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TECHSPEC<sup>®</sup> 12.0mm Dia. x 54.0mm FL, YAG-BBAR Coated Plano-Convex Lens



YAG-BBAR Coated Plano-Convex (PCX) Lenses



Stock **#88-839** **5 In Stock**

[Other Coating Options](#)

-

1

+

£40<sup>00</sup>

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| Volume Pricing |                               |
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| Qty 1-9        | £40.00 each                   |
| Qty 10-24      | £35.80 each                   |
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Product Downloads

General

Plano-Convex Lens

Type:

Physical & Mechanical Properties

|                      |                           |
|----------------------|---------------------------|
| 12.00 +0.0/-0.025    | Diameter (mm):            |
| <1                   | Centering (arcmin):       |
| 3.00 ±0.05           | Center Thickness CT (mm): |
| 2.35                 | Edge Thickness ET (mm):   |
| 11                   | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|                                                                                                              |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Optical Properties                                                                                           |                                                       |
| 54.00 @ 587.6nm                                                                                              | Effective Focal Length EFL (mm):                      |
| 52.02                                                                                                        | Back Focal Length BFL (mm):                           |
| YAG-BBAR (500-1100nm)                                                                                        | Coating:                                              |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm | Coating Specification:                                |
| N-BK7                                                                                                        | Substrate: <input type="checkbox"/>                   |
| 40-20                                                                                                        | Surface Quality:                                      |
| 1.5λ                                                                                                         | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                          | Irregularity (P-V) @ 632.8nm:                         |
| ±1                                                                                                           | Focal Length Tolerance (%):                           |
| 27.91                                                                                                        | Radius R <sub>1</sub> (mm):                           |
| 4.5                                                                                                          | f/#:                                                  |
| 0.11                                                                                                         | Numerical Aperture NA:                                |
| 500 - 1100                                                                                                   | Wavelength Range (nm):                                |
| 5 J/cm² @ 532nm, 10ns                                                                                        | Damage Threshold, By Design: <input type="checkbox"/> |

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

## 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](#), [MgF<sub>2</sub>](#), [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 [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [VIS-EXT](#).

## Technical Information



| N-BK7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div><h3>Uncoated N-BK7 Typical Transmission</h3><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></div>                                                                                                                                                                                                                                                                                                                                                                                       |  |
| <div><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3><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 - 700\text{nm}</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></div>                                                                                         |  |
| <div><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3><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><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></div>                                                                                                                  |  |
| <div><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3><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></div> |  |



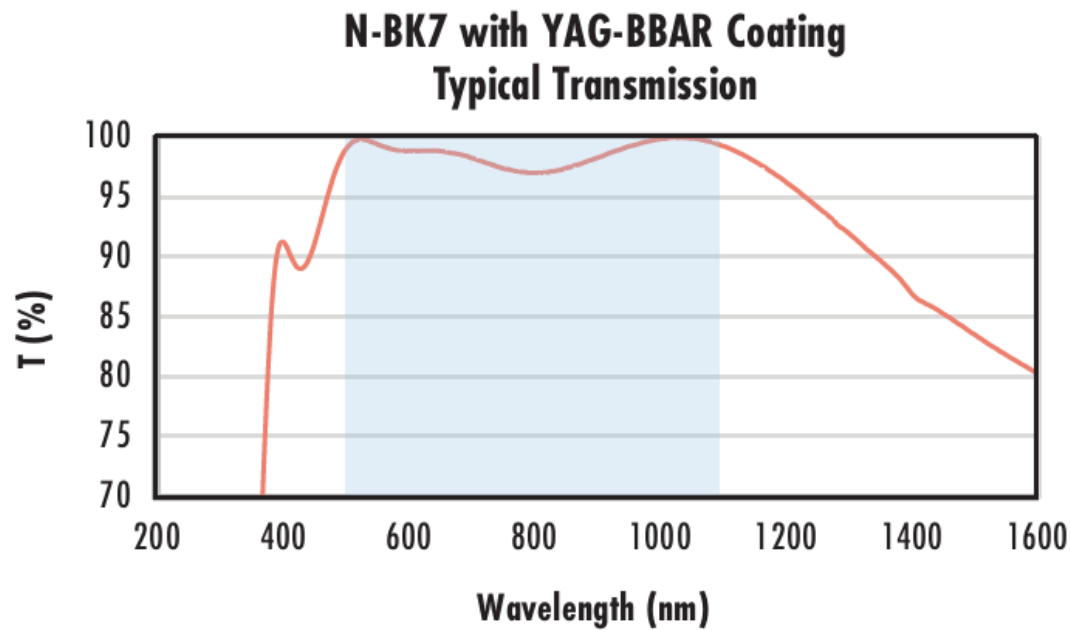
Typical transmission of a 3mm thick N-BK7 window with VIS 0°  
(425-675nm) coating at 0° AOI.

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

$$R_{avg} \leq 0.4\% @ 425 - 675nm$$

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

[Click Here to Download Data](#)



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:

$$R_{\text{abs}} \leq 0.25\% @ 532\text{nm}$$

$R_{\text{abs}} \leq 0.25\% @ 1064\text{nm}$

$$R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$$

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

[Click Here to Download Data](#)



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](#)



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:

$$R_{\text{abs}} \leq 1.5\% @ 750 - 800\text{nm}$$

$R_{\text{abs}} \leq 1.0\% @ 800 - 1550\text{nm}$

$$R_{avg} \leq 0.7\% @ 750 - 1550nm$$

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

[Click Here to Download Data](#)

## 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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