

TECHSPEC<sup>®</sup> 12mm Dia. x 40mm FL, NIR II Coated, Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses



Stock **#18-051** 2 In Stock

-

1

+

₹10,977

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| Volume Pricing |                               |
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| Qty 1-5        | ₹10,977 each                  |
| Qty 6-25       | ₹8,797 each                   |
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General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

12.00 -0.025

|                      |                           |
|----------------------|---------------------------|
| <1                   | Centering (arcmin):       |
| 3.13 ±0.05           | Center Thickness CT (mm): |
| 2.12                 | Edge Thickness ET (mm):   |
| 11                   | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|                                                                                                                        |                                  |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Optical Properties                                                                                                     |                                  |
| 40.00 @ 587.6nm                                                                                                        | Effective Focal Length EFL (mm): |
| 37.85                                                                                                                  | Back Focal Length BFL (mm):      |
| NIR II (750-1550nm)                                                                                                    | Coating:                         |
| R <sub>abs</sub> ≤1.5% @ 750 - 800nm<br>R <sub>abs</sub> ≤1.0% @ 800 - 1550nm<br>R <sub>avg</sub> ≤0.7% @ 750 - 1550nm | Coating Specification:           |
| Fused Silica (Corning 7980)                                                                                            | Substrate: □                     |
| 40-20                                                                                                                  | Surface Quality:                 |
| 3 Rings                                                                                                                | Power (P-V) @ 632.8nm:           |
| 0.5 Rings                                                                                                              | Irregularity (P-V) @ 632.8nm:    |
| ±1                                                                                                                     | Focal Length Tolerance (%):      |
| 18.34                                                                                                                  | Radius R <sub>1</sub> (mm):      |
| 3.33                                                                                                                   | f/#:                             |
| 0.15                                                                                                                   | Numerical Aperture NA:           |
| 750 - 1550                                                                                                             | Wavelength Range (nm):           |
| 8 J/cm <sup>2</sup> @ 1064nm, 10ns                                                                                     | Damage Threshold, By Design: □   |

|                                     |                             |
|-------------------------------------|-----------------------------|
| Regulatory Compliance               |                             |
| Compliant                           | RoHS 2015:                  |
| View                                | Certificate of Conformance: |
| Compliant                           | Reach 235:                  |
| Japan                               | Country of Origin:          |
| Edmund Optics India Private Limited | 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

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## Product Details

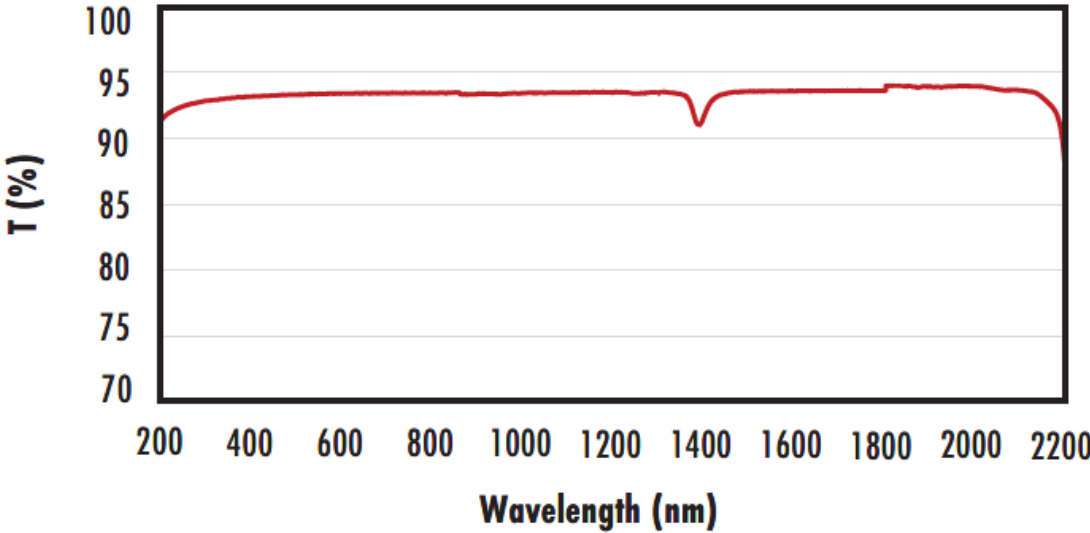
- AR Coated to Provide <0.7% Reflection per Surface for 750 - 1550nm
- Precision Fused Silica Substrate
- Various Coating Options: [Uncoated](#), [MgF<sub>2</sub>](#), [UV-AR](#), [UV-VIS](#), [VIS-EXT](#), [VIS-NIR](#), [VIS 0°](#), [YAG-BBAR](#), and [NIR I](#)

TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses NIR II Coated feature precision specifications and a [variety of coating options](#) on a broadband substrate. Fused Silica is commonly used in applications from the Ultraviolet (UV) through the Near-Infrared (NIR). Its low index of refraction, low coefficient of thermal expansion, and low inclusion content make it ideal for laser applications and harsh environmental conditions. TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses NIR II Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are NIR II coated to increase their coating performance in the 750 to 1550nm range.

# Technical Information

## FUSED SILICA

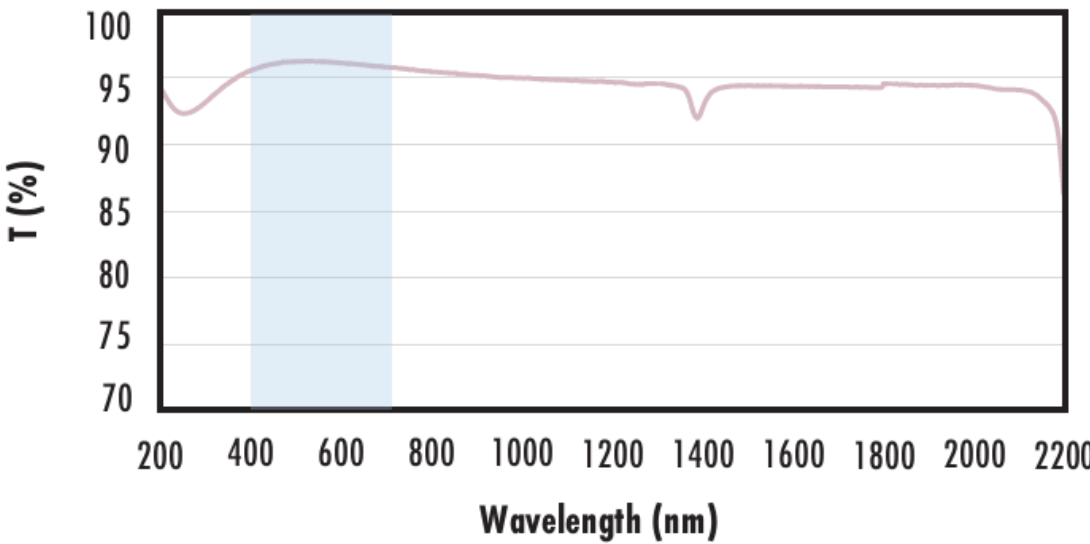
Uncoated Fused Silica  
Typical Transmission



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.

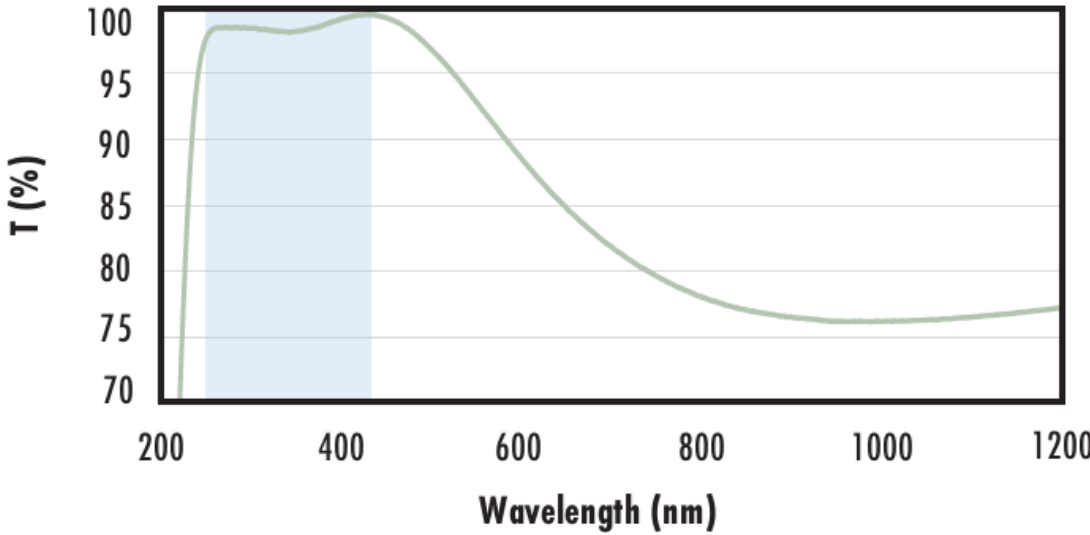
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

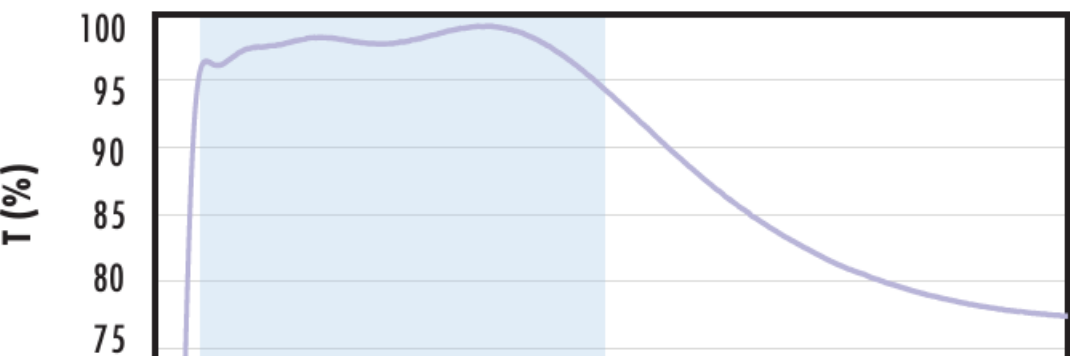
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

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

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

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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.

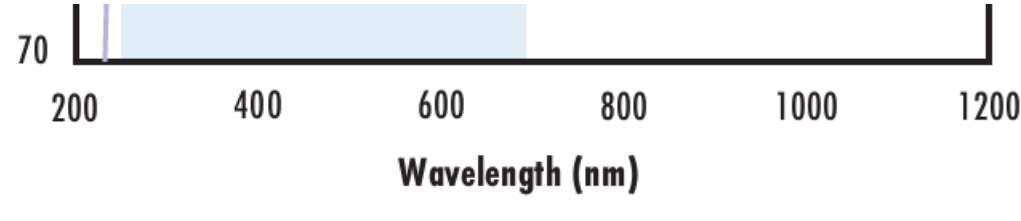
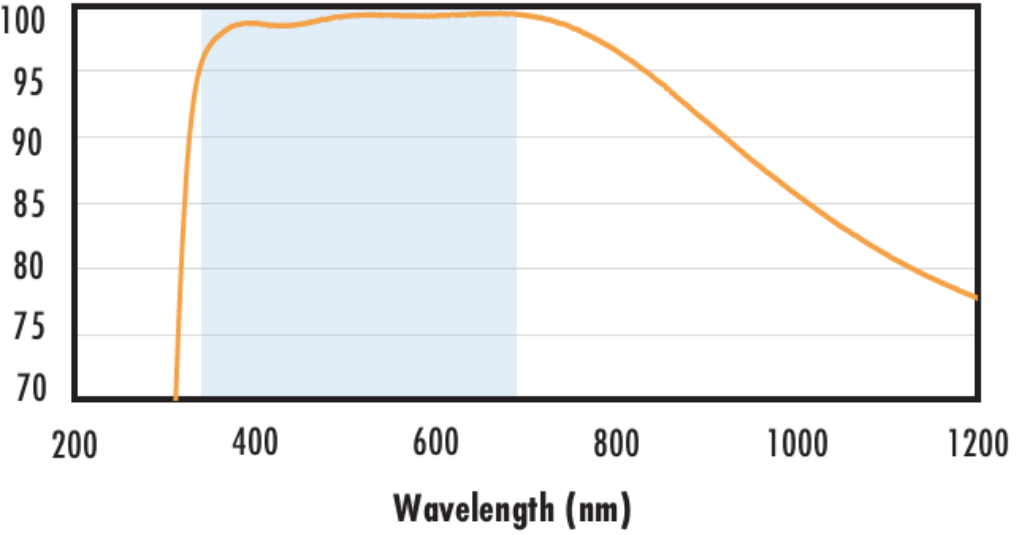
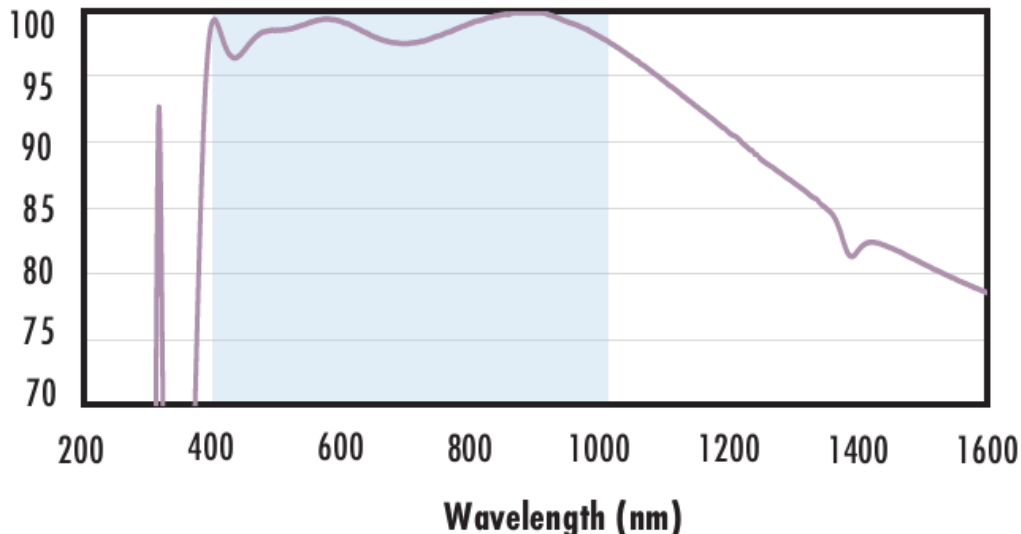
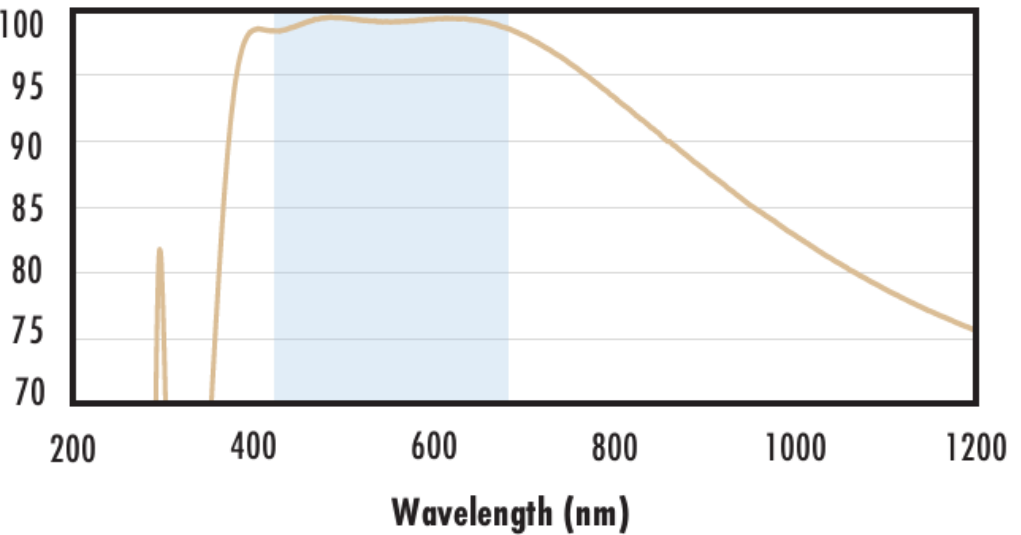
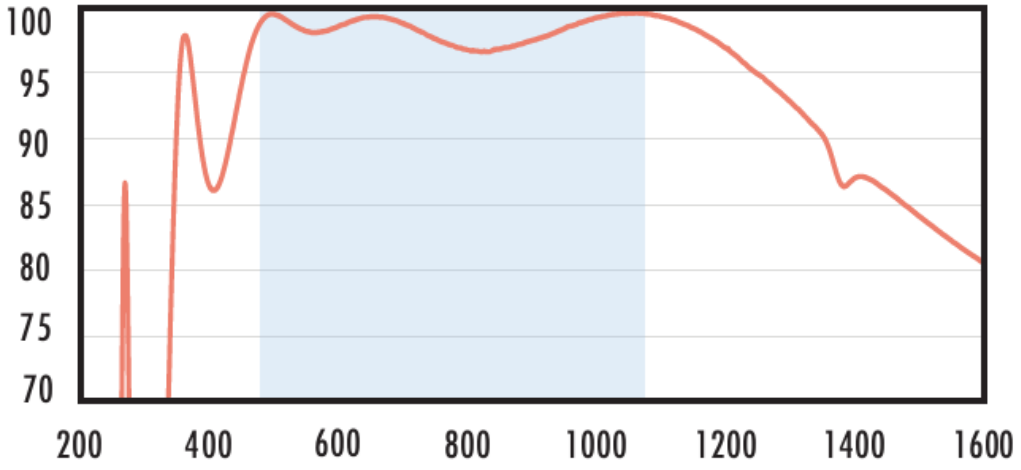
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

$$R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}$$

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

[Click Here to Download Data](#)

|                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p data-bbox="569 299 1079 403"><b>Fused Silica with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1341 480 1839 528">Typical transmission of a 3mm thick fused silica window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1333 543 1848 593">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 605 1703 632"><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></p> <p data-bbox="1341 644 1839 691">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 706 1709 730"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                  |
| <p data-bbox="573 973 1089 1077"><b>Fused Silica with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1341 1118 1839 1166">Typical transmission of a 3mm thick fused silica window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1333 1181 1848 1228">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1493 1240 1688 1267"><math>R_{abs} \leq 0.25\% @ 880\text{nm}</math></p> <p data-bbox="1472 1267 1709 1291"><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math></p> <p data-bbox="1472 1291 1715 1314"><math>R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}</math></p> <p data-bbox="1341 1353 1839 1400">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1415 1709 1439"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="569 1647 1073 1751"><b>Fused Silica with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1329 1825 1854 1872">Typical transmission of a 3mm thick fused silica window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1333 1887 1848 1935">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 1947 1703 1973"><math>R_{avg} \leq 0.4\% @ 425 - 675\text{nm}</math></p> <p data-bbox="1341 1985 1839 2033">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2047 1709 2071"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                         |
| <p data-bbox="548 2315 1106 2418"><b>Fused Silica with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1341 2469 1839 2516">Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1333 2531 1848 2579">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1493 2591 1688 2617"><math>R_{abs} \leq 0.25\% @ 532\text{nm}</math></p> <p data-bbox="1493 2617 1694 2641"><math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math></p> <p data-bbox="1472 2641 1715 2665"><math>R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}</math></p> <p data-bbox="1341 2677 1839 2724">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2739 1709 2763"><a href="#">Click Here to Download Data</a></p>      |

