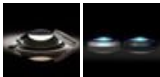


TECHSPEC<sup>®</sup> 12.0mm Dia. x 50mm FL, MgF<sub>2</sub> Coated, Plano-Convex Lens



Stock **#38-230** **6 In Stock**

☐ [Other Coating Options](#)

-

1

+

€37<sup>60</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | €37,60 each                   |
| Qty 10-24      | €33,73 each                   |
| Qty 25-49      | €30,13 each                   |
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Product Downloads

SPECIFICATIONS

General

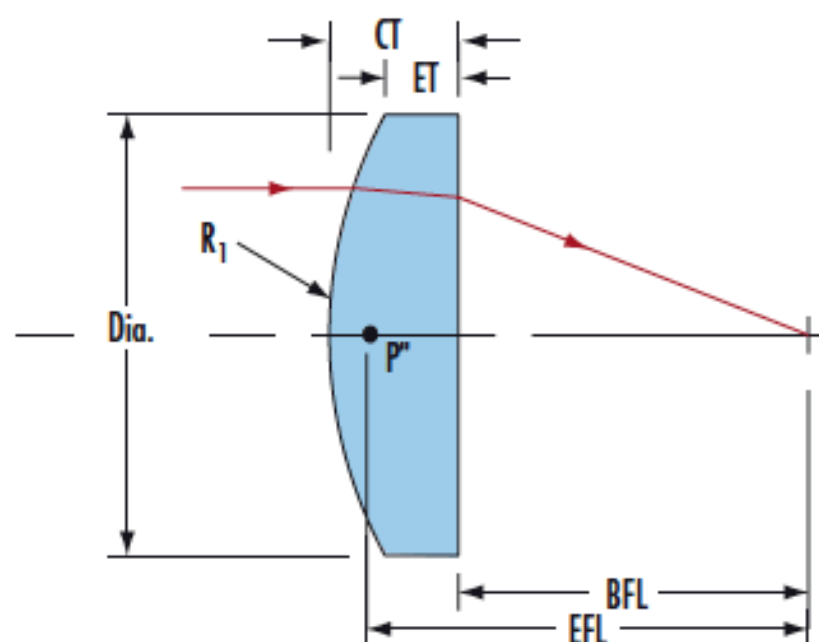
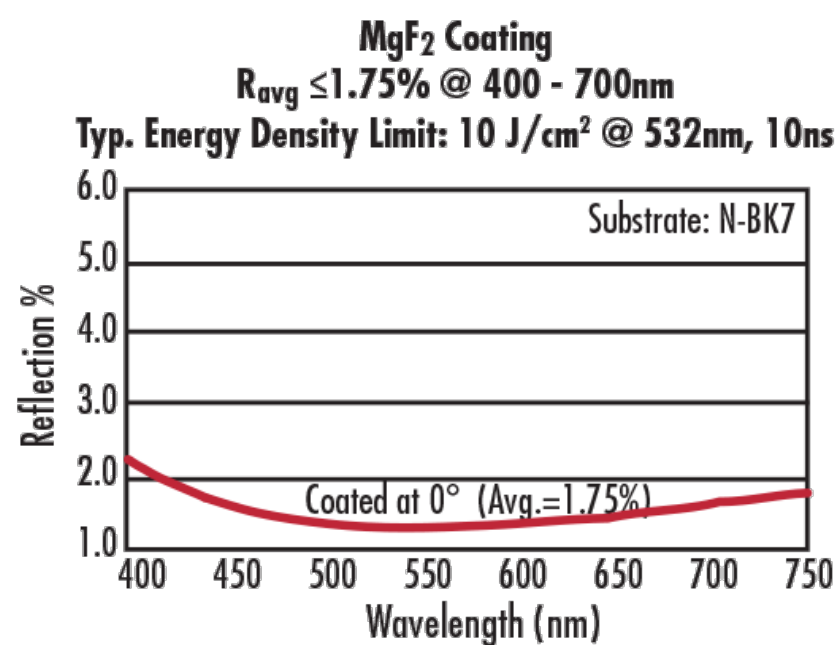
|                                                       |  |                                        |
|-------------------------------------------------------|--|----------------------------------------|
| Plano-Convex Lens                                     |  | Type:                                  |
| Physical & Mechanical Properties                      |  |                                        |
| Diameter (mm):                                        |  | 12.00 +0.0/-0.025                      |
| Centering (arcmin):                                   |  | <1                                     |
| Center Thickness CT (mm):                             |  | 1.90 ±0.05                             |
| Edge Thickness ET (mm):                               |  | 1.19                                   |
| Clear Aperture CA (mm):                               |  | 11                                     |
| Bevel:                                                |  | Protective as needed                   |
| Optical Properties                                    |  |                                        |
| Effective Focal Length EFL (mm):                      |  | 50.00 @ 587.6nm                        |
| Back Focal Length BFL (mm):                           |  | 48.75                                  |
| Coating:                                              |  | MgF <sub>2</sub> (400-700nm)           |
| Coating Specification:                                |  | R <sub>avg</sub> ≤ 1.75% @ 400 - 700nm |
| Substrate: <input type="checkbox"/>                   |  | N-BK7                                  |
| Surface Quality:                                      |  | 40-20                                  |
| Power (P-V) @ 632.8nm:                                |  | 1.5λ                                   |
| Irregularity (P-V) @ 632.8nm:                         |  | λ/4                                    |
| Focal Length Tolerance (%):                           |  | ±1                                     |
| Radius R <sub>1</sub> (mm):                           |  | 25.84                                  |
| f/#:                                                  |  | 4.17                                   |
| Numerical Aperture NA:                                |  | 0.12                                   |
| Wavelength Range (nm):                                |  | 400 - 700                              |
| Damage Threshold, Reference: <input type="checkbox"/> |  | 10 J/cm <sup>2</sup> @ 532nm, 10ns     |
| Regulatory Compliance                                 |  |                                        |
| RoHS 2015:                                            |  | Compliant                              |
| Certificate of Conformance:                           |  | View                                   |
| Reach 235:                                            |  | Compliant                              |

## PRODUCT DETAILS

- AR Coated to Provide <1.75% Reflectance per Surface for 400 - 700nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)
- Also Available [Pre-Mounted in Engraved C-Mount Housings](#)

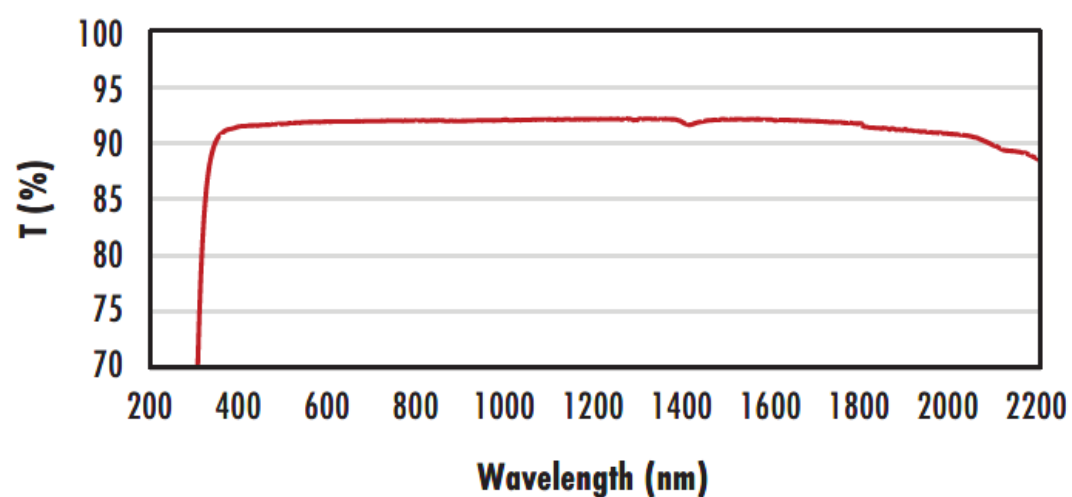
TECHSPEC® MgF2 Coated Plano-Convex (PCX) Lenses have a positive focal length, making them ideal for collecting and focusing light in imaging applications. They are also useful in a variety of applications involving emitters, detectors, lasers, and fiber optics. TECHSPEC® MgF2 Coated Plano-Convex (PCX) Lenses are available in a wide variety of diameters and focal lengths. Identical designs of these PCX lenses are also offered [uncoated](#) or with broadband anti-reflective (BBAR) coatings, which include [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#).

## TECHNICAL INFORMATION



N-BK7

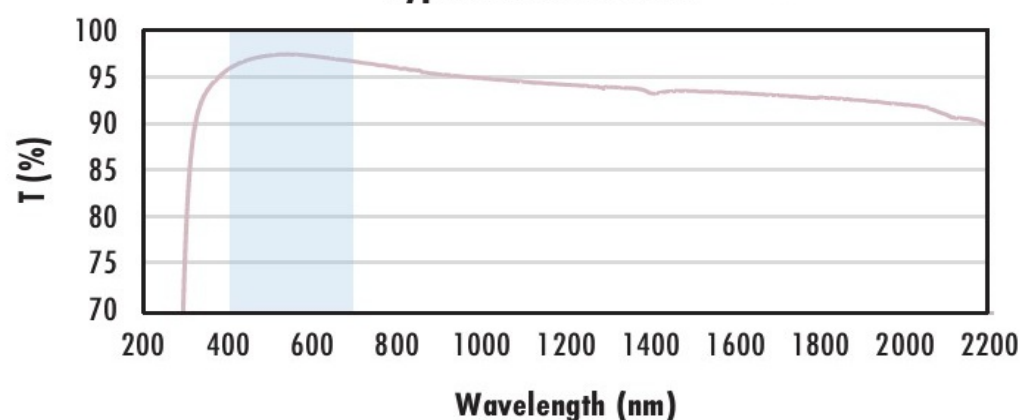
**Uncoated N-BK7 Typical Transmission**



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.

[Click Here to Download Data](#)

**N-BK7 with MgF<sub>2</sub> Coating Typical Transmission**



Typical transmission of a 3mm thick N-BK7 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:

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

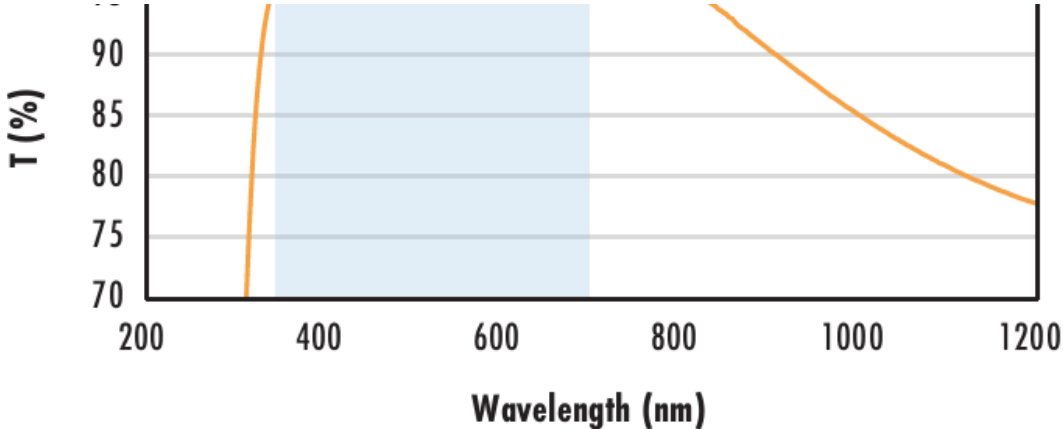
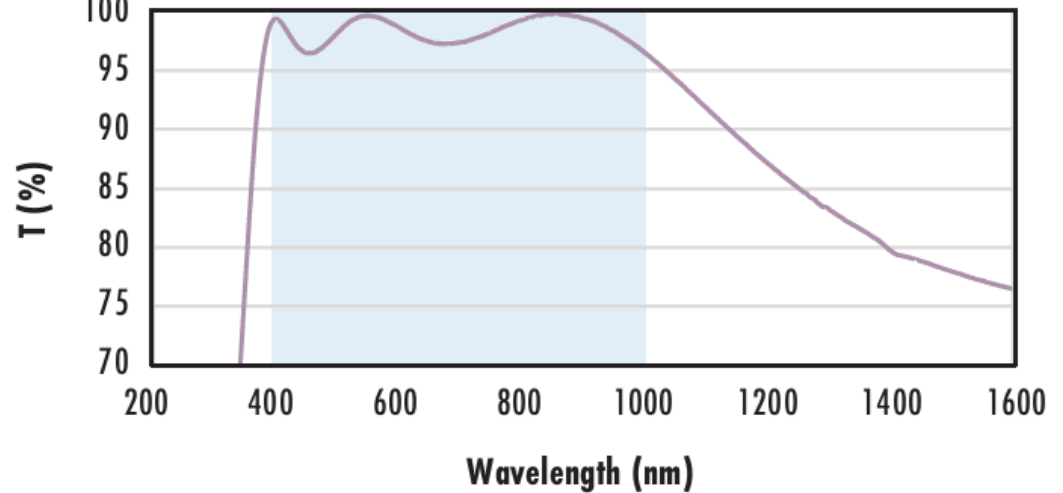
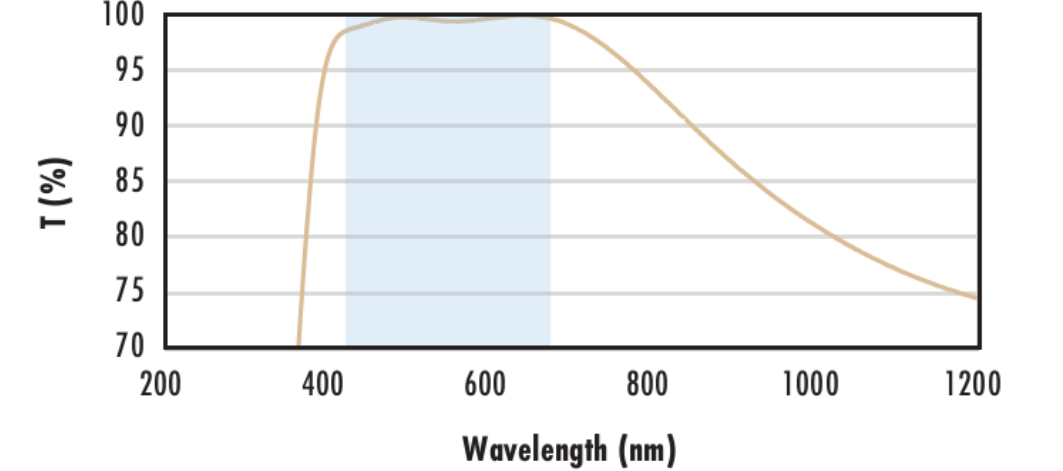
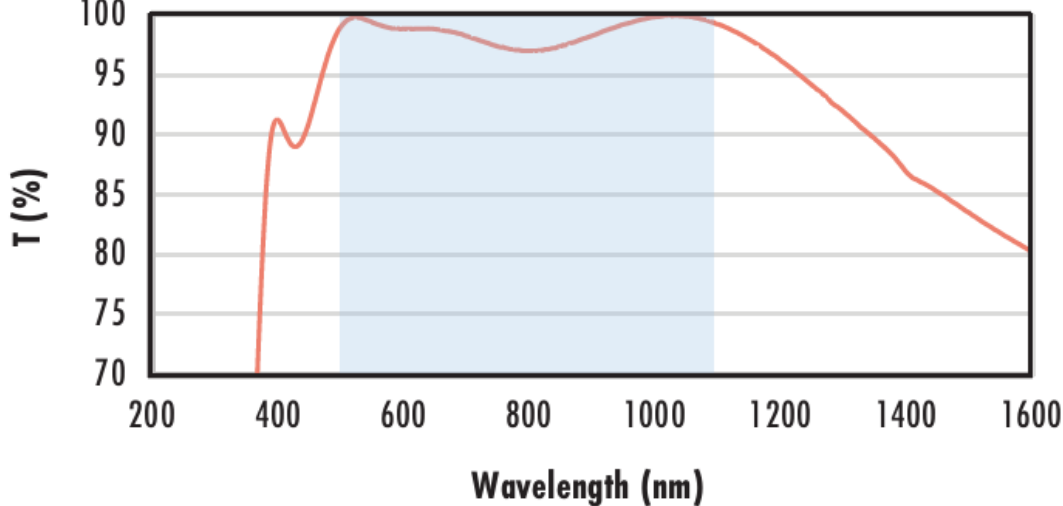
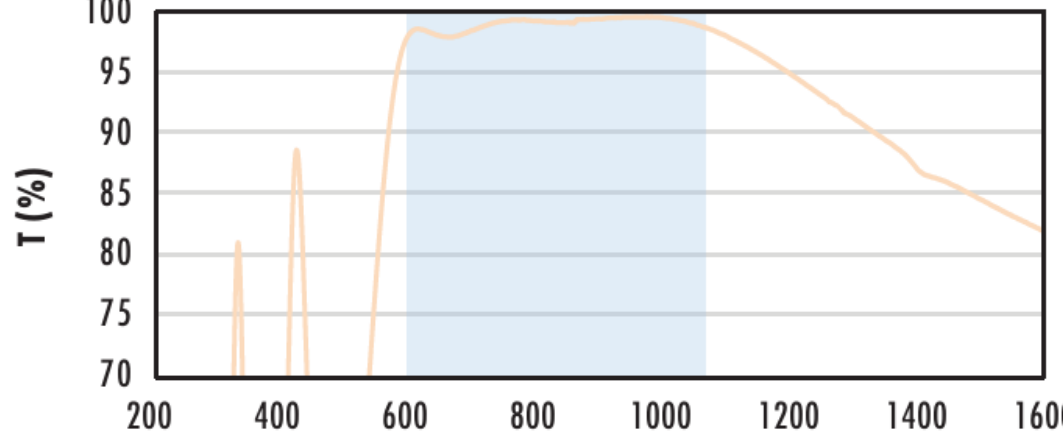
Data outside this range is not guaranteed and is for reference only.

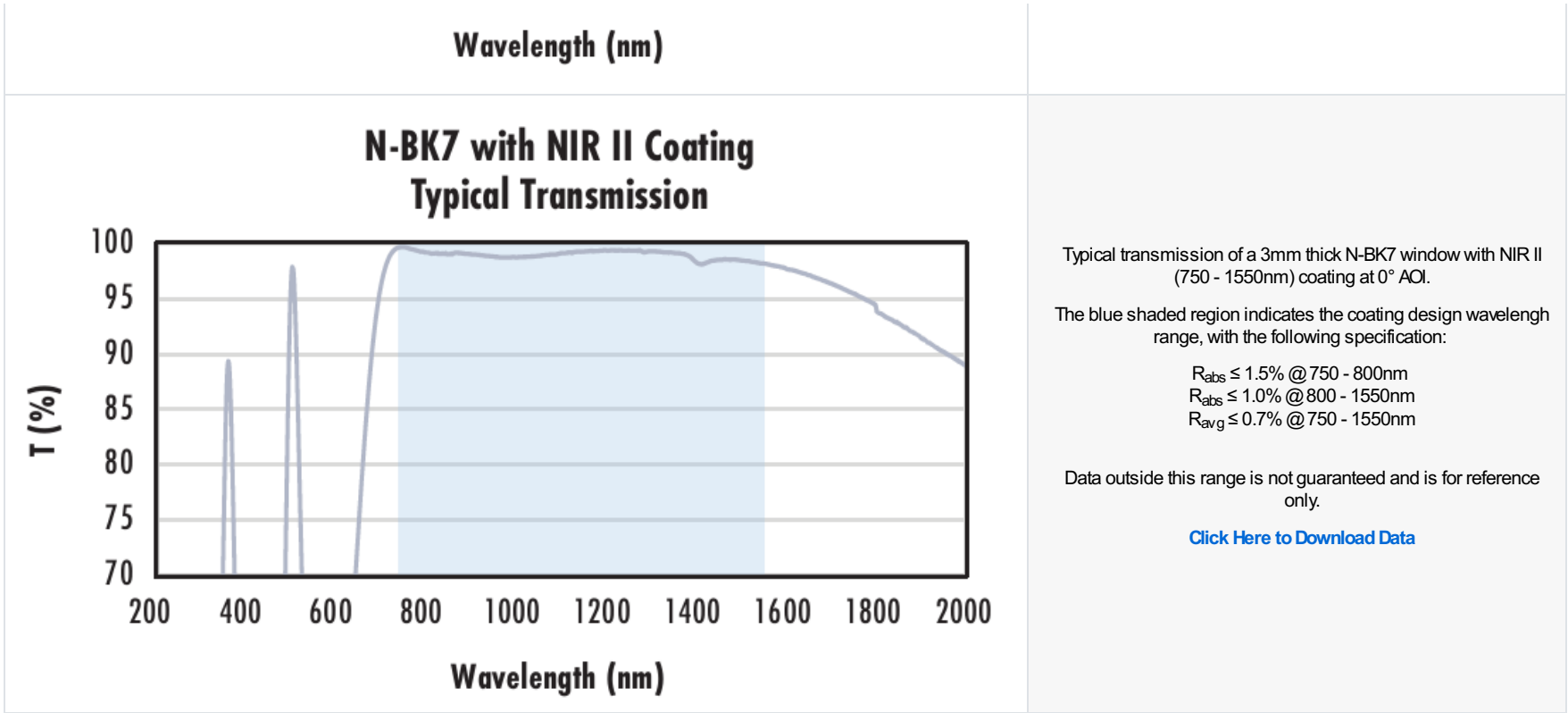
[Click Here to Download Data](#)

**N-BK7 with VIS-EXT Coating Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with VIS-EXT

|                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                               | <p>Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (350-700nm) 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 0.5\%</math> @ 350 - 700nm</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><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\%</math> @ 880nm<br/><math>R_{avg} \leq 1.25\%</math> @ 400 - 870nm<br/><math>R_{avg} \leq 1.25\%</math> @ 890 - 1000nm</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><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\%</math> @ 425 - 675nm</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><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\%</math> @ 532nm<br/><math>R_{abs} \leq 0.25\%</math> @ 1064nm<br/><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</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><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\%</math> @ 600 - 1050nm</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>                                                                                                  |



COATING CURVES

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