

TECHSPEC[®] 50mm Dia., 5mm Thick UV-AR Coated, 1λ Fused Silica Window



Stock **#19-895** **3 In Stock**

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1

+

£131^{.33}

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Volume Pricing	
Qty 1-5	£131.33 each
Qty 6-25	£104.63 each
Qty 26-49	£98.50 each
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Product Downloads

SPECIFICATIONS

General

Protective Window

Type:

Physical & Mechanical Properties	
Protective as needed	Bevel:
90	Clear Aperture (%):
45.00	Clear Aperture CA (mm):
50.00 +0.00/-0.20	Diameter (mm):
5.00 ±0.38	Thickness (mm):
Fine Ground	Edges:
522.00	Knoop Hardness (kg/mm²):
<5	Parallelism (arcmin):
0.16	Poisson's Ratio:
73	Young's Modulus (GPa):
Optical Properties	
67.8	Abbe Number (v _d):
UV-AR (250-425nm)	Coating:
Coating Specification: R _{abs} ≤1.0% @ 250 - 425nm R _{avg} ≤0.75% @ 250 - 425nm R _{avg} ≤0.5% @ 370 - 420nm	
1.458	Index of Refraction (n _d):
Fused Silica (Corning 7980)	Substrate:
60-40	Surface Quality:
1λ	Transmitted Wavefront, P-V:
250 - 450	Wavelength Range (nm):
Damage Threshold, Reference: ☐ 3 J/cm² @ 355nm, 10ns	
Material Properties	
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)	
2.20	Density (g/cm³):
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

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



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](#)

2004006008001000120014001600180020002200 Wavelength (nm) Fused Silica with MgF₂ Coating Typical Transmission 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 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
20040060080010001200 Wavelength (nm) Fused Silica with UV-AR Coating Typical Transmission 100 95 90 85 80 75 70 200 400 600 800 1000 1200 Wavelength (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
20040060080010001200 Wavelength (nm) Fused Silica with UV-VIS Coating Typical Transmission 100 95 90 85 80 75 70 200 400 600 800 1000 1200 Wavelength (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
20040060080010001200 Wavelength (nm) Fused Silica with VIS-EXT Coating Typical Transmission 100 95 90 85 80 75 70 200 400 600 800 1000 1200 Wavelength (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



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:

$R_{abs} \leq 0.25\% @ 880\text{nm}$
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$

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

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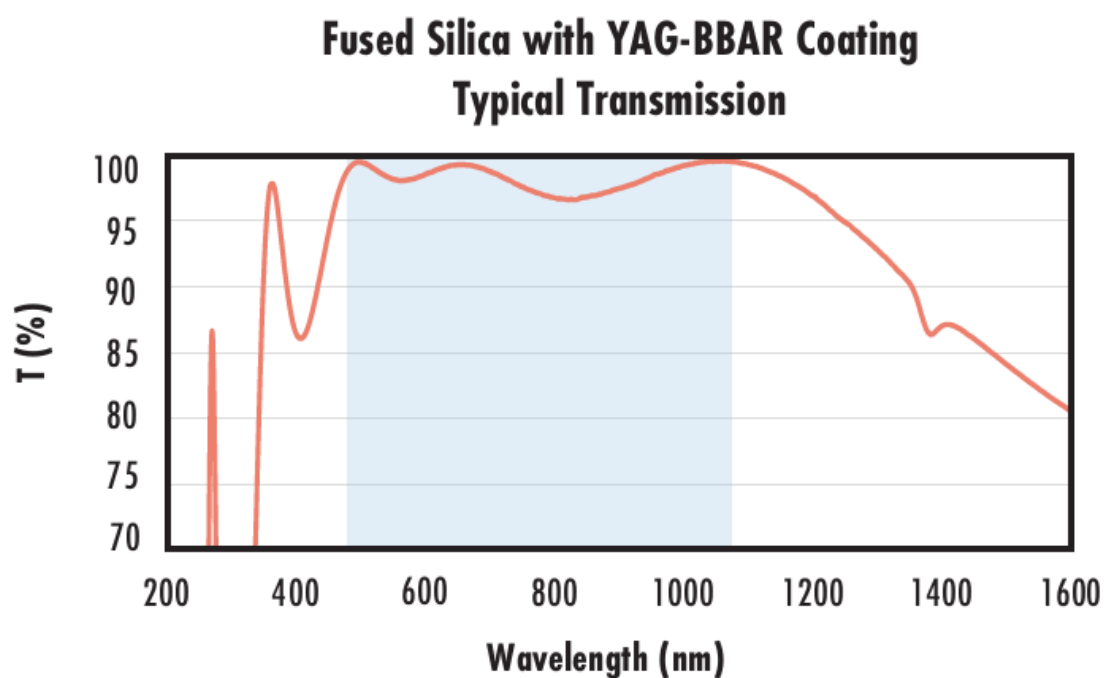
Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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

$R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$

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

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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.

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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.

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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:

$$\begin{aligned} R_{\text{abs}} &\leq 1.5\% @ 750 - 800\text{nm} \\ R_{\text{abs}} &\leq 1.0\% @ 800 - 1550\text{nm} \\ R_{\text{avg}} &\leq 0.7\% @ 750 - 1550\text{nm} \end{aligned}$$

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

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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

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

COMPATIBLE MOUNTS