

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

+

£62⁴⁰

ADD TO CART

Volume Pricing	
Qty 1-9	£62.40 each
Qty 10-24	£56.00 each
Qty 25-49	£50.00 each
Need More?	Request Quote

 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Plano-Convex Lens

Type:

Physical & Mechanical Properties

50.00 +0.0/-0.025	Diameter (mm):
<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:
R _{abs} <0.25% @ 532nm R _{abs} <0.25% @ 1064nm R _{avg} <1.0% @ 500 - 1100nm	Coating Specification:
N-BK7	Substrate: ☐
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
±1	Focal Length Tolerance (%):
90.44	Radius R ₁ (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:

Product Details

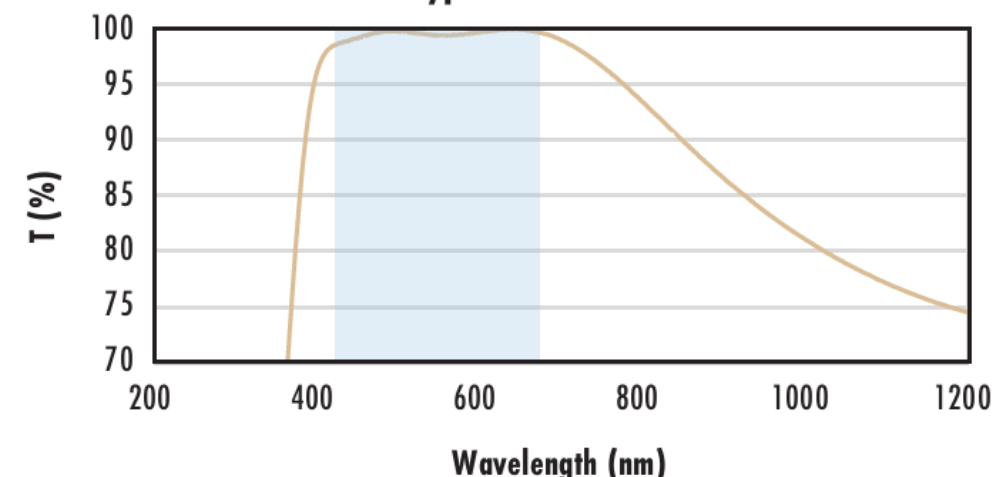
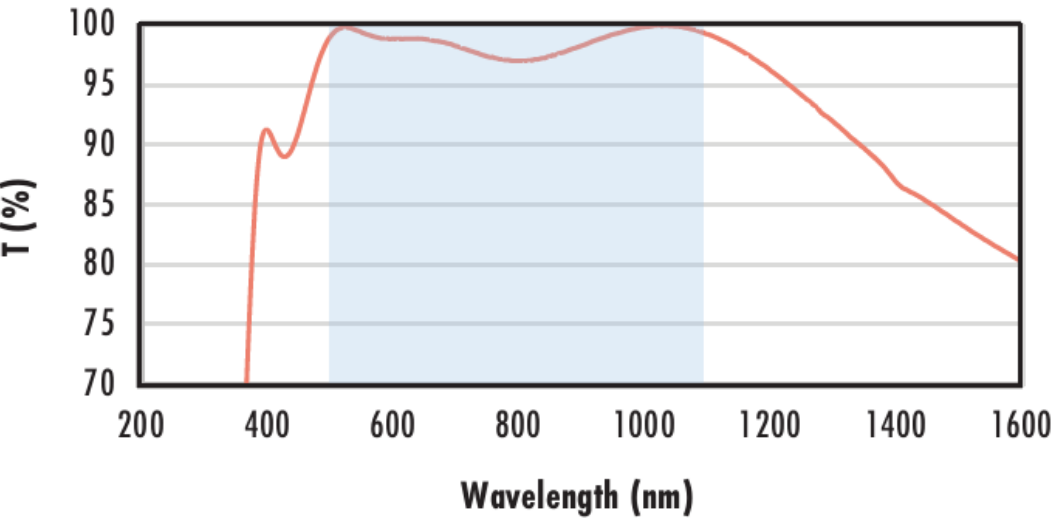
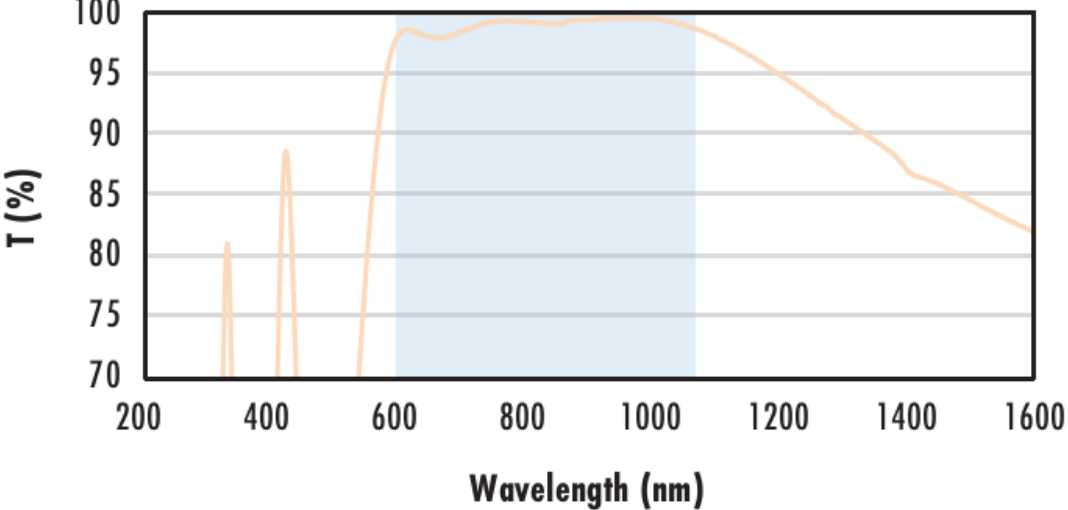
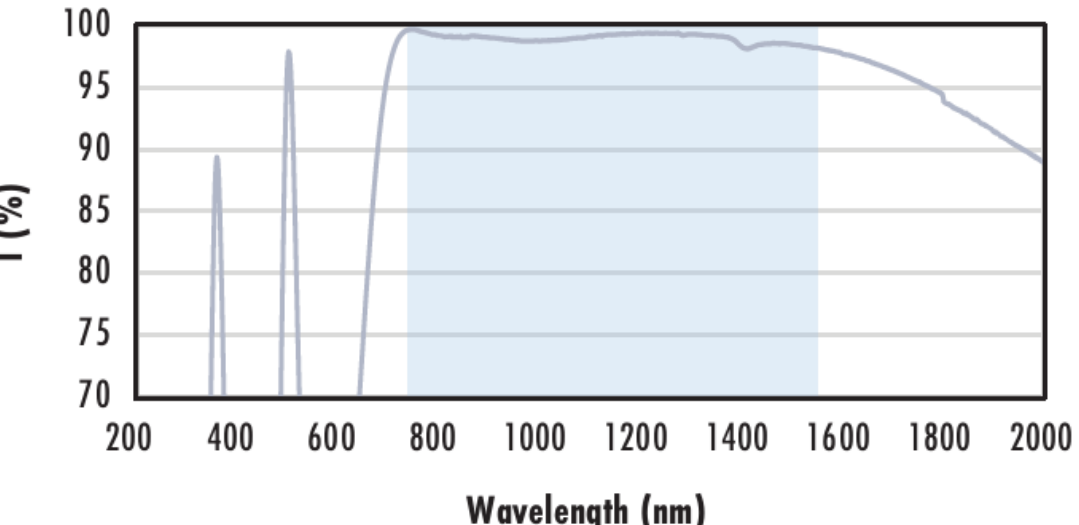
- Optimized for R<0.25% @ Both 532nm and 1064nm
- AR Coated to Provide <1.0% Reflectance per Surface for 500 - 1100nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [VIS-EXT](#)

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 This graph shows the typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra. The Y-axis represents T (%) from 70 to 100, and the X-axis represents Wavelength (nm) from 200 to 2200. The transmission is high, starting at ~70% at 200 nm, rising to ~92% at 400 nm, and remaining stable around 92% until 2200 nm. <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>~92</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	~92	Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra. Click Here to Download Data
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N-BK7 with MgF₂ Coating Typical Transmission This graph shows the typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI. The Y-axis represents T (%) from 70 to 100, and the X-axis represents Wavelength (nm) from 200 to 2200. The transmission is high, starting at ~70% at 200 nm, rising to ~92% at 400 nm, and remaining stable around 92% until 2200 nm. A blue shaded region indicates the coating design wavelength range from 400 to 700 nm. <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>~92</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	~92	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
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N-BK7 with VIS-EXT Coating Typical Transmission 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 represents T (%) from 70 to 100, and the X-axis represents Wavelength (nm) from 200 to 1200. The transmission is high, starting at ~70% at 200 nm, rising to ~92% at 400 nm, and remaining stable around 92% until 700 nm. A blue shaded region indicates the coating design wavelength range from 350 to 700 nm. <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></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~92	600	~92	800	~92	1000	~92	1200	~92	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										
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N-BK7 with VIS-NIR Coating Typical Transmission 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 represents T (%) from 70 to 100, and the X-axis represents Wavelength (nm) from 200 to 1600. The transmission is high, starting at ~70% at 200 nm, rising to ~92% at 400 nm, and remaining stable around 92% until 1000 nm. A blue shaded region indicates the coating design wavelength range from 400 to 1000 nm. <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></tbody></table>	Wavelength (nm)	T (%)	200	~70	400	~92	600	~92	800	~92	1000	~92	1200	~92	1400	~92	1600	~92	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						
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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

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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