

TECHSPEC® 50.8mm Dia., 5mm Thick, YAG-BBAR Coated,  $\lambda$ /10 Fused Silica Window



Stock #15-786 4 In Stock

-

1

+

€323<sup>.00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | €323,00 each                  |
| Qty 6-25       | €257,00 each                  |
| Qty 26-49      | €241,00 each                  |
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! Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):

40.64

Diameter (mm):

50.80 +0.00/-0.20

|                      |                             |
|----------------------|-----------------------------|
| 5.00 ±0.10           | Thickness (mm):             |
| +0.00/-0.20          | Dimensional Tolerance (mm): |
| Protective as needed | Bevel:                      |
| 80                   | Clear Aperture (%):         |
| Fine Ground          | Edges:                      |
| <5                   | Parallelism (arcsec):       |
| 0.16                 | Poisson's Ratio:            |
| 73                   | Young's Modulus (GPa):      |
| 522.00               | Knoop Hardness (kg/mm²):    |

|                                                                                                              |                                        |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Optical Properties                                                                                           |                                        |
| YAG-BBAR (500-1100nm)                                                                                        | Coating:                               |
| Fused Silica (Corning 7980)                                                                                  | Substrate: □                           |
| 1.458                                                                                                        | Index of Refraction (n <sub>d</sub> ): |
| 20-10                                                                                                        | Surface Quality:                       |
| λ/10                                                                                                         | Transmitted Wavefront, P-V:            |
| 67.8                                                                                                         | Abbe Number (v <sub>d</sub> ):         |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm | Coating Specification:                 |
| 500 - 1100                                                                                                   | Wavelength Range (nm):                 |

|                       |                                |
|-----------------------|--------------------------------|
| 5 J/cm² @ 532nm, 10ns | Damage Threshold, By Design: □ |
|-----------------------|--------------------------------|

|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| Material Properties                                               |                                                              |
| 2.20                                                              | Density (g/cm³):                                             |
| 0.52 (+5 to +35°C)<br>0.57 (0 to +200°C)<br>0.48 (-100 to +200°C) | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°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

- UV, Visible, and NIR Anti-Reflection Coated Versions Available
- λ/10 Transmitted Wavefront Distortion

- Circular and Square Sizes from 2mm to 150mm
- [1λ](#) or [λ/4](#) UV Fused Silica Windows Also Available

TECHSPEC® *N*10 UV Fused Silica Windows feature laser-grade surface quality and parallelism. In addition, these windows will limit the transmitted wavefront distortion to *N*10. The superior transmission characteristics, excellent thermal properties, and high tolerance manufacturing specifications make these windows an excellent choice for more demanding applications. TECHSPEC *N*10 UV Fused Silica Windows are available for purchase in circular and square sizes ranging from 2mm to 150mm.. These windows are offered uncoated or with anti-reflection coatings optimized for the UV or visible spectrum.

## 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](#)

#### Fused Silica with MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

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

$$R_{avg} \leq 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}$$

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:

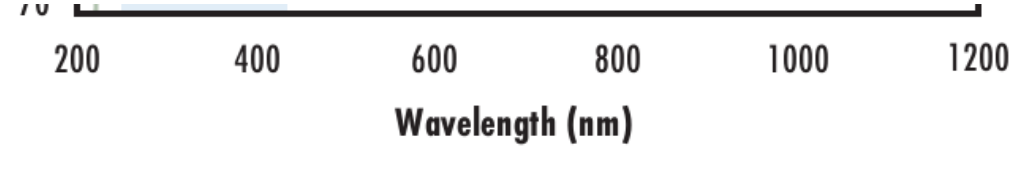
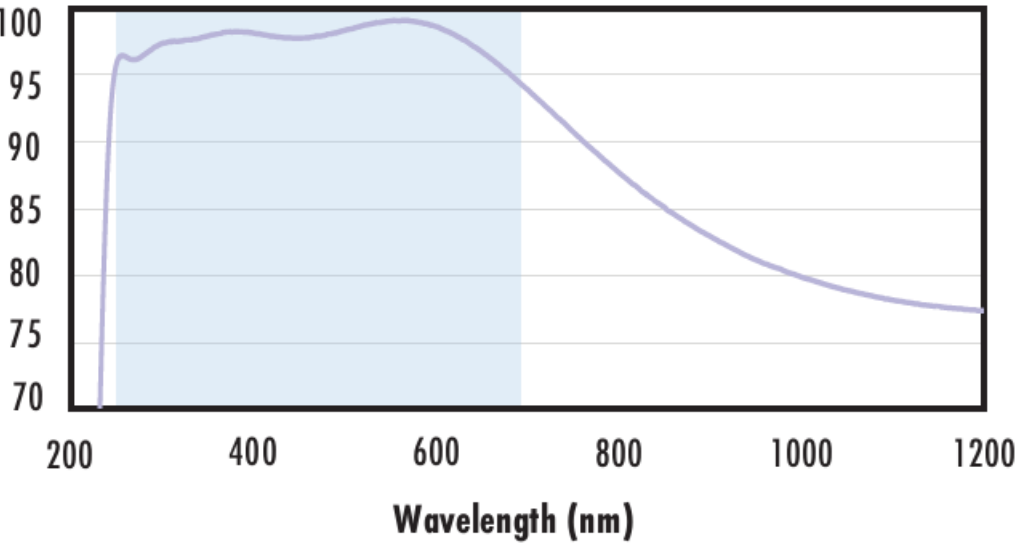
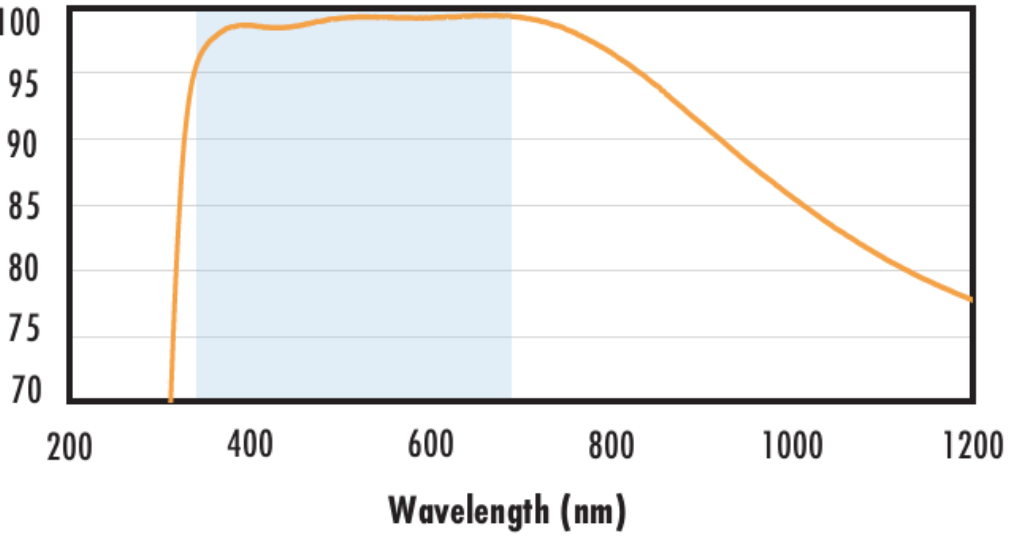
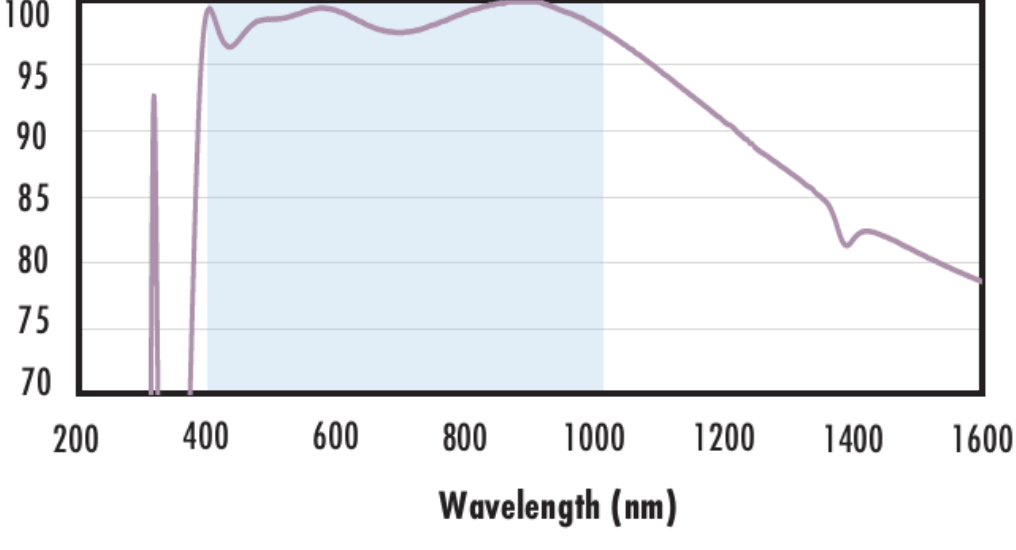
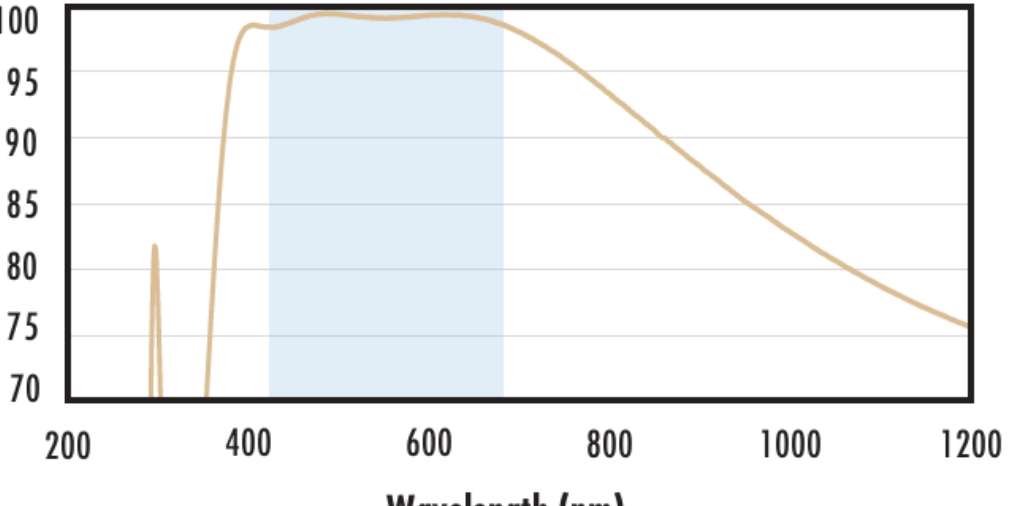
$$R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}$$

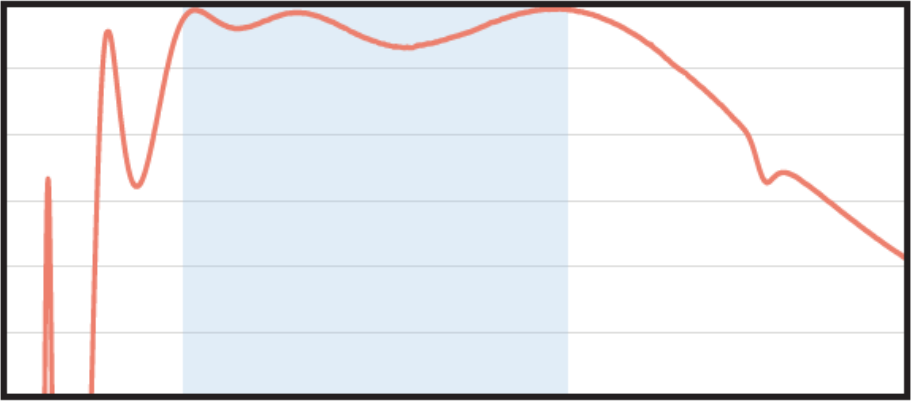
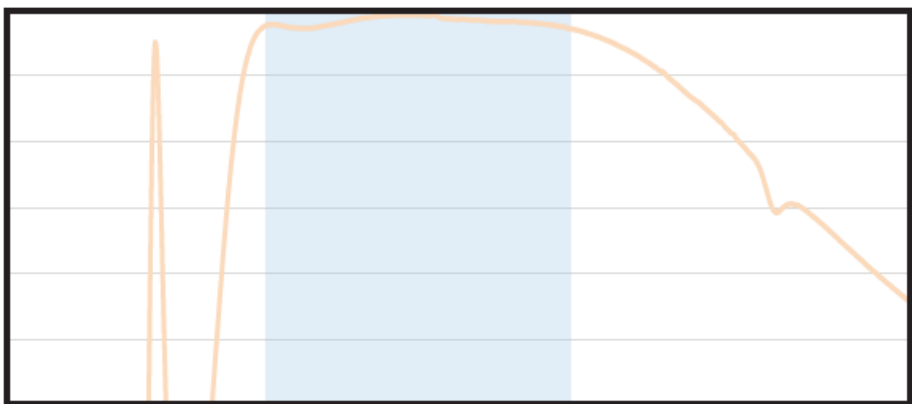
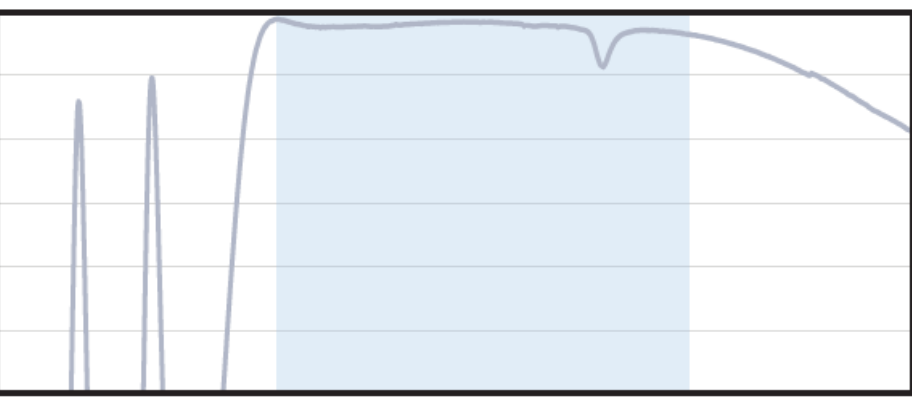
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}$$

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

[Click Here to Download Data](#)

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p data-bbox="573 255 1083 365"><b>Fused Silica with UV-VIS Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1329 418 1850 468">Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.</p> <p data-bbox="1329 480 1850 531">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 543 1703 593"><math>R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}</math><math>R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}</math></div> <p data-bbox="1329 629 1850 679">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 691 1703 712"><a href="#">Click Here to Download Data</a></p>                                                                        |
| <p data-bbox="567 934 1089 1044"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 1121 1850 1172">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1329 1184 1850 1234">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1246 1703 1270"><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <p data-bbox="1329 1282 1850 1332">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 1344 1703 1365"><a href="#">Click Here to Download Data</a></p>                                                                                                                          |
| <p data-bbox="571 1614 1085 1724"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1329 1760 1850 1810">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1329 1822 1850 1872">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1467 1884 1711 1955"><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></div> <p data-bbox="1329 1991 1850 2041">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2053 1703 2074"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="569 2288 1087 2398"><b>Fused Silica with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1329 2466 1850 2516">Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1329 2528 1850 2579">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 2591 1703 2614"><math>R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}</math></div> <p data-bbox="1329 2626 1850 2677">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1476 2689 1703 2709"><a href="#">Click Here to Download Data</a></p>                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>Wavelength (nm)</div><div><div><div>Fused Silica with YAG-BBAR Coating</div><div>Typical Transmission</div></div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div></div>                               | <div><p>Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><div><div><div><math>R_{abs} \leq 0.25\%</math> @ 532nm</div><div><math>R_{abs} \leq 0.25\%</math> @ 1064nm</div><div><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</div></div></div><p>Data outside this range is not guaranteed and is for reference only.</p><div><a href="#">Click Here to Download Data</a></div></div>           |
| <div><div>Wavelength (nm)</div><div><div><div>Fused Silica with NIR I Coating</div><div>Typical Transmission</div></div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div></div>                                 | <div><p>Typical transmission of a 3mm thick fused silica window with NIR I (600 - 1050nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</div></div><p>Data outside this range is not guaranteed and is for reference only.</p><div><a href="#">Click Here to Download Data</a></div></div>                                                                                                                              |
| <div><div>Wavelength (nm)</div><div><div><div>Fused Silica with NIR II Coating</div><div>Typical Transmission</div></div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div><div>1800</div><div>2000</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div></div> | <div><p>Typical transmission of a 3mm thick fused silica window with NIR II (750 - 1550nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><div><div><div><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</div><div><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</div><div><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</div></div></div><p>Data outside this range is not guaranteed and is for reference only.</p><div><a href="#">Click Here to Download Data</a></div></div> |

Compatible Mounts