

TECHSPEC<sup>®</sup> 50.0mm Dia. x 250.0mm FL, MgF<sub>2</sub> Coated, Plano-Convex Lens



Stock **#45-154** 20+ In Stock

☐ Other Coating Options

-

1

+

A\$98<sup>.40</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | A\$98.40 each                 |
| Qty 10-24      | A\$88.80 each                 |
| Qty 25-49      | A\$78.80 each                 |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

General

Type:  
Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):  
50.00 +0.0/-0.025

|                      |                           |
|----------------------|---------------------------|
| <1                   | Centering (arcmin):       |
| 4.94 ±0.10           | Center Thickness CT (mm): |
| 2.50                 | Edge Thickness ET (mm):   |
| 49                   | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Optical Properties                    |                                  |
| 250.00 @ 587.6nm                      | Effective Focal Length EFL (mm): |
| 246.74                                | Back Focal Length BFL (mm):      |
| MgF <sub>2</sub> (400-700nm)          | Coating:                         |
| R <sub>avg</sub> ≤1.75% @ 400 - 700nm | Coating Specification:           |
| N-BK7                                 | Substrate: □                     |
| 40-20                                 | Surface Quality:                 |
| 1.5λ                                  | Power (P-V) @ 632.8nm:           |
| λ/4                                   | Irregularity (P-V) @ 632.8nm:    |
| ±1                                    | Focal Length Tolerance (%):      |
| 129.21                                | Radius R <sub>1</sub> (mm):      |
| 5                                     | f/#:                             |
| 0.10                                  | Numerical Aperture NA:           |
| 400 - 700                             | Wavelength Range (nm):           |
| 10 J/cm <sup>2</sup> @ 532nm, 10ns    | Damage Threshold, By Design: □   |

|                       |                             |
|-----------------------|-----------------------------|
| Regulatory Compliance |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant             | Reach 235:                  |

## 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](#)

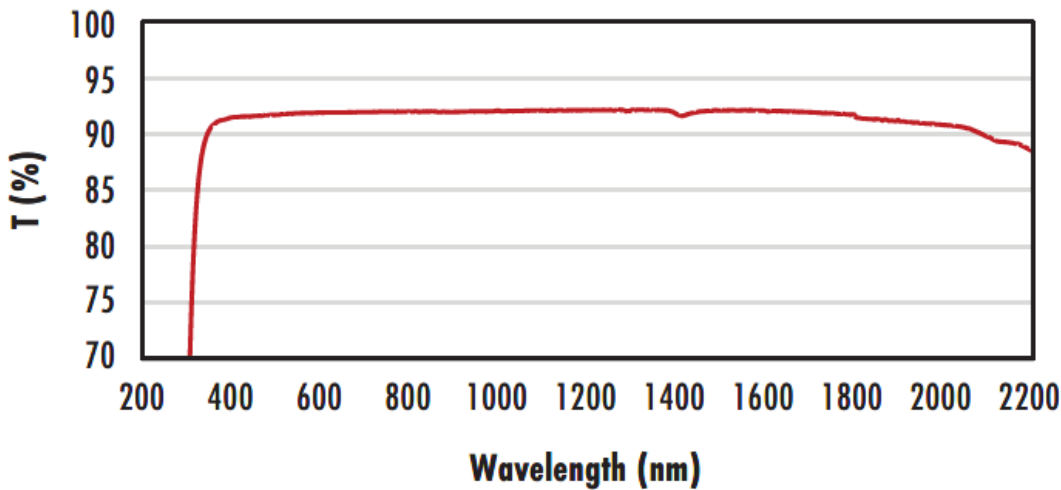
TECHSPEC® MgF2 Coated Plano-Convex (PCX) Lenses have a positive focal length, making them ideal for collecting and focusing light in imaging applications. They are also useful in a variety of applications involving emitters, detectors, lasers, and fiber optics. TECHSPEC® MgF2 Coated Plano-Convex (PCX) 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

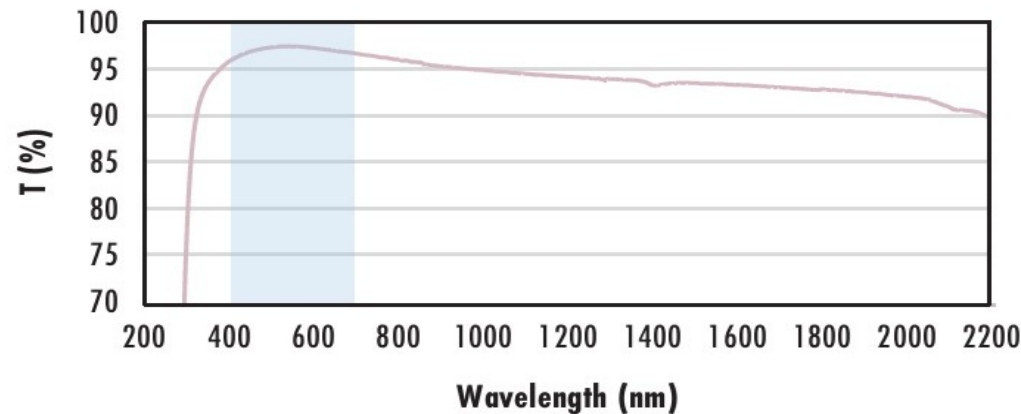
Uncoated N-BK7 Typical Transmission



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.

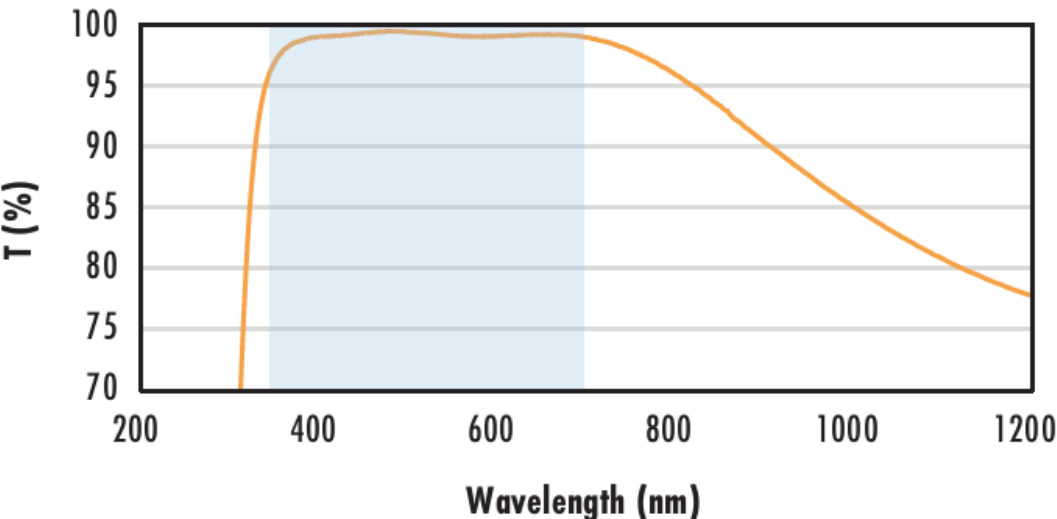
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$  (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 (350-700nm) coating at 0° AOI.

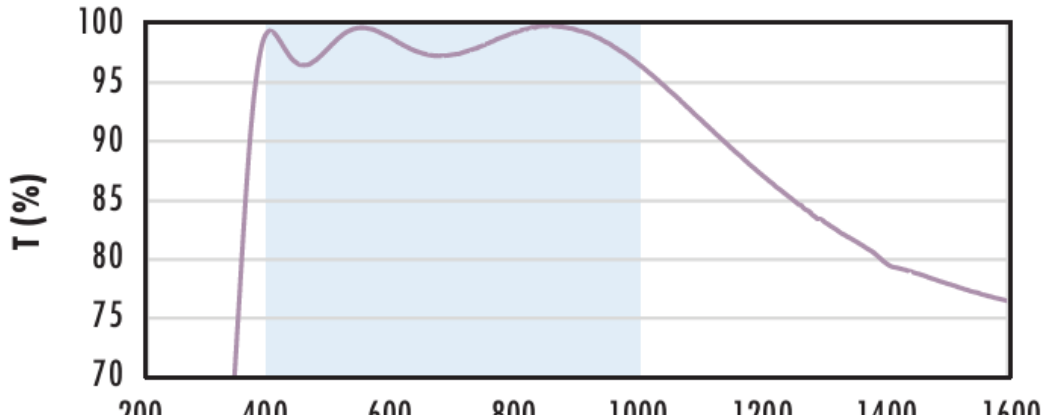
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

N-BK7 with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 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](#)

|                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>2004006008001000120014001600</div> <div>Wavelength (nm)</div>                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <div><div>N-BK7 with VIS 0° Coating</div><div>Typical Transmission</div><div><div><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>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div></div></div><div><div>T (%)</div><div>Wavelength (nm)</div></div></div></div>                                                             |  | <div>Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><math>R_{avg} \leq 0.4\%</math> @ 425 - 675nm</div></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                      |
| <div><div>N-BK7 with YAG-BBAR Coating</div><div>Typical Transmission</div><div><div><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>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><div><div>T (%)</div><div>Wavelength (nm)</div></div></div></div>                             |  | <div>Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</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>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>           |
| <div><div>N-BK7 with NIR I Coating</div><div>Typical Transmission</div><div><div><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>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><div><div>T (%)</div><div>Wavelength (nm)</div></div></div></div>                                |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</div></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                   |
| <div><div>N-BK7 with NIR II Coating</div><div>Typical Transmission</div><div><div><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>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><div><div>T (%)</div><div>Wavelength (nm)</div></div></div></div> |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</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>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div> |

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