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## TECHSPEC® 5.0mm Dia. x 10.0mm FL, MgF<sub>2</sub> Coated, Plano-Convex Lens



Stock #45-230 **20+ In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ €47.<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-9	€47,50 each
Qty 10-24	€42,75 each
Qty 25-49	€38,00 each
Need More?	<a href="#">Request Quote</a>

ⓘ Prices shown are exclusive of VAT/local taxes

### Product Downloads

### General

Plano-Convex Lens **Type:**

### Physical & Mechanical Properties

5.00 +0.0/-0.025	<b>Diameter (mm):</b>
<3	<b>Centering (arcmin):</b>
1.64 ±0.05	<b>Center Thickness CT (mm):</b>
1.00	<b>Edge Thickness ET (mm):</b>
4.5	<b>Clear Aperture CA (mm):</b>
Protective as needed	<b>Bevel:</b>

## Optical Properties

10.00 @ 587.6nm	<b>Effective Focal Length EFL (mm):</b>
8.91	<b>Back Focal Length BFL (mm):</b>
MgF <sub>2</sub> (400-700nm)	<b>Coating:</b>
R <sub>avg</sub> ≤ 1.75% @ 400 - 700nm	<b>Coating Specification:</b>
<a href="#">N-BK7</a>	<b>Substrate:</b> <input type="checkbox"/>
40-20	<b>Surface Quality:</b>
1.5λ	<b>Power (P-V) @ 632.8nm:</b>
λ/4	<b>Irregularity (P-V) @ 632.8nm:</b>
±1	<b>Focal Length Tolerance (%):</b>
5.17	<b>Radius R<sub>1</sub> (mm):</b>
2	<b>f#:</b>
0.25	<b>Numerical Aperture NA:</b>
400 - 700	<b>Wavelength Range (nm):</b>
10 J/cm <sup>2</sup> @ 532nm, 10ns	<b>Damage Threshold, By Design:</b> <input type="checkbox"/>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">Compliant</a>	<b>Reach 219:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>

## 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](#)

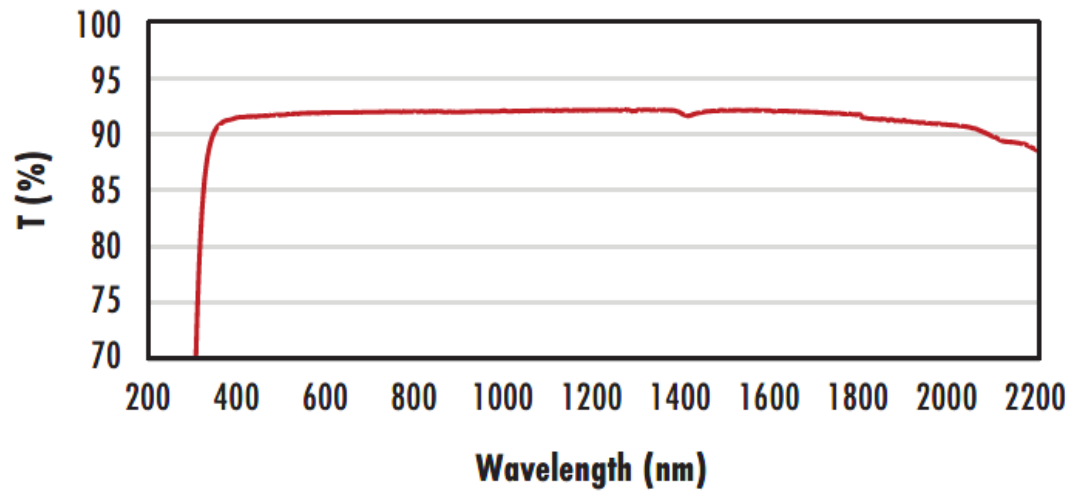
TECHSPEC® MgF<sub>2</sub> Coated Plano-Convex (PCX) Lenses have a positive focal length, making them ideal for collecting and focusing light in imaging applications. They are also useful in a variety of applications involving emitters, detectors, lasers, and fiber optics. TECHSPEC® MgF<sub>2</sub> Coated 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:

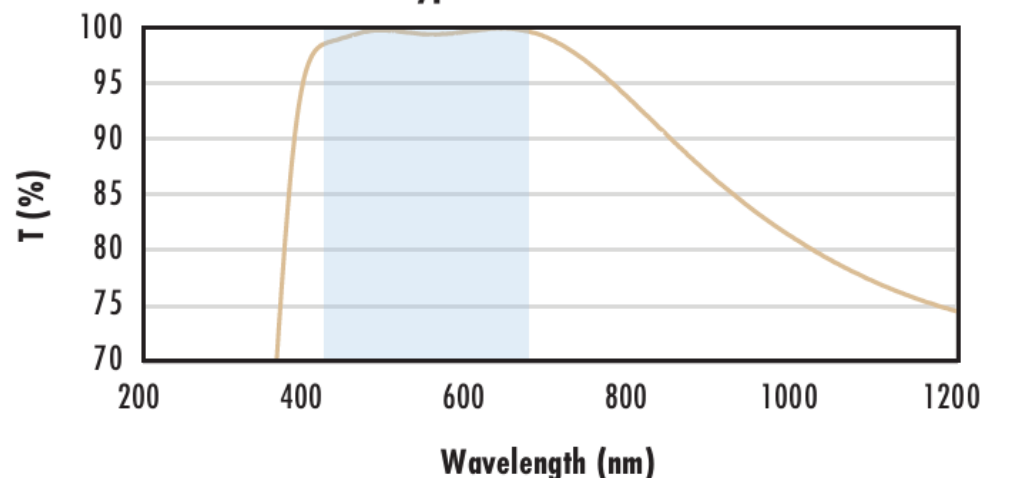
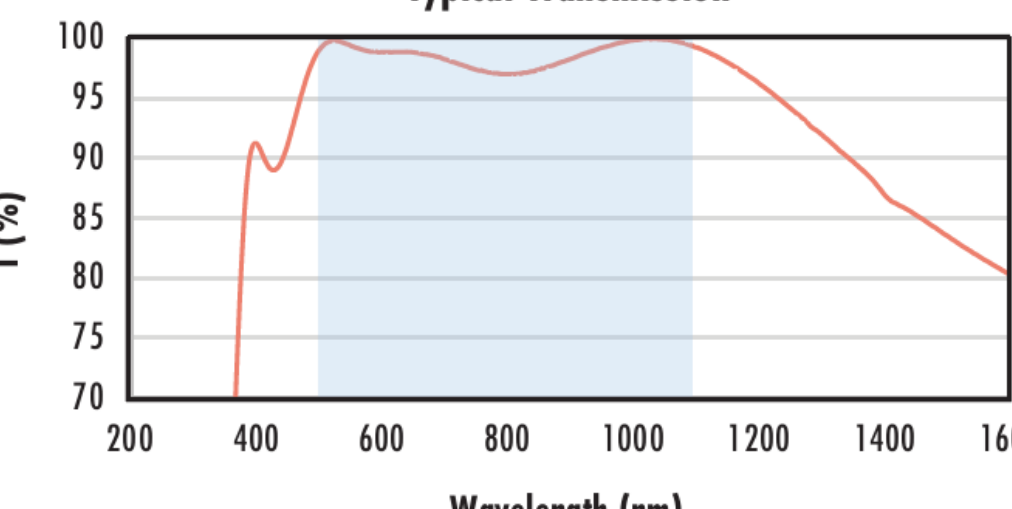
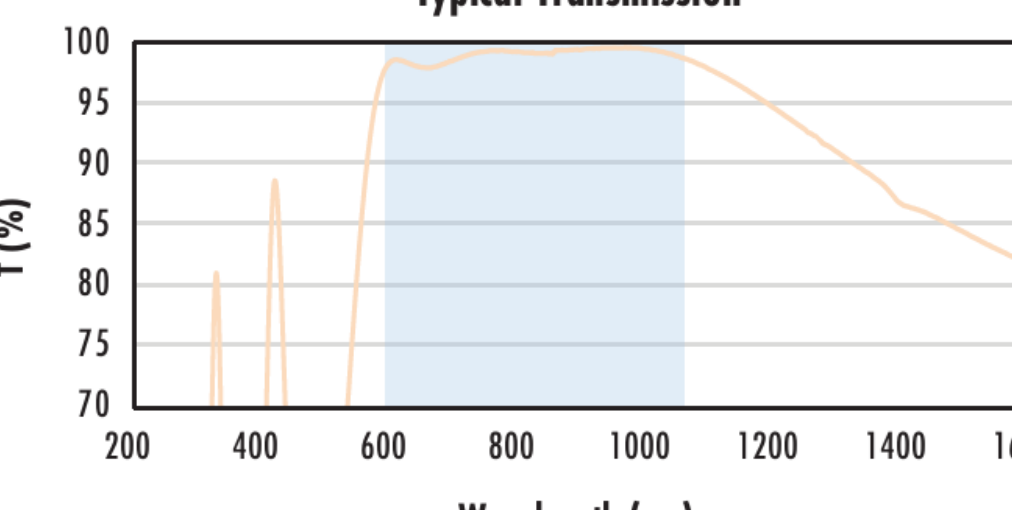
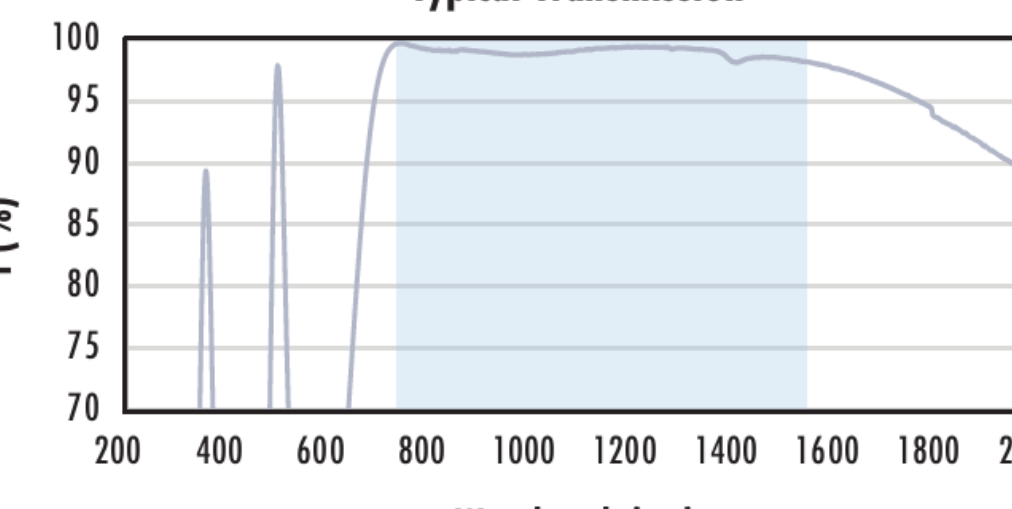
$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$$

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

[Click Here to Download Data](#)

<p style="text-align: center;">200    400    600    800    1000    1200    1400    1600</p> <p style="text-align: center;"><b>Wavelength (nm)</b></p>	
<p style="text-align: center;"><b>N-BK7 with VIS 0° Coating</b> <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 style="text-align: center;"><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 style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>N-BK7 with YAG-BBAR Coating</b> <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 style="text-align: center;"><math>R_{abs} \leq 0.25\% @ 532\text{nm}</math> <math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math> <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 style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>N-BK7 with NIR I Coating</b> <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 style="text-align: center;"><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 style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>N-BK7 with NIR II Coating</b> <b>Typical Transmission</b></p> 	<p>Typical transmission of a 3mm thick N-BK7 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> <p style="text-align: center;"><math>R_{abs} \leq 1.5\% @ 750 - 800\text{nm}</math> <math>R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}</math> <math>R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;"><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

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