

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



Stock **#47-231** **7 In Stock**

MRP ₹13,621

i Price inclusive of all taxes

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Volume Pricing	
Qty 1-5	₹13,621 each
Qty 6-25	₹10,896 each
Qty 26-49	₹10,190 each
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Product Downloads

General

Protective Window **Type:**
Glass **Type of Window:**

Physical & Mechanical Properties

45.00 x45.00 **Clear Aperture CA (mm):**

50.00 x 50.00 +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 (Coming 7980)	Substrate: <input type="checkbox"/>
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):
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:
Compliant	REACH 201:
View	Certificate of Conformance:
United States	Country of Origin:
Edmund Optics India Private Limited 267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038 Phone: +91- 80-6845 0000	Imported By:

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](#).

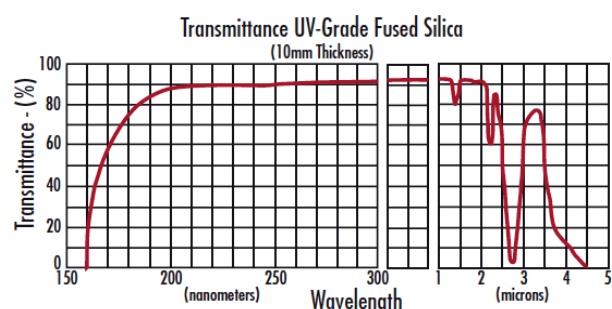
Product Details

- Available Uncoated or with Broadband Anti-Reflection Coatings
- Ideal for Cost Sensitive Broadband Applications
- Circular and Square Sizes from 5mm to 100mm
- $\lambda/4$ or $\lambda/10$ 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. $\lambda/4$ or $\lambda/10$ UV Fused Silica Windows are also available.

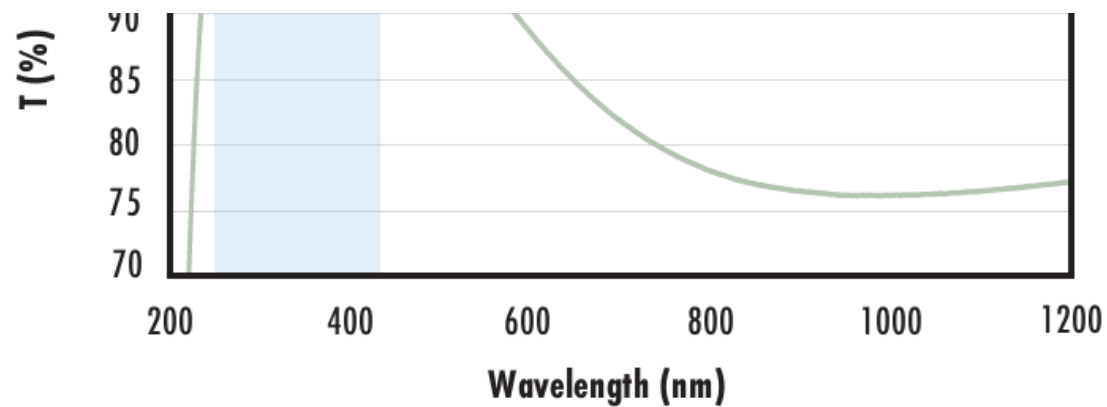
Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

Technical Information



UV FS Transmission Curve

FUSED SILICA	
<p style="text-align: center;">Uncoated Fused Silica Typical Transmission</p> <p>The graph shows the typical transmission of a 3mm thick uncoated fused silica window. The y-axis is T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. The transmission is high, around 95%, with a small dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">Fused Silica with MgF₂ Coating Typical Transmission</p> <p>The graph shows the typical transmission of a 3mm thick fused silica window with MgF₂ coating. The y-axis is T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from 400 to 700 nm. The transmission is high, around 95%, with a small dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with MgF₂ (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;">$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">Fused Silica with UV-AR Coating Typical Transmission</p> <p>The graph shows the typical transmission of a 3mm thick fused silica window with UV-AR coating. The y-axis is T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from 250 to 425 nm. The transmission is high, around 95%, with a small dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p>



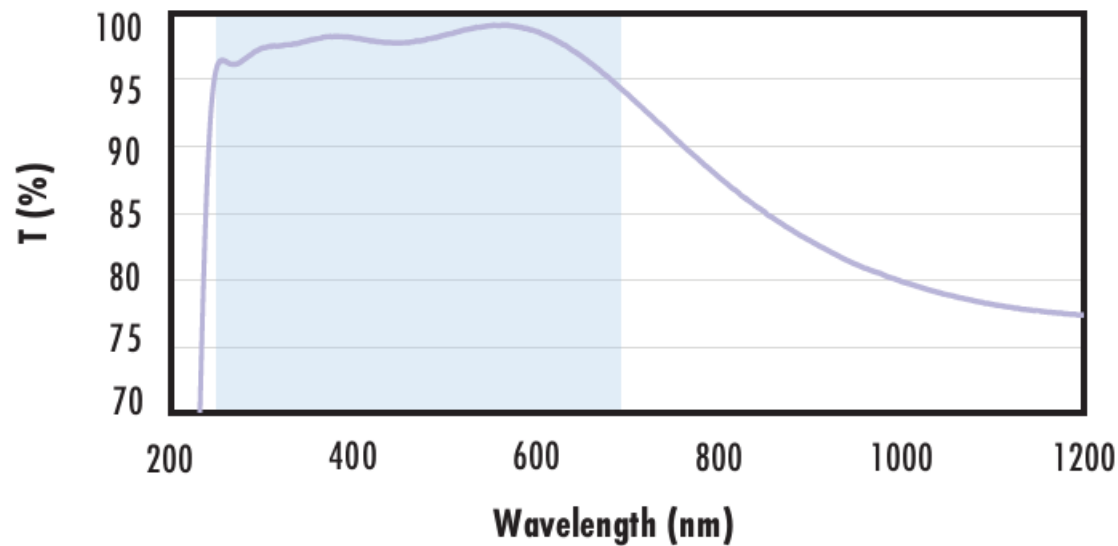
range, with the following specification:

- $R_{abs} \leq 1.0\% @ 250 - 425\text{nm}$
- $R_{avg} \leq 0.75\% @ 250 - 425\text{nm}$
- $R_{avg} \leq 0.5\% @ 370 - 420\text{nm}$

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.

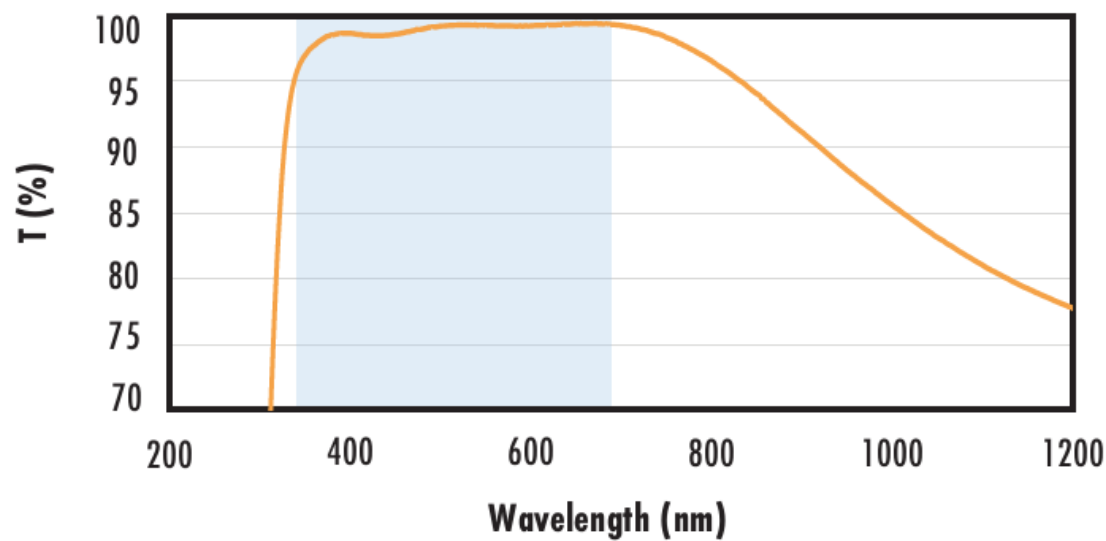
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 1.0\% @ 350 - 450\text{nm}$
- $R_{avg} \leq 1.5\% @ 250 - 700\text{nm}$

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.

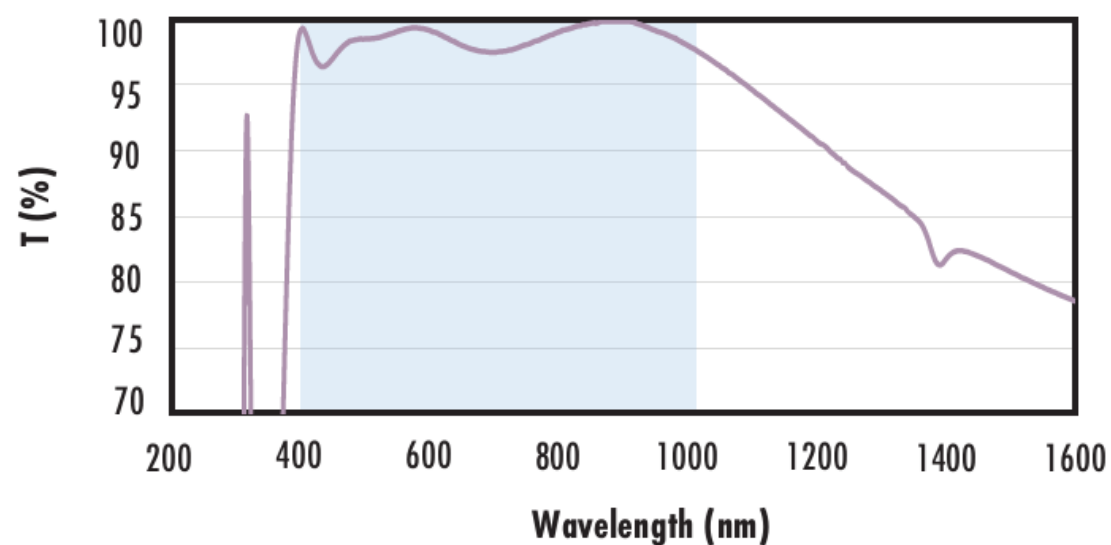
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$

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.

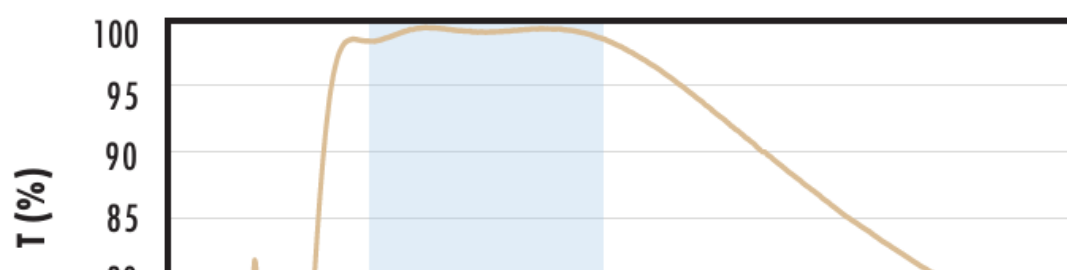
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with VIS 0° Coating Typical Transmission

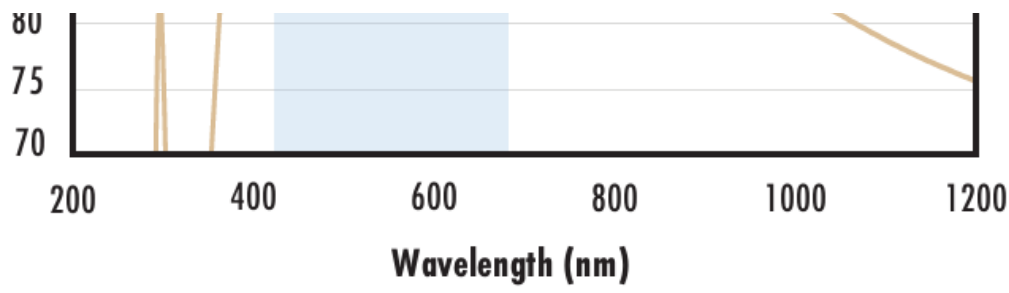


Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.

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

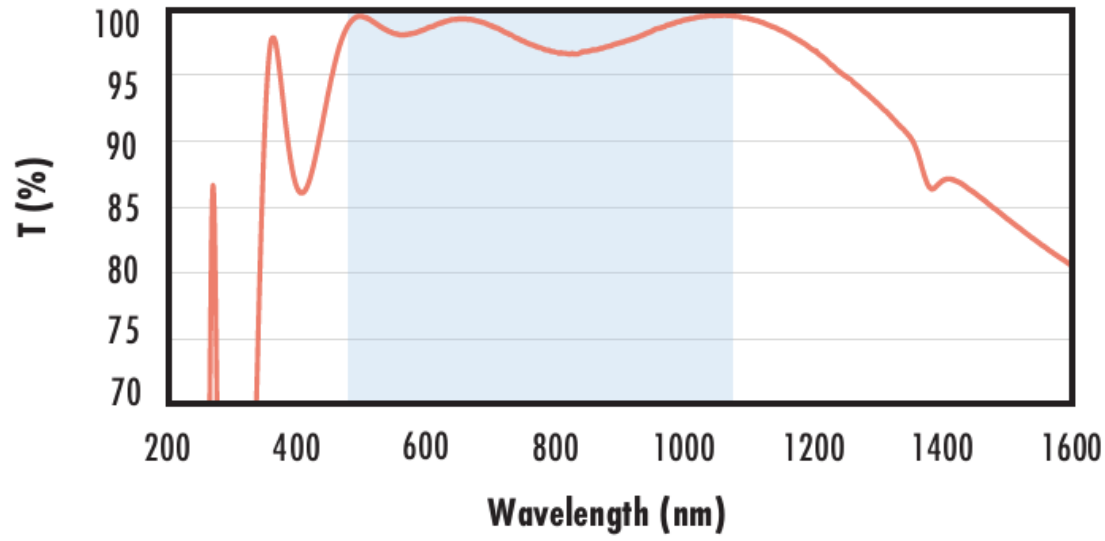
- $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$

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



only.
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Fused Silica with YAG-BBAR Coating Typical Transmission

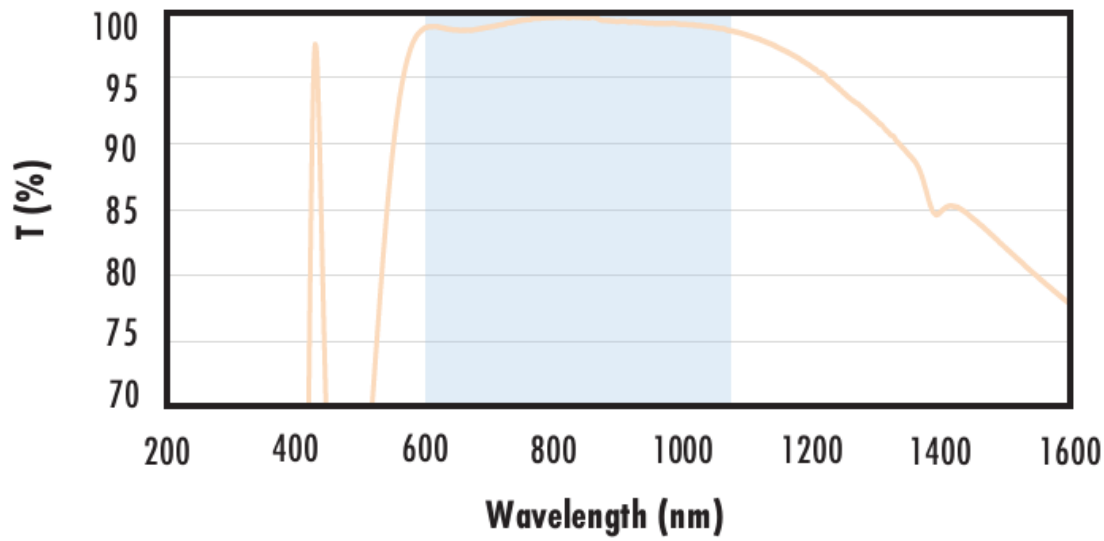


Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.
 The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 0.25\%$ @ 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

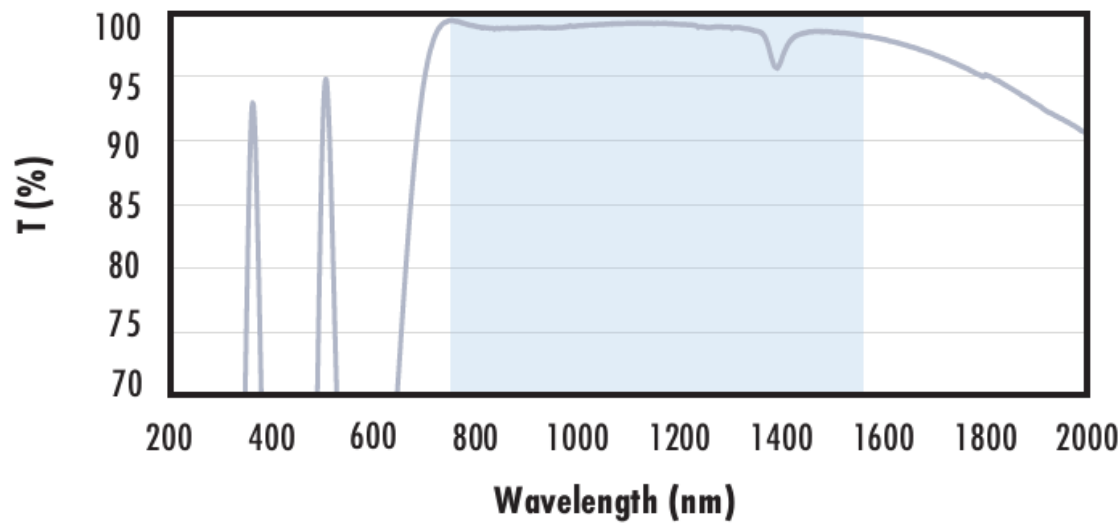


Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.
 The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{avg} \leq 0.5\%$ @ 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

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