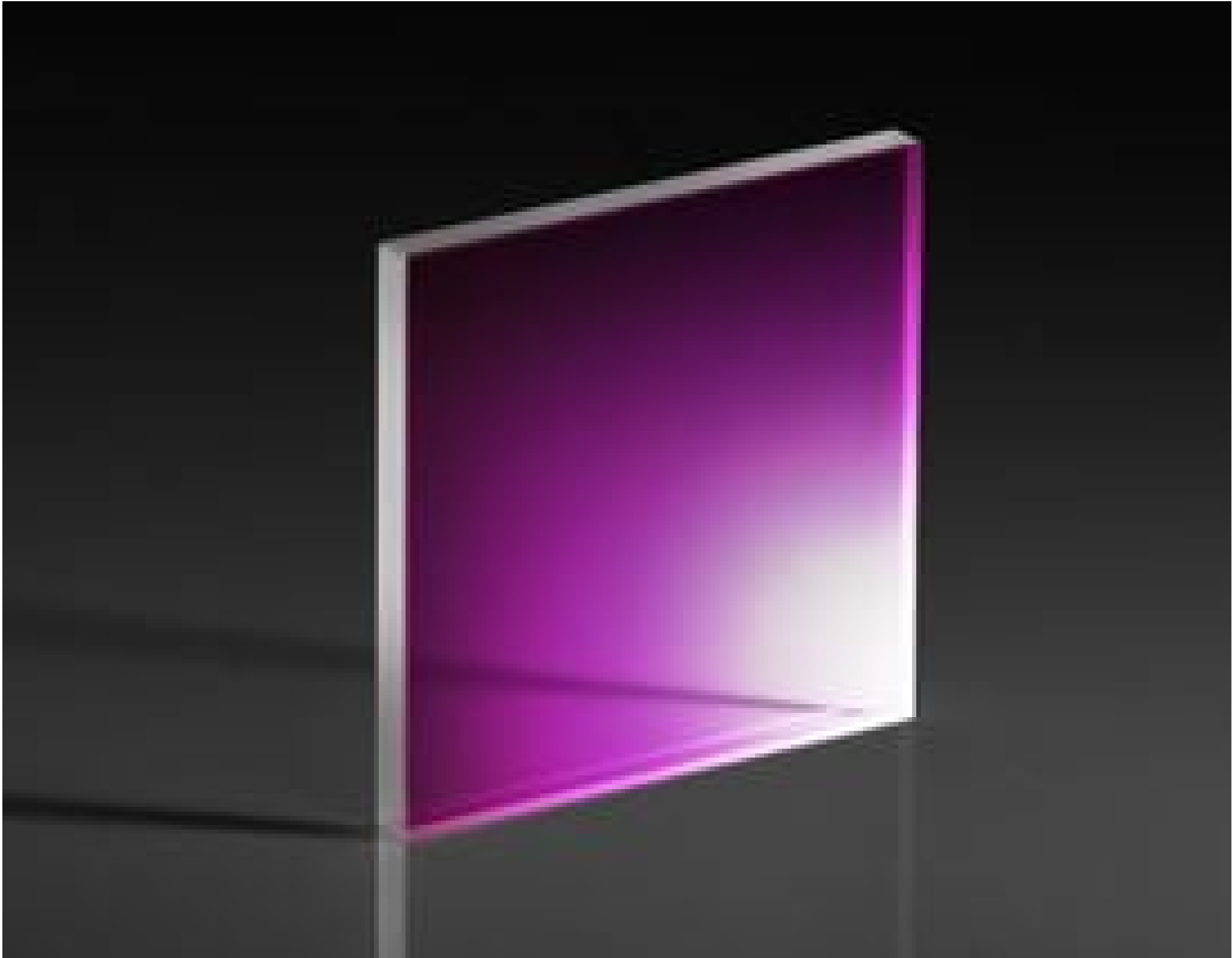


TECHSPEC® 50 x 50mm, 4mm Thick Uncoated, 1λ Fused Silica Window



Stock **#47-231** 16 In Stock

-

1

+

€135^{.00}

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Volume Pricing	
Qty 1-5	€135,00 each
Qty 6-25	€108,00 each
Qty 26-49	€101,00 each
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 Prices shown are exclusive of VAT/local taxes

Product Downloads

301.00

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General

Protective Window

Type:

Physical & Mechanical Properties

45.00 x 45.00

Clear Aperture CA (mm):

50.00 x50.00 +0.00/-0.20	Dimensions (mm):
4.00 ±0.38	Thickness (mm):
50.00	Length (mm):
50.00	Width (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	
Uncoated	Coating:
Fused Silica (Corning 7980)	Substrate: ☐
1.458	Index of Refraction (n _d):
60–40	Surface Quality:
67.8	Abbe Number (v _d):
200 - 2200	Wavelength Range (nm):
1λ	Surface Flatness (P-V):

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

Regulatory Compliance	
Compliant	RoHS 2015:
Compliant	REACH 201:
View	Certificate of Conformance:

Product Details

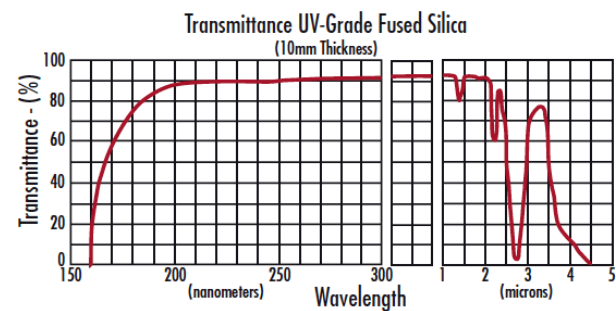
- Available Uncoated or with Broadband Anti-Reflection Coatings
- Ideal for Cost Sensitive Broadband Applications
- Circular and Square Sizes from 5mm to 100mm
- [λ/4](#) or [λ/10](#) UV Fused Silica Windows Also Available

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.

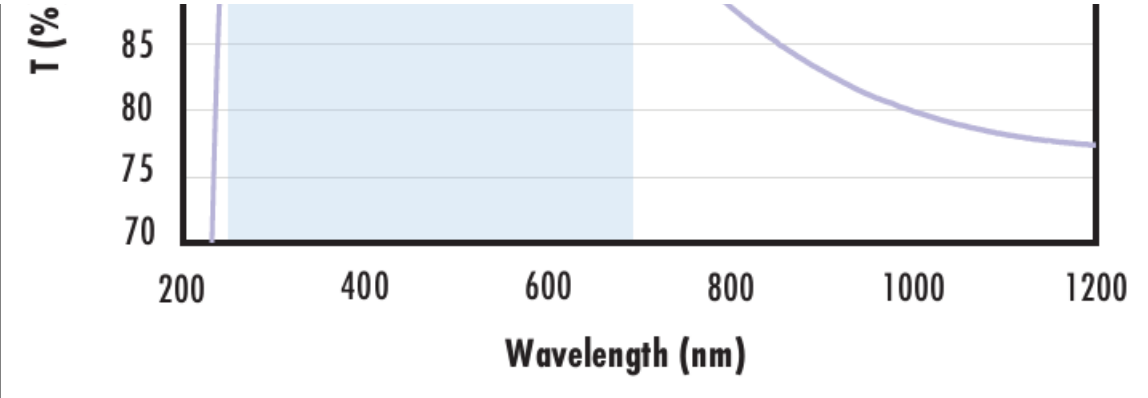
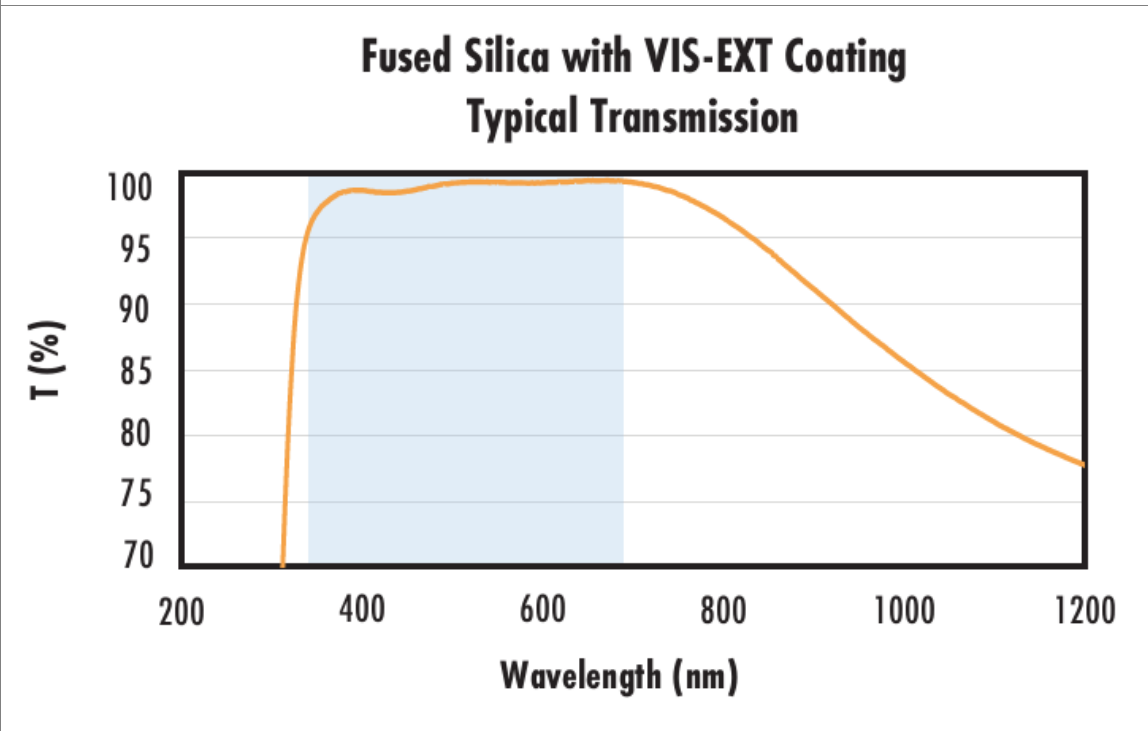
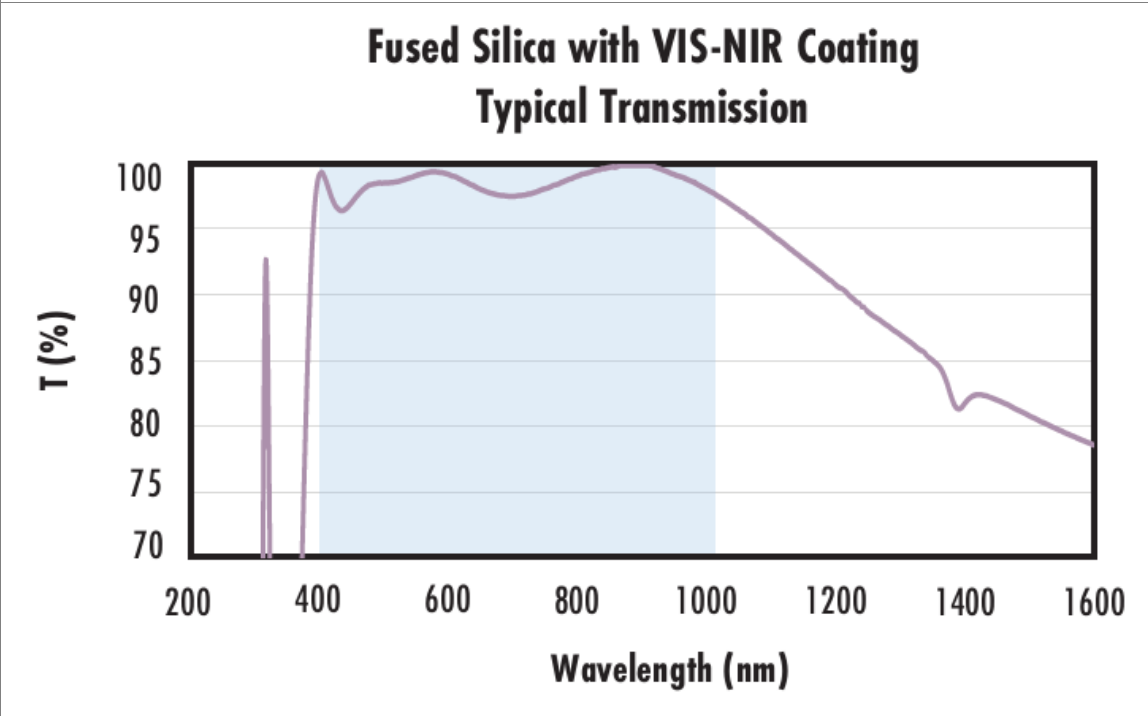
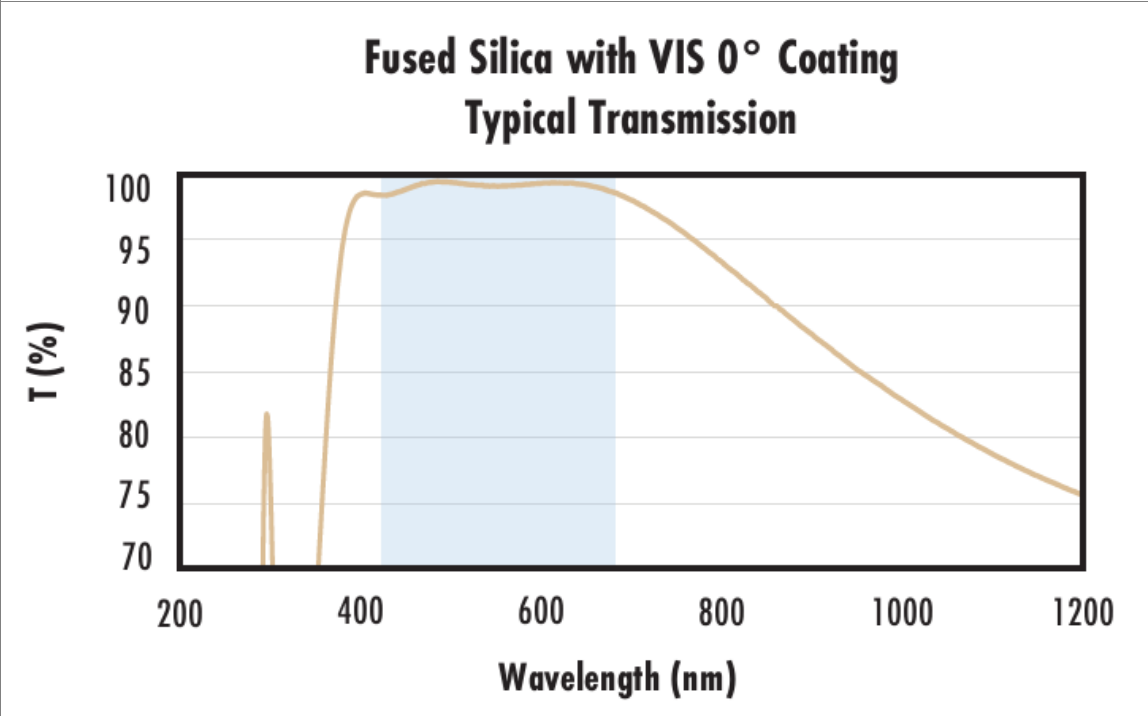
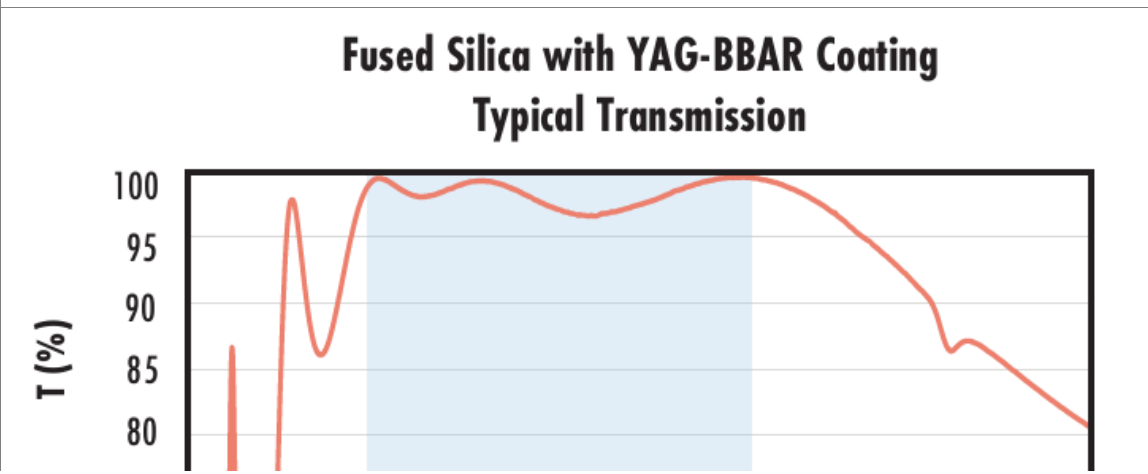
Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

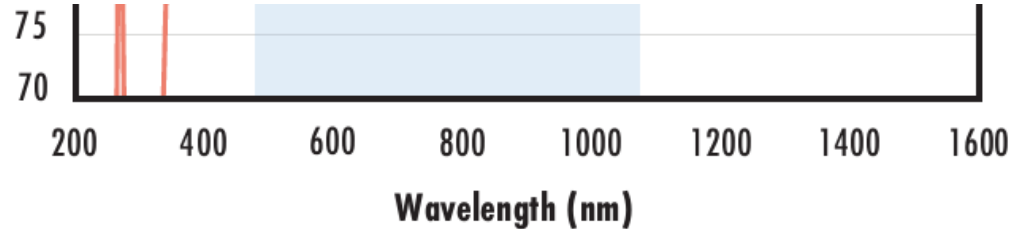
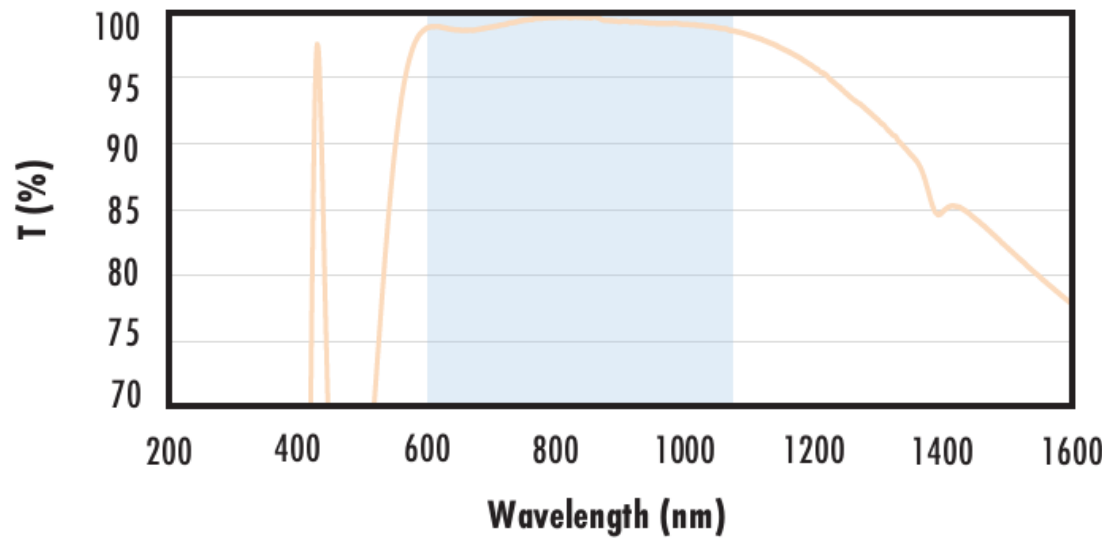
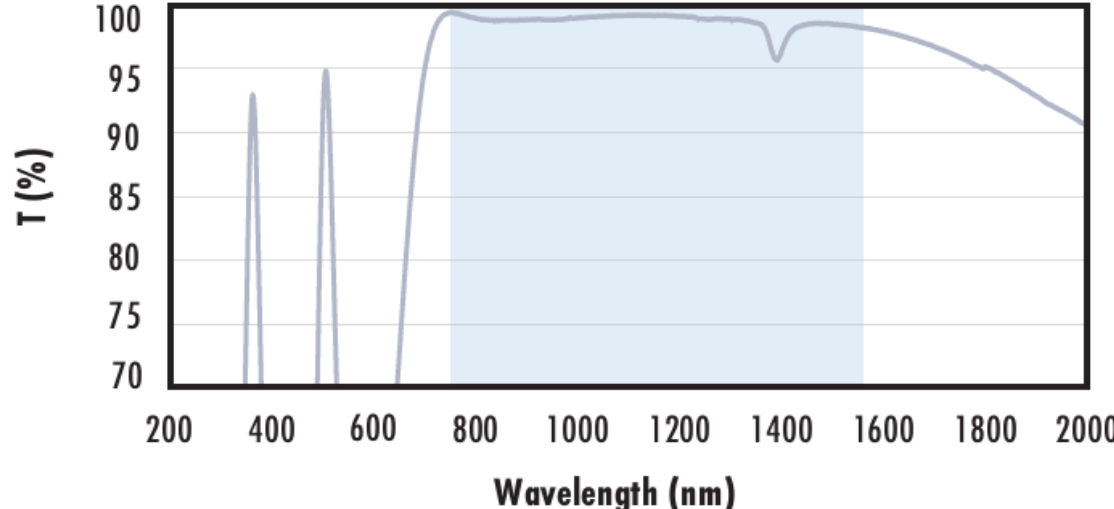
Technical Information



UV FS Transmission Curve

FUSED SILICA	
Uncoated Fused Silica Typical Transmission The graph shows the typical transmission of uncoated fused silica. The y-axis represents transmittance T (%) from 70 to 100, and the x-axis represents wavelength in nm from 200 to 2200. The curve shows high transmittance (above 90%) across the entire range, with a sharp drop-off below 200nm and above 2200nm. 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 the typical transmission of fused silica with a MgF₂ coating. The y-axis represents transmittance T (%) from 70 to 100, and the x-axis represents wavelength in nm from 200 to 2200. The curve shows high transmittance (above 90%) across the entire range, with a sharp drop-off below 200nm and above 2200nm. A blue shaded region indicates the coating design wavelength range from 400 to 700nm. 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 the typical transmission of fused silica with a UV-AR coating. The y-axis represents transmittance T (%) from 70 to 100, and the x-axis represents wavelength in nm from 200 to 1200. The curve shows high transmittance (above 90%) across the entire range, with a sharp drop-off below 200nm and above 1200nm. A blue shaded region indicates the coating design wavelength range from 250 to 425nm. 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 the typical transmission of fused silica with a UV-VIS coating. The y-axis represents transmittance T (%) from 90 to 100, and the x-axis represents wavelength in nm from 200 to 1200. The curve shows high transmittance (above 90%) across the entire range, with a sharp drop-off below 200nm and above 1200nm. A blue shaded region indicates the coating design wavelength range from 250 to 700nm. 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 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: $R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}$ $R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$ $R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}$ 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 - 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