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TECHSPEC® 50.0mm Dia. x 175.0mm FL, YAG-BBAR Coated Plano-Convex Lens



YAG-BBAR Coated Plano-Convex (PCX) Lenses



Stock **#88-923** **6 In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ C\$109²⁰

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Volume Pricing	
Qty 1-9	C\$109.20 each
Qty 10-24	C\$98.00 each
Qty 25-49	C\$87.50 each
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General

Plano-Convex Lens **Type:**

Physical & Mechanical Properties

Diameter (mm):

50.00 +0.0/-0.025

<1 **Centering (arcmin):**

9.00 ±0.10 **Center Thickness CT (mm):**

5.48 **Edge Thickness ET (mm):**

49 **Clear Aperture CA (mm):**

Protective as needed **Bevel:**

Optical Properties

175.00 @ 587.6nm **Effective Focal Length EFL (mm):**

169.05 **Back Focal Length BFL (mm):**

YAG-BBAR (500-1100nm) **Coating:**

Coating Specification:
R_{abs} <0.25% @ 532nm
R_{abs} <0.25% @ 1064nm
R_{avg} <1.0% @ 500 - 1100nm

N-BK7 **Substrate:**

40-20 **Surface Quality:**

1.5λ **Power (P-V) @ 632.8nm:**

M4 **Irregularity (P-V) @ 632.8nm:**

±1 **Focal Length Tolerance (%):**

90.44 **Radius R₁ (mm):**

3.5 **f#:**

0.14 **Numerical Aperture NA:**

500 - 1100 **Wavelength Range (nm):**

5 J/cm² @ 532nm, 10ns **Damage Threshold, By Design:**

Regulatory Compliance

Compliant **RoHS 2015:**

View **Certificate of Conformance:**

Compliant **Reach 235:**

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

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

- Optimized for R<0.25% @ Both 532nm and 1064nm
- AR Coated to Provide <1.0% Reflectance per Surface for 500 - 1100nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [VIS-EXT](#)

TECHSPEC® YAG-BBAR 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® YAG-BBAR 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 [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [VIS-EXT](#).

Technical Information



N-BK7	
<p>Uncoated N-BK7 Typical Transmission</p> <p>This graph shows the typical transmission of a 3mm thick, uncoated N-BK7 window. The y-axis is T (%) from 70 to 100, and the x-axis is Wavelength (nm) from 200 to 2200. The transmission is approximately 90% across the entire range.</p>	<p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p>Click Here to Download Data</p>
<p>N-BK7 with MgF₂ Coating Typical Transmission</p> <p>This graph shows the typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI. The y-axis is T (%) from 70 to 100, and the x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from approximately 400 nm to 700 nm, where transmission is high (above 95%).</p>	<p>Typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p>$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>
<p>N-BK7 with VIS-EXT Coating Typical Transmission</p> <p>This graph shows the typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI. The y-axis is T (%) from 70 to 100, and the x-axis is Wavelength (nm) from 200 to 1200. A blue shaded region indicates the coating design wavelength range from approximately 350 nm to 700 nm, where transmission is above 95%.</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>$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>
<p>N-BK7 with VIS-NIR Coating Typical Transmission</p> <p>This graph shows the typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI. The y-axis is T (%) from 70 to 100, and the x-axis is Wavelength (nm) from 200 to 1200. A blue shaded region indicates the coating design wavelength range from approximately 400 nm to 1000 nm, where transmission is above 95%.</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>$R_{abs} \leq 0.25\% @ 880\text{nm}$ $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$ $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>

200 400 600 800 1000 1200 1400 1600
Wavelength (nm)

**N-BK7 with VIS 0° Coating
Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.
The blue shaded region indicates the coating design wavelength range, with the following specification:
 $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$
Data outside this range is not guaranteed and is for reference only.
[Click Here to Download Data](#)

**N-BK7 with YAG-BBAR Coating
Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.
The blue shaded region indicates the coating design wavelength range, with the following specification:
 $R_{abs} \leq 0.25\% @ 532\text{nm}$
 $R_{abs} \leq 0.25\% @ 1064\text{nm}$
 $R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$
Data outside this range is not guaranteed and is for reference only.
[Click Here to Download Data](#)

**N-BK7 with NIR I Coating
Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.
The blue shaded region indicates the coating design wavelength range, with the following specification:
 $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$
Data outside this range is not guaranteed and is for reference only.
[Click Here to Download Data](#)

**N-BK7 with NIR II Coating
Typical Transmission**



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:
 $R_{abs} \leq 1.5\% @ 750 - 800\text{nm}$
 $R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$
 $R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$
Data outside this range is not guaranteed and is for reference only.
[Click Here to Download Data](#)

Compatible Mounts
