700 nm. The transmission curve rises sharply from 200 nm to 250 nm, remains high (above 95%) until 700 nm, and then decreases to about 76% at 1200 nm.	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  The graph shows typical transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 1200). A blue shaded region indicates the coating design wavelength range from 350 nm to 700 nm. The transmission curve rises sharply from 300 nm to 350 nm, remains near 100% until 700 nm, and then decreases to about 77% at 1200 nm.	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  The graph shows typical transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 1200). A blue shaded region indicates the coating design wavelength range from 400 nm to 1000 nm. The transmission curve shows some fluctuations between 400 nm and 1000 nm, remaining above 95%, and then decreases sharply after 1000 nm.	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:

	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: $R_{abs} \leq 0.25\% @ 880nm$ $R_{avg} \leq 1.25\% @ 400 - 870nm$ $R_{avg} \leq 1.25\% @ 890 - 1000nm$ 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: $R_{abs} \leq 1.5\% @ 750 - 800nm$ $R_{abs} \leq 1.0\% @ 800 - 1550nm$ $R_{avg} \leq 0.7\% @ 750 - 1550nm$



Coating Curves

Compatible Mounts