

[See all 413 Products in Family](#)

TECHSPEC[®] 10.0mm Dia. x 20.0mm FL, YAG-BBAR, Inked, Plano-Convex Lens



YAG-BBAR Coated Plano-Convex (PCX) Lenses



Stock #88-823-INK 1 In Stock

☐ Other Coating Options

-

1

+

A\$91^{.20}

ADD TO CART

Volume Pricing	
Qty 1-9	A\$91.20 each
Qty 10-24	A\$81.60 each
Qty 25-49	A\$73.20 each
Need More?	Request Quote

Product Downloads

General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

10.00 ±0.025	
Centering (arcmin):	<1
Center Thickness CT (mm):	3.00 ±0.05
Edge Thickness ET (mm):	1.71
Clear Aperture CA (mm):	9
Bevel:	Protective as needed

Optical Properties	
Effective Focal Length EFL (mm):	20.00 @ 587.6nm
Back Focal Length BFL (mm):	18.03
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-BK7
Surface Quality:	40-20
Power (P-V) @ 632.8nm:	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4
Focal Length Tolerance (%):	±1
Radius R ₁ (mm):	10.34
f##:	2
Numerical Aperture NA:	0.25
Wavelength Range (nm):	500 - 1100
Damage Threshold, By Design: ☐	5 J/cm² @ 532nm, 10ns

Regulatory Compliance	
Certificate of Conformance:	View

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																									
Uncoated N-BK7 Typical Transmission <table border="1"><thead><tr><th>Wavelength (nm)</th><th>T (%)</th></tr></thead><tbody><tr><td>200</td><td>~70</td></tr><tr><td>400</td><td>~92</td></tr><tr><td>600</td><td>~92</td></tr><tr><td>800</td><td>~92</td></tr><tr><td>1000</td><td>~92</td></tr><tr><td>1200</td><td>~92</td></tr><tr><td>1400</td><td>~92</td></tr><tr><td>1600</td><td>~92</td></tr><tr><td>1800</td><td>~92</td></tr><tr><td>2000</td><td>~92</td></tr><tr><td>2200</td><td>~88</td></tr></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~92	600	~92	800	~92	1000	~92	1200	~92	1400	~92	1600	~92	1800	~92	2000	~92	2200	~88	Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra. Click Here to Download Data
Wavelength (nm)	T (%)																								
200	~70																								
400	~92																								
600	~92																								
800	~92																								
1000	~92																								
1200	~92																								
1400	~92																								
1600	~92																								
1800	~92																								
2000	~92																								
2200	~88																								
N-BK7 with MgF₂ Coating Typical Transmission <table border="1"><thead><tr><th>Wavelength (nm)</th><th>T (%)</th></tr></thead><tbody><tr><td>200</td><td>~70</td></tr><tr><td>400</td><td>~98</td></tr><tr><td>600</td><td>~98</td></tr><tr><td>800</td><td>~98</td></tr><tr><td>1000</td><td>~98</td></tr><tr><td>1200</td><td>~98</td></tr><tr><td>1400</td><td>~98</td></tr><tr><td>1600</td><td>~98</td></tr><tr><td>1800</td><td>~98</td></tr><tr><td>2000</td><td>~98</td></tr><tr><td>2200</td><td>~90</td></tr></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~98	600	~98	800	~98	1000	~98	1200	~98	1400	~98	1600	~98	1800	~98	2000	~98	2200	~90	Typical transmission of a 3mm thick N-BK7 window with MgF₂ (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
Wavelength (nm)	T (%)																								
200	~70																								
400	~98																								
600	~98																								
800	~98																								
1000	~98																								
1200	~98																								
1400	~98																								
1600	~98																								
1800	~98																								
2000	~98																								
2200	~90																								
N-BK7 with VIS-EXT Coating Typical Transmission <table border="1"><thead><tr><th>Wavelength (nm)</th><th>T (%)</th></tr></thead><tbody><tr><td>200</td><td>~70</td></tr><tr><td>400</td><td>~98</td></tr><tr><td>600</td><td>~98</td></tr><tr><td>800</td><td>~98</td></tr><tr><td>1000</td><td>~98</td></tr><tr><td>1200</td><td>~98</td></tr><tr><td>1400</td><td>~98</td></tr><tr><td>1600</td><td>~98</td></tr><tr><td>1800</td><td>~98</td></tr><tr><td>2000</td><td>~98</td></tr><tr><td>2200</td><td>~90</td></tr></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~98	600	~98	800	~98	1000	~98	1200	~98	1400	~98	1600	~98	1800	~98	2000	~98	2200	~90	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
Wavelength (nm)	T (%)																								
200	~70																								
400	~98																								
600	~98																								
800	~98																								
1000	~98																								
1200	~98																								
1400	~98																								
1600	~98																								
1800	~98																								
2000	~98																								
2200	~90																								
N-BK7 with VIS-NIR Coating Typical Transmission <table border="1"><thead><tr><th>Wavelength (nm)</th><th>T (%)</th></tr></thead><tbody><tr><td>200</td><td>~70</td></tr><tr><td>400</td><td>~98</td></tr><tr><td>600</td><td>~98</td></tr><tr><td>800</td><td>~98</td></tr><tr><td>1000</td><td>~98</td></tr><tr><td>1200</td><td>~98</td></tr><tr><td>1400</td><td>~98</td></tr><tr><td>1600</td><td>~98</td></tr><tr><td>1800</td><td>~98</td></tr><tr><td>2000</td><td>~98</td></tr><tr><td>2200</td><td>~90</td></tr></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~98	600	~98	800	~98	1000	~98	1200	~98	1400	~98	1600	~98	1800	~98	2000	~98	2200	~90	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
Wavelength (nm)	T (%)																								
200	~70																								
400	~98																								
600	~98																								
800	~98																								
1000	~98																								
1200	~98																								
1400	~98																								
1600	~98																								
1800	~98																								
2000	~98																								
2200	~90																								



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:

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

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:

$$R_{\text{abs}} \leq 0.25\% @ 532\text{nm}$$
$$R_{\text{abs}} \leq 0.25\% @ 1064\text{nm}$$
$$R_{\text{avg}} \leq 1.0\% @ 500 - 1100\text{nm}$$

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:

$$R_{\text{avg}} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$$

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:

$$R_{\text{abs}} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$$
$$R_{\text{abs}} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$
$$R_{\text{avg}} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$$

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

[Click Here to Download Data](#)

Compatible Mounts