

TECHSPEC[®] 50mm Dia., 2mm Thick UV-VIS Coated, 1λ Fused Silica Window



Stock #19-882 12 In Stock

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1

+

A\$280^{.00}

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Volume Pricing	
Qty 1-5	A\$280.00 each
Qty 6-25	A\$222.40 each
Qty 26-49	A\$209.60 each
Need More?	Request Quote

Product Downloads

General

Type:Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):45.00

Diameter (mm):50.00 +0.00/-0.20

2.00 ±0.38	Thickness (mm):
<5	Parallelism (arcmin):
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	
UV-VIS (250-700nm)	Coating:
Fused Silica (Corning 7980)	Substrate: □
1.458	Index of Refraction (n _d):
60-40	Surface Quality:
1λ	Transmitted Wavefront, P-V:
67.8	Abbe Number (v _d):
R _{abs} ≤1.0% @ 350 - 450nm R _{avg} ≤1.5% @ 250 - 700nm	Coating Specification:
250 - 700	Wavelength Range (nm):
3 J/cm² @ 355nm, 10ns 5 J/cm² @ 532nm, 10ns	Damage Threshold, Reference: □

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,

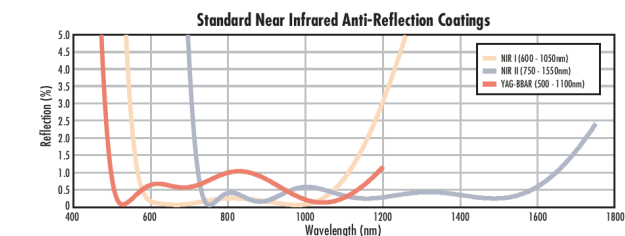
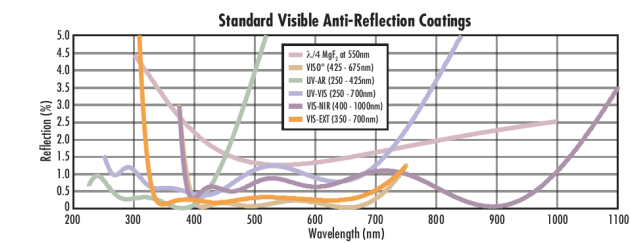
Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

The graph displays the transmittance of UV-Grade Fused Silica with a 10mm thickness. The x-axis represents wavelength in both nanometers (150 to 300 nm) and microns (1 to 5 microns). The y-axis represents transmittance in percent (0 to 100%). The material is highly transparent in the visible range, with a significant absorption peak in the infrared region around 2.5 microns.

Wavelength (nm)	Wavelength (microns)	Transmittance (%)
150	1.5	0
200	2.0	85
250	2.5	90
300	3.0	90
350	3.5	90
400	4.0	90
450	4.5	90
500	5.0	90
550	5.5	90
600	6.0	90
650	6.5	90
700	7.0	90
750	7.5	90
800	8.0	90
850	8.5	90
900	9.0	90
950	9.5	90
1000	10.0	90
1050	10.5	90
1100	11.0	90
1150	11.5	90
1200	12.0	90
1250	12.5	90
1300	13.0	90
1350	13.5	90
1400	14.0	90
1450	14.5	90
1500	15.0	90
1550	15.5	90
1600	16.0	90
1650	16.5	90
1700	17.0	90
1750	17.5	90
1800	18.0	90
1850	18.5	90
1900	19.0	90
1950	19.5	90
2000	20.0	90
2050	20.5	90
2100	21.0	90
2150	21.5	90
2200	22.0	90
2250	22.5	90
2300	23.0	90
2350	23.5	90
2400	24.0	90
2450	24.5	90
2500	25.0	90
2550	25.5	90
2600	26.0	90
2650	26.5	90
2700	27.0	90
2750	27.5	90
2800	28.0	90
2850	28.5	90
2900	29.0	90
2950	29.5	90
3000	30.0	90
3050	30.5	90
3100	31.0	90
3150	31.5	90
3200	32.0	90
3250	32.5	90
3300	33.0	90
3350	33.5	90
3400	34.0	90
3450	34.5	90
3500	35.0	90
3550	35.5	90
3600	36.0	90
3650	36.5	90
3700	37.0	90
3750	37.5	90
3800	38.0	90
3850	38.5	90
3900	39.0	90
3950	39.5	90
4000	40.0	90
4050	40.5	90
4100	41.0	90
4150	41.5	90
4200	42.0	90
4250	42.5	90
4300	43.0	90
4350	43.5	90
4400	44.0	90
4450	44.5	90
4500	45.0	90
4550	45.5	90
4600	46.0	90
4650	46.5	90
4700	47.0	90
4750	47.5	90
4800	48.0	90
4850	48.5	90
4900	49.0	90
4950	49.5	90
5000	50.0	90
5050	50.5	90
5100	51.0	90
5150	51.5	90
5200	52.0	90
5250	52.5	90
5300	53.0	90
5350	53.5	90
5400	54.0	90
5450	54.5	90
5500	55.0	90
5550	55.5	90
5600	56.0	90
5650	56.5	90
5700	57.0	90

The graph, titled "Anti-Reflective Coating Curves", plots Reflectance (%) on the y-axis (0 to 2.5) against Wavelength (nm) on the x-axis (200 to 1000). Three curves are shown: UV-AR (blue), UV-VIS (red), and VIS-NIR (green). The UV-AR curve has a minimum reflectance near 300 nm. The UV-VIS curve has a minimum reflectance near 400 nm. The VIS-NIR curve has a minimum reflectance near 850 nm.

Wavelength (nm)	UV-AR Reflectance (%)	UV-VIS Reflectance (%)	VIS-NIR Reflectance (%)
200	1.6	2.5	2.5
300	0.2	0.5	2.5
400	0.3	0.2	2.5
500	2.5	1.0	0.5
600	0.5	0.4	0.6
700	0.5	2.2	0.9
800	0.5	0.5	0.8
900	0.5	0.5	0.1
1000	0.5	0.5	1.2



FUSED SILICA

Uncoated Fused Silica Typical Transmission

A line graph showing the typical transmission of uncoated fused silica. The y-axis is labeled 'T (%)' and ranges from 70 to 100 in increments of 5. The x-axis is labeled 'Wavelength (nm)' and ranges from 200 to 2200 in increments of 200. The transmission curve is a solid red line that starts at approximately 92% at 200 nm, rises to about 94% by 400 nm, and remains relatively flat until 1300 nm. There is a small dip to about 91% at 1400 nm. The transmission then rises slightly to about 94.5% at 1800 nm and remains flat until 2100 nm, where it begins to drop sharply, reaching about 90% at 2200 nm.

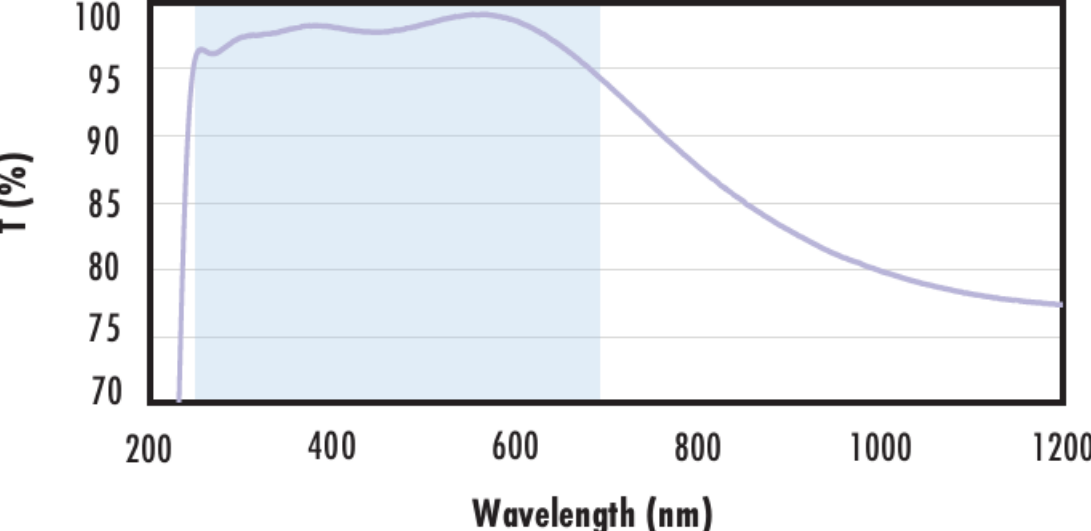
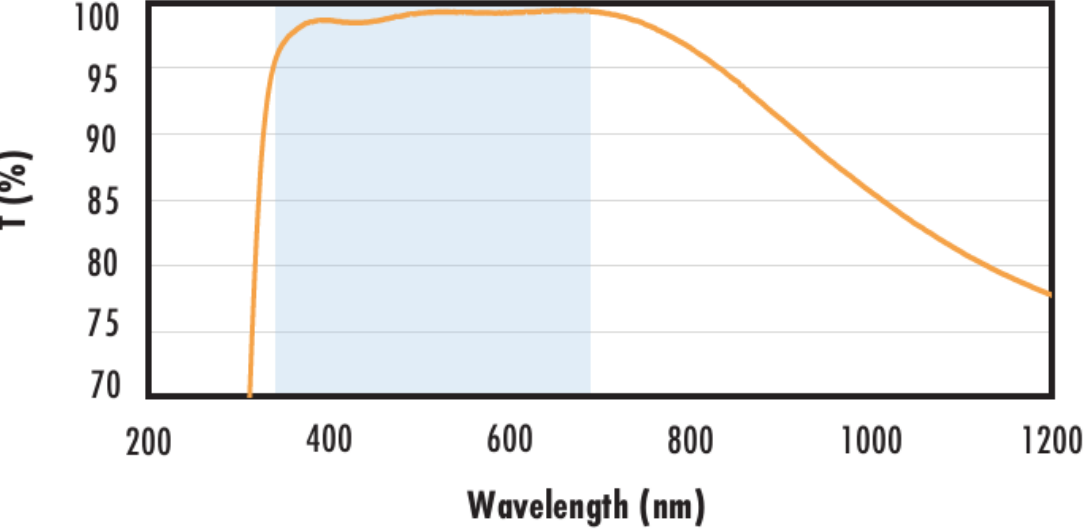
Wavelength (nm)	Transmission T (%)
200	92
400	94
600	94
800	94
1000	94
1200	94
1400	91
1600	94
1800	94.5
2000	94.5
2200	90

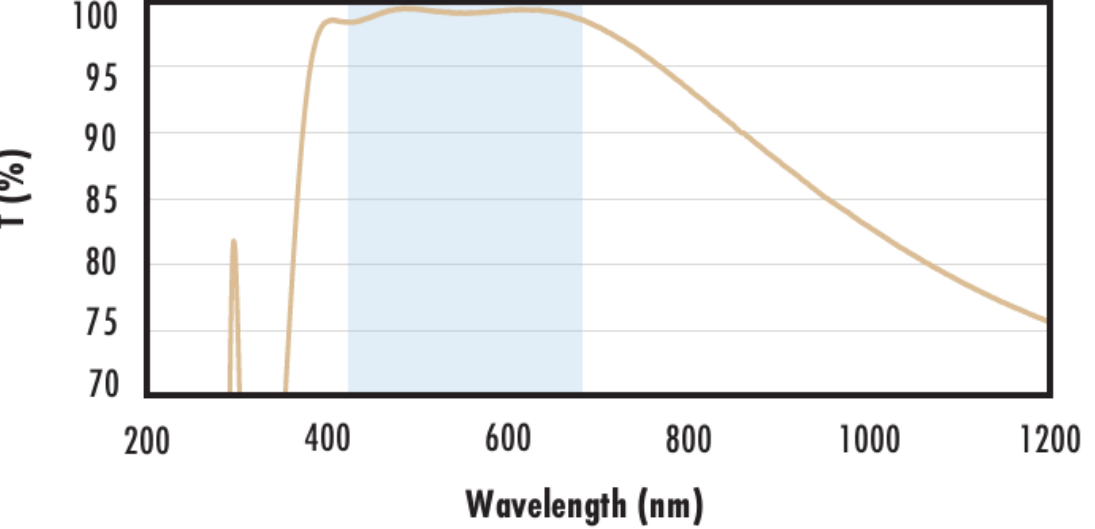
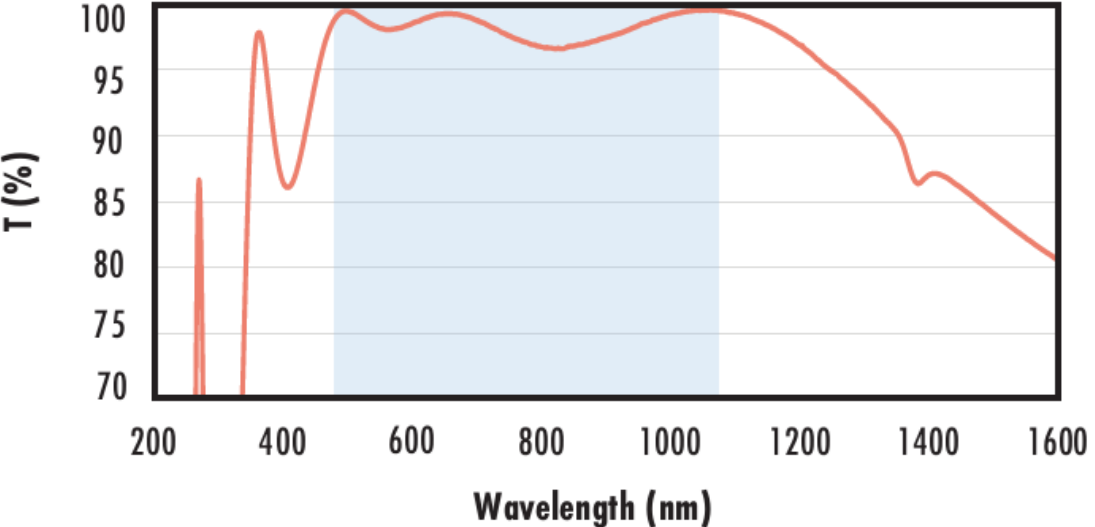
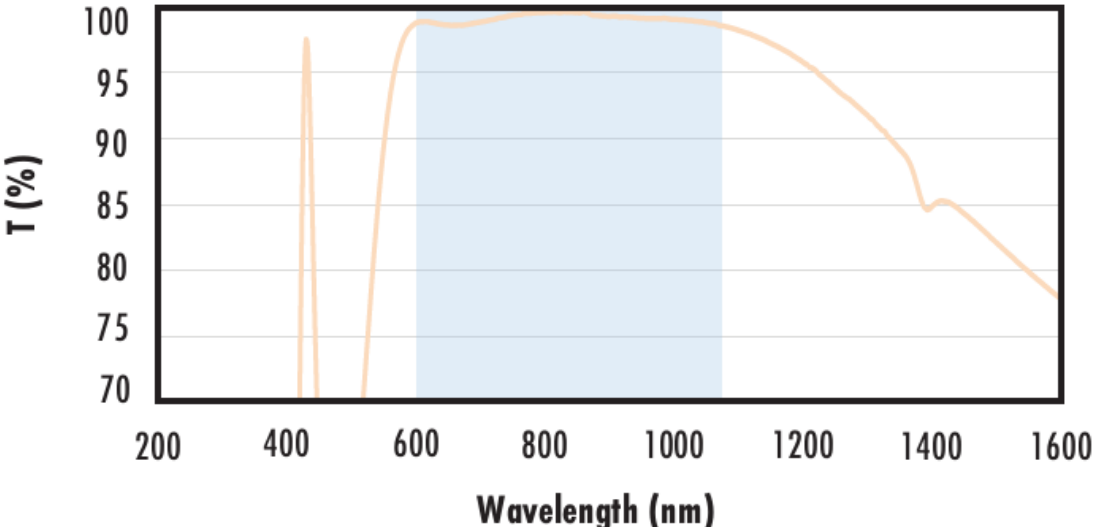
Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.

[Click Here to Download Data](#)

Fused Silica with MgF_2 Coating Typical Transmission

A partial line graph showing the typical transmission of fused silica with MgF_2 coating. The y-axis is labeled '100' at the top. The x-axis is partially visible, showing a range from 200 to 2200 nm. The graph area is mostly obscured by a light blue rectangular block.

	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 	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 	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 	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 	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: $R_{avg} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$ 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\% \text{ @ } 750 - 800\text{nm}$$R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$ Data outside this range is not guaranteed and is for reference



Compatible Mounts

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