

TECHSPEC® 4.5mm Dia. x 4.5mm FL, YAG-BBAR Coated Plano-Convex Lens



YAG-BBAR Coated Plano-Convex (PCX) Lenses



Stock **#88-786** **7 In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ MRP ₹7,668

● Price inclusive of all taxes

ADD TO CART

Volume Pricing	
Qty 1-9	₹7,668 each
Qty 10-24	₹6,911 each
Qty 25-49	₹6,104 each
Need More?	Request Quote

Product Downloads

General

Plano-Convex Lens **Type:**

Physical & Mechanical Properties

Diameter (mm):
4.50 +0.0/-0.025

Centering (arcmin):
30-45, typical

Center Thickness CT (mm):
2.59 ±0.05

Edge Thickness ET (mm):
1.80

Clear Aperture CA (mm):
4.05

Bevel:
Protective as needed

Optical Properties

Effective Focal Length EFL (mm):
4.50 @ 587.6nm

Back Focal Length BFL (mm):
3.05

Coating:
YAG-BBAR (500-1100nm)

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

Substrate:
[N-LASF44](#)

Surface Quality:
40-20

Power (P-V) @ 632.8nm:
1.5λ

Irregularity (P-V) @ 632.8nm:
λ/4

Focal Length Tolerance (%):
±1

Radius R₁ (mm):
3.61

f#:
1

Numerical Aperture NA:
0.50

Wavelength Range (nm):
500 - 1100

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

Regulatory Compliance

RoHS 2015:
[Compliant](#)

Certificate of Conformance:
[View](#)

Reach 235:
[Compliant](#)

Country of Origin:
United States

Imported By:
Edmund Optics India Private Limited
267, Greystone Building, Second Floor,
6th Cross Rd, Binnamangala,
Stage 1, Indiranagar, Bengaluru,
Karnataka, India 560038
Phone: +91- 80-6845 0000

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

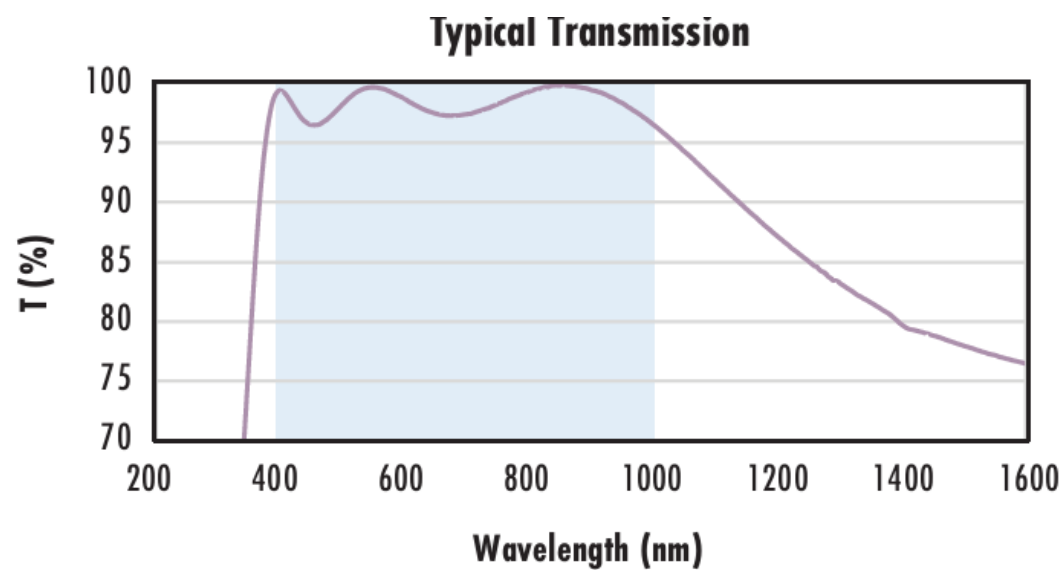
- Optimized for $R < 0.25\%$ @ Both 532nm and 1064nm
- AR Coated to Provide $< 1.0\%$ Reflectance per Surface for 500 - 1100nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [VIS-EXT](#)

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>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>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 - 700nm (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>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 - 700nm</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</p>	



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:

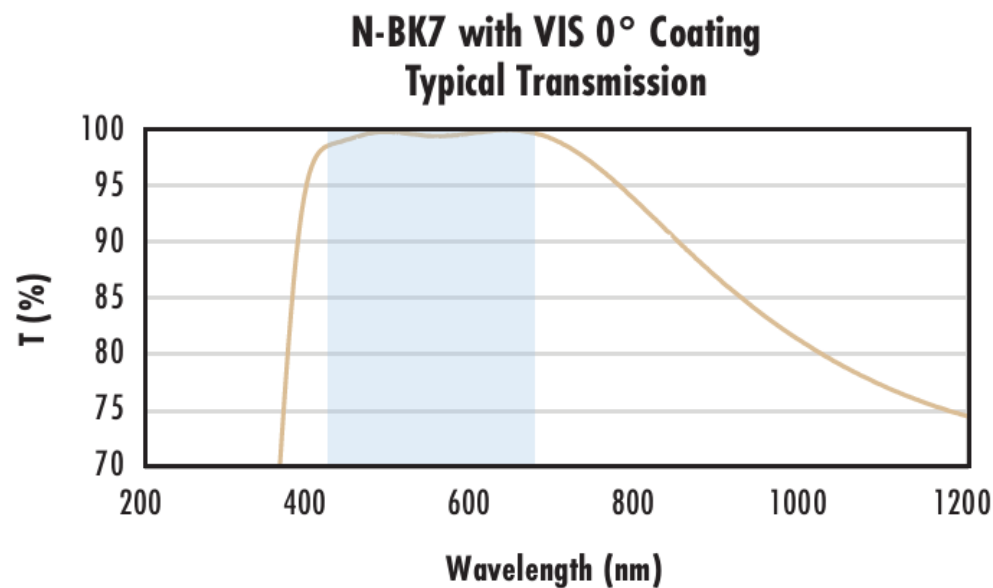
$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

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

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

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

[Click Here to Download Data](#)



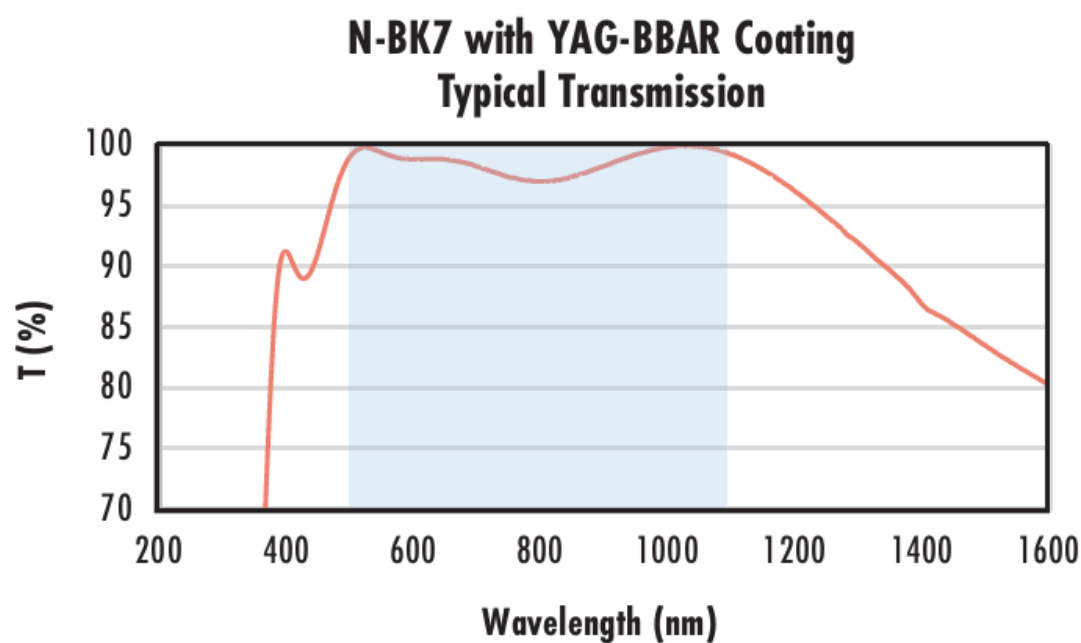
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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](#)



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:

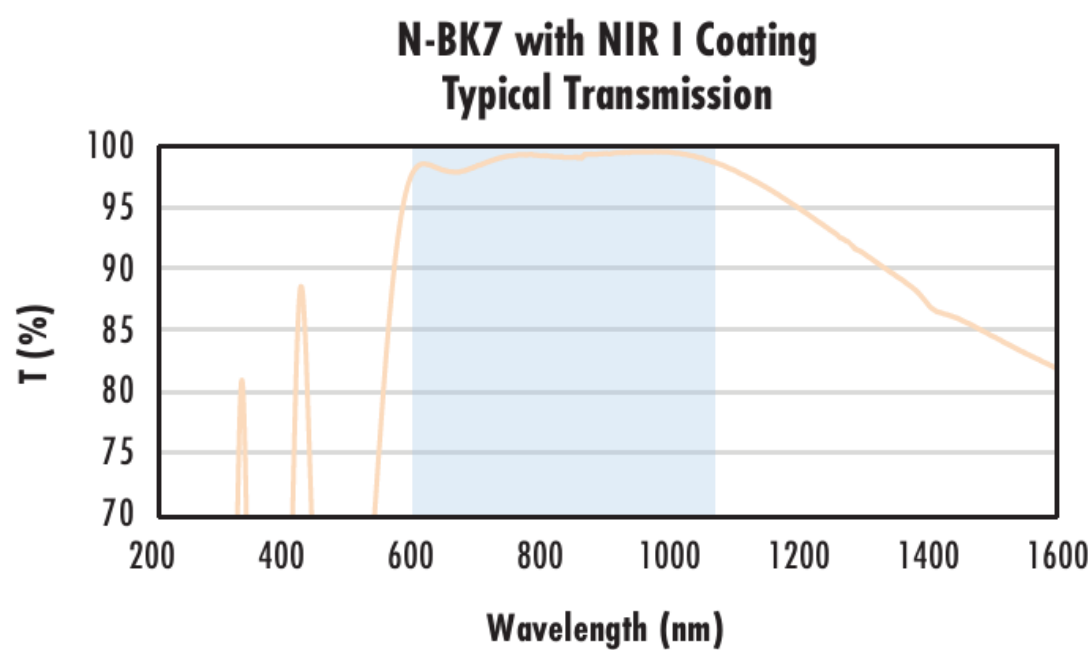
$$R_{abs} \leq 0.25\% @ 532\text{nm}$$

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

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

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

[Click Here to Download Data](#)



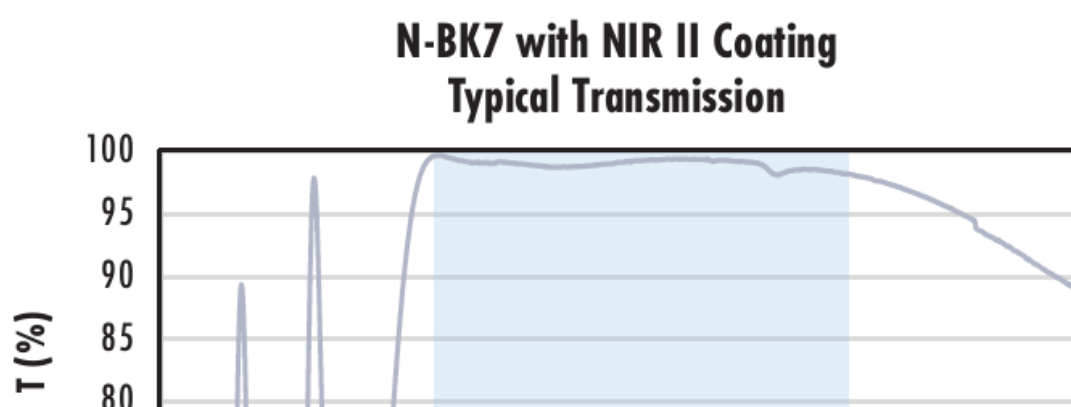
Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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](#)



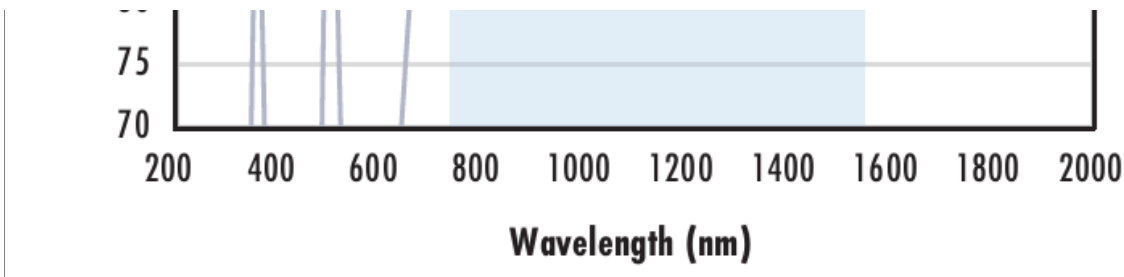
Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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

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

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

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



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

[Click Here to Download Data](#)