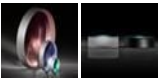


TECHSPEC<sup>®</sup> 12mm Diameter x -18 FL, VIS-NIR, Inked, Plano-Concave Lens



TECHSPEC VIS-NIR Coated Plano-Concave (PCV) Lenses



Stock **#48-347-INK** [CONTACT US](#)

☐ [Other Coating Options](#)

-

1

+

₹5,040

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | ₹5,040 each                   |
| Qty 10-25      | ₹4,545 each                   |
| Qty 26-49      | ₹4,028 each                   |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

General

Type:

Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):

|                                                       |                                                                                                                    |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| 12.00 ±0.025                                          |                                                                                                                    |
| Protective as needed                                  | Bevel:                                                                                                             |
| Center Thickness CT (mm):                             | 3.50                                                                                                               |
| Center Thickness Tolerance (mm):                      | ±0.05                                                                                                              |
| Centering (arcmin):                                   | <1                                                                                                                 |
| Clear Aperture CA (mm):                               | 11.00                                                                                                              |
| Edge Thickness ET (mm):                               | 4.70                                                                                                               |
| Optical Properties                                    |                                                                                                                    |
| Effective Focal Length EFL (mm):                      | -18.00                                                                                                             |
| Substrate: <input type="checkbox"/>                   | N-SF11                                                                                                             |
| f#:                                                   | 1.5                                                                                                                |
| Numerical Aperture NA:                                | 0.33                                                                                                               |
| Coating:                                              | VIS-NIR (400-1000nm)                                                                                               |
| Wavelength Range (nm):                                | 400 - 1000                                                                                                         |
| Back Focal Length BFL (mm):                           | -19.95                                                                                                             |
| Coating Specification:                                | R <sub>abs</sub> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm |
| Focal Length Specification Wavelength (nm):           | 587.6                                                                                                              |
| Focal Length Tolerance (%):                           | ±1                                                                                                                 |
| Radius R <sub>1</sub> (mm):                           | -14.12                                                                                                             |
| Surface Quality:                                      | 40-20                                                                                                              |
| Damage Threshold, By Design: <input type="checkbox"/> | 5 J/cm <sup>2</sup> @ 532nm, 10ns                                                                                  |
| Power (P-V) @ 632.8nm:                                | 1.5λ                                                                                                               |
| Irregularity (P-V) @ 632.8nm:                         | λ/4                                                                                                                |
| Regulatory Compliance                                 |                                                                                                                    |
| Certificate of Conformance:                           | <a href="#">View</a>                                                                                               |
| Country of Origin:                                    | Japan                                                                                                              |
| Imported By:                                          | Edmund Optics India Private Limited                                                                                |

## 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](#).

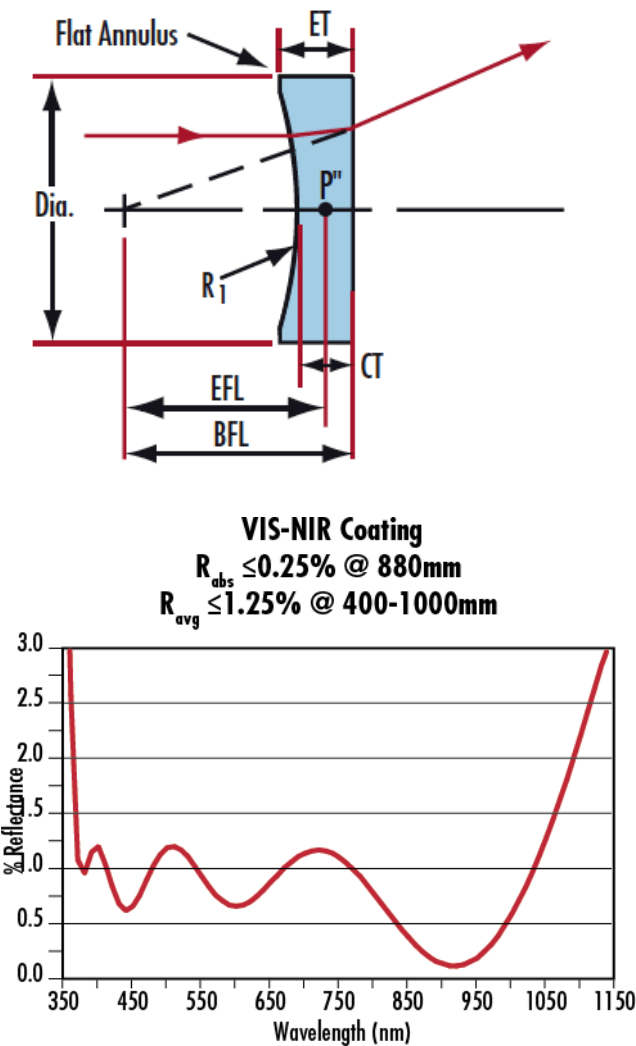
## Product Details

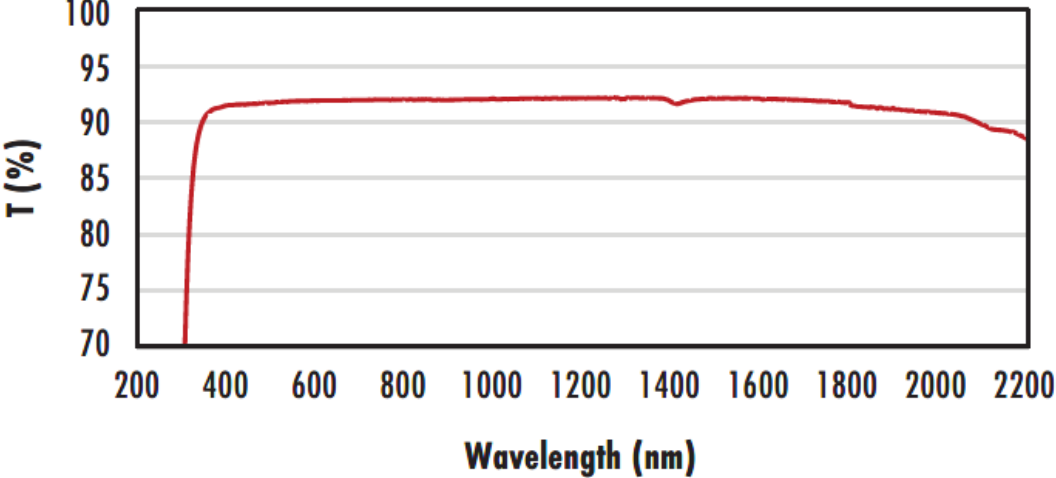
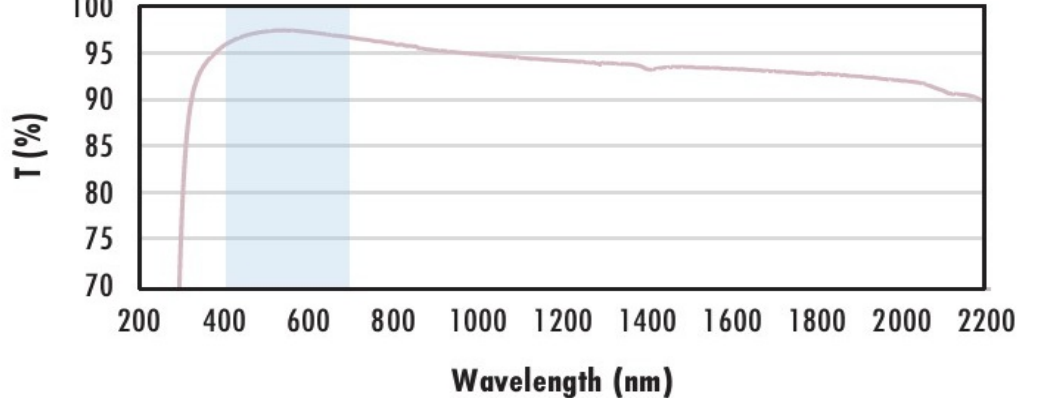
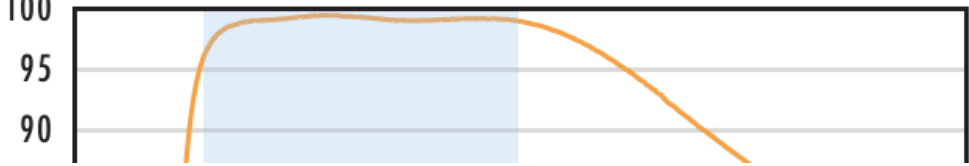
- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
- <0.25% Reflectance @ 880nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

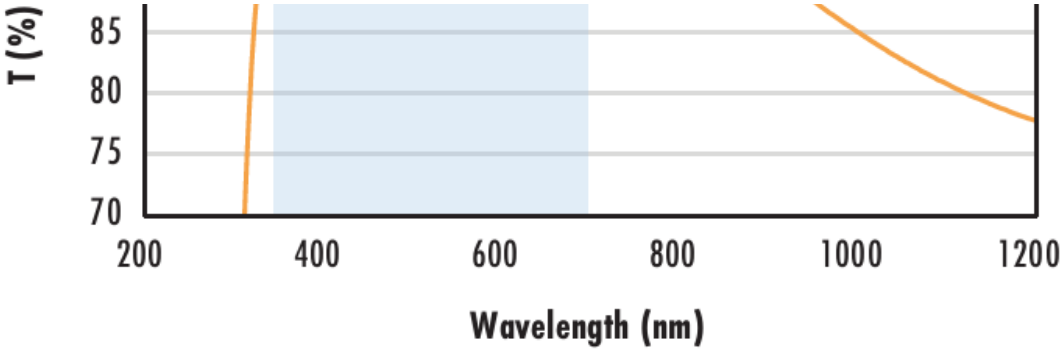
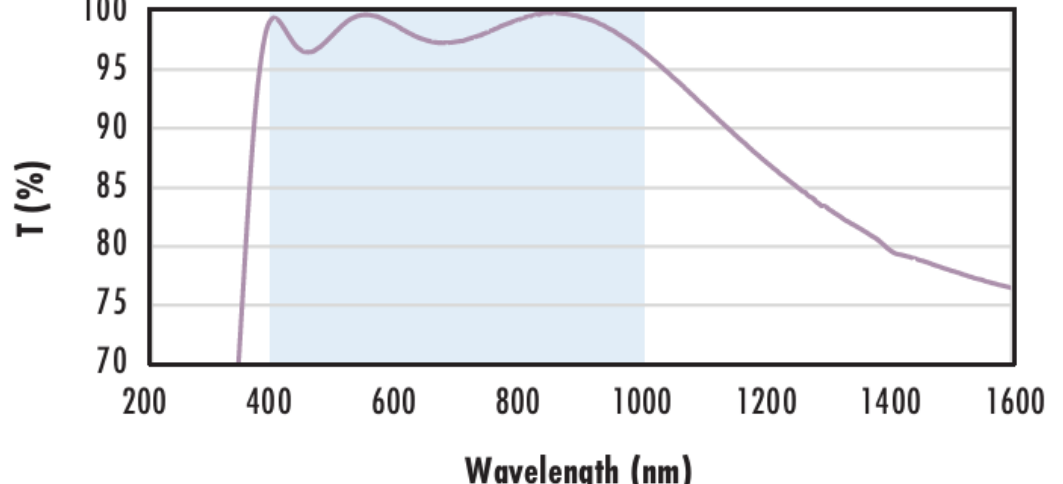
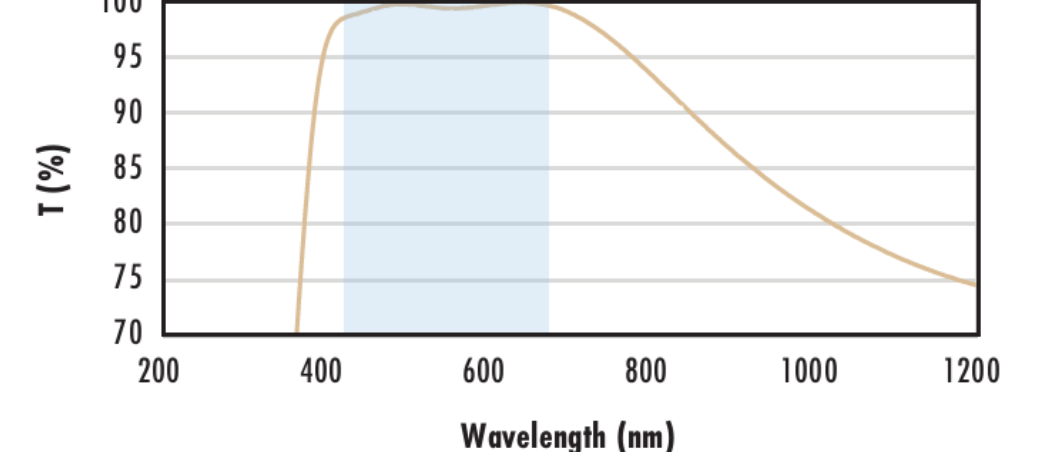
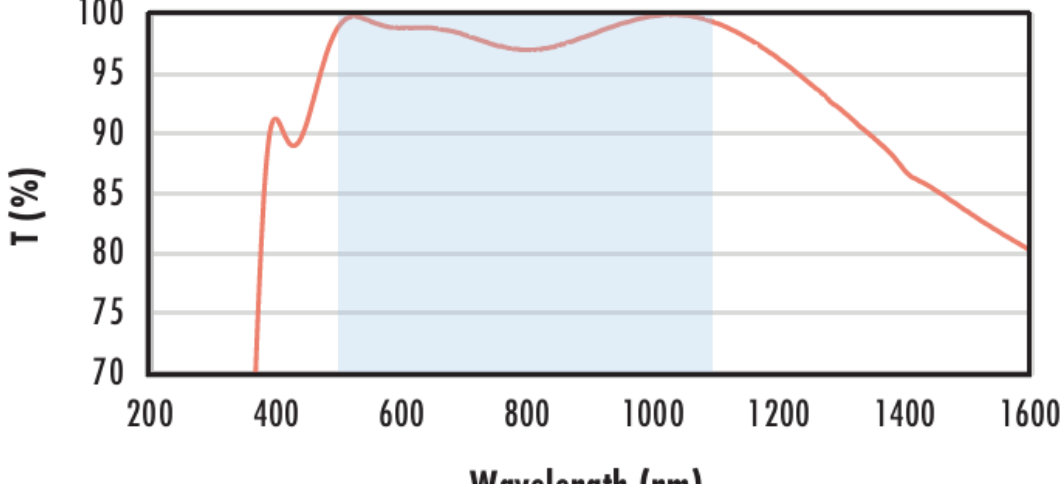
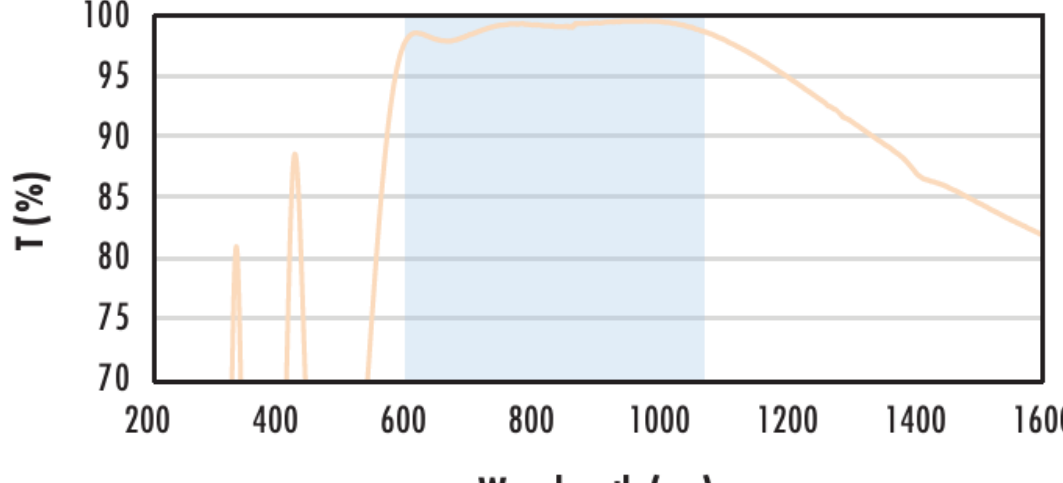
TECHSPEC® VIS-NIR Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be

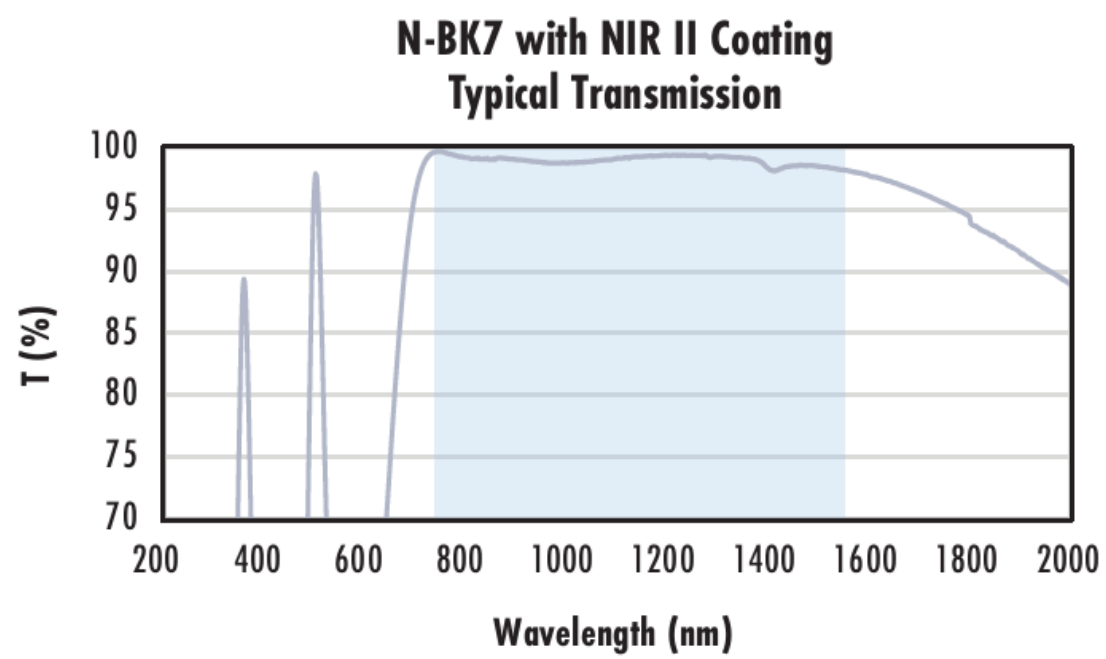
used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® VIS-NIR Coated Plano-Concave (PCV) Lenses are optimized for transmission (>99%) in the near-infrared. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

Technical Information



| N-BK7                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Uncoated N-BK7 Typical Transmission</p>                      | <p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                                                                                       |  |
| <p>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</p>  | <p>Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 1.75\% @ 400 - 700nm</math> (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p> |  |
| <p>N-BK7 with VIS-EXT Coating Typical Transmission</p>          | <p>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p>                                                                                                                                                                                                      |  |

|                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              | <p>range, with the following specification:</p> <p><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                                                                                                     |
| <p data-bbox="583 448 1008 543"><b>N-BK7 with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>      | <p>Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{abs} \leq 0.25\% @ 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="594 1071 976 1166"><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>     | <p>Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 0.4\% @ 425 - 675\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                   |
| <p data-bbox="567 1665 1039 1760"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>  | <p>Typical transmission of a 3mm thick N-BK7 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> <p><math>R_{abs} \leq 0.25\% @ 532\text{nm}</math><br/><math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math><br/><math>R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>      |
| <p data-bbox="615 2288 1008 2383"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>     | <p>Typical transmission of a 3mm thick N-BK7 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> <p><math>R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                                |



Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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

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

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

[Click Here to Download Data](#)

## Coating Curves

## Compatible Mounts