

[See all 26 Products in Family](#)**TECHSPEC® 12.0mm Dia. x -48 FL, YAG-BBAR, Plano-Concave Lens**Stock #21-314 **5 In Stock** **A\$81^{.60}****ADD TO CART**

Volume Pricing	
Qty 1-9	A\$81.60 each
Qty 10-25	A\$73.20 each
Qty 26-49	A\$65.20 each
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SPECIFICATIONS**General**

Type:

Plano-Concave Lens

Physical & Mechanical Properties

12.00	Diameter (mm):
Protective as needed	Bevel:
3.50 ±0.05	Center Thickness CT (mm):
<1	Centering (arcmin):
11.00	Clear Aperture CA (mm):
4.12	Edge Thickness ET (mm):

Optical Properties

-48.00	Effective Focal Length EFL (mm):
N-BK7	Substrate: <input type="checkbox"/>
1.00	f#:
0.13	Numerical Aperture NA:
YAG-BBAR (500-1100nm)	Coating:
500 - 1100	Wavelength Range (nm):
-50.31	Back Focal Length BFL (mm):
R _{abs} <0.25% @ 532nm R _{abs} <0.25% @ 1064nm R _{avg} <1.0% @ 500 - 1100nm	Coating Specification:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
-24.81	Radius R_i (mm):
40-20	Surface Quality:
5 J/cm ² @ 532nm, 10ns	Damage Threshold, By Design: <input type="checkbox"/>
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:

Regulatory Compliance

Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

PRODUCT DETAILS

- Negative Focal Lengths for Beam Expansion or Light Projection Applications

• Optimized for R<0.25% at both 532nm and 1064nm

• AR Coated to Provide <1.0% Reflectance per Surface for 500 - 1100nm

• Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [1064nm V-Coat](#)

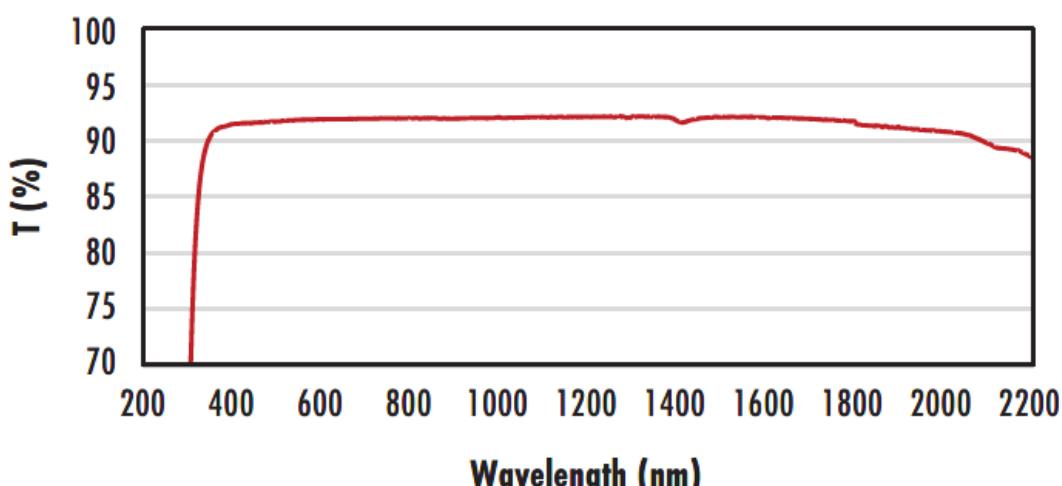
TECHSPEC® YAG-BBAR Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® YAG-BBAR Coated Plano-Concave (PCV) Lenses feature less than 0.25% reflection at common Nd:YAG laser wavelengths of 532nm and 1064nm. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), or with [NIR II](#) AR coating options.

TECHNICAL INFORMATION

N-BK7

1100-1100-BK7-1064nm-532nm

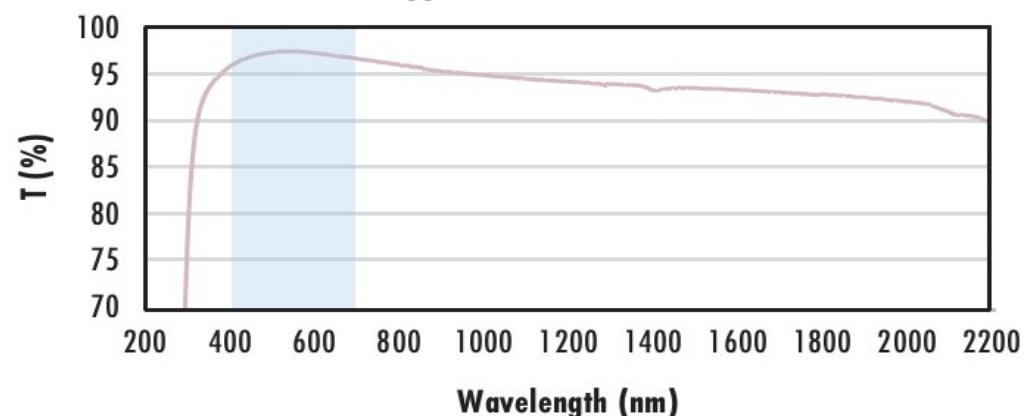
Uncoated N-BK7 / typical transmission



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV- NIR spectra.

[Click Here to Download Data](#)

N-BK7 with MgF_2 Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF_2 (400-700nm) coating at 0° AOI.

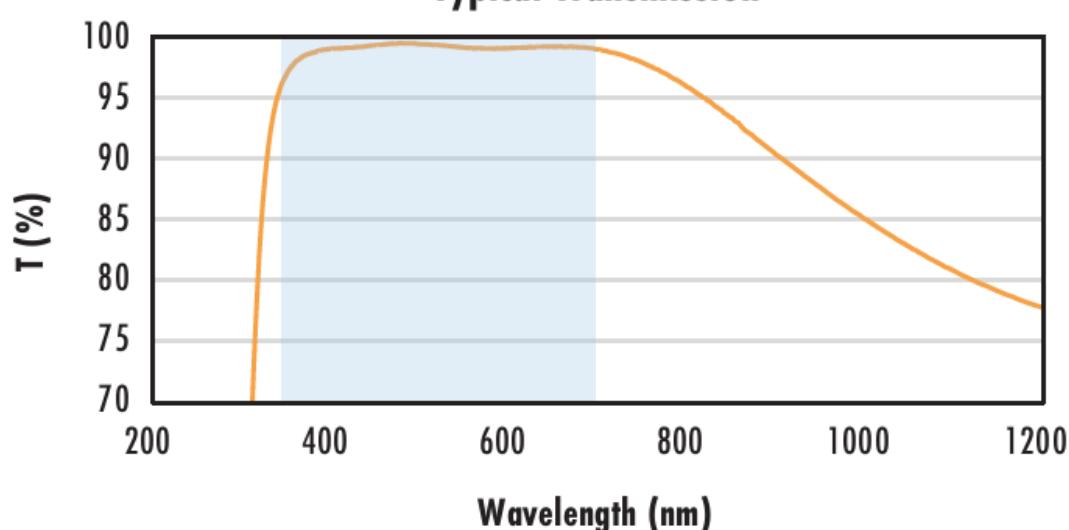
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{avg}} \leq 1.75\% \text{ @ 400 - 700nm (N-BK7)}$$

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

[Click Here to Download Data](#)

N-BK7 with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

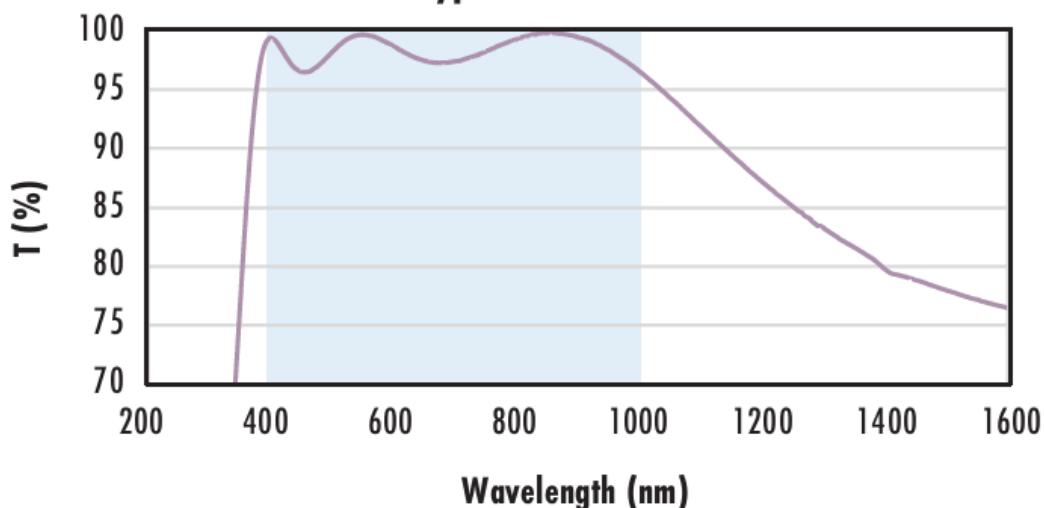
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{avg}} \leq 0.5\% \text{ @ 350 - 700nm}$$

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

[Click Here to Download Data](#)

N-BK7 with VIS-NIR Coating Typical Transmission



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:

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

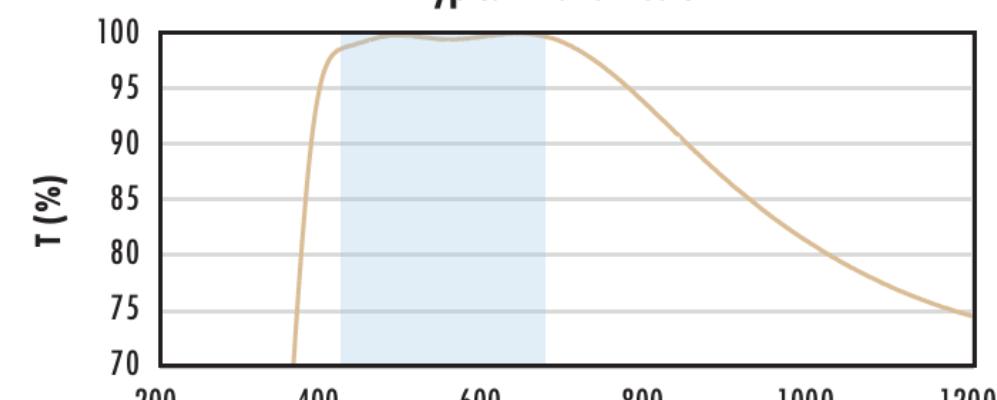
$$R_{\text{avg}} \leq 1.25\% \text{ @ 400 - 870nm}$$

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

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

[Click Here to Download Data](#)

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:

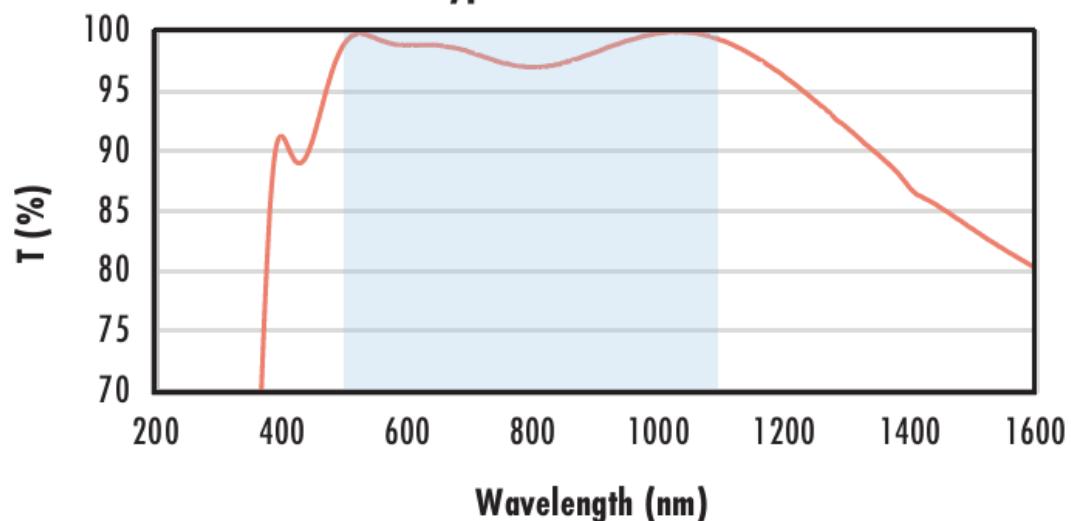
$$R_{\text{avg}} \leq 0.4\% \text{ @ 425 - 675nm}$$

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

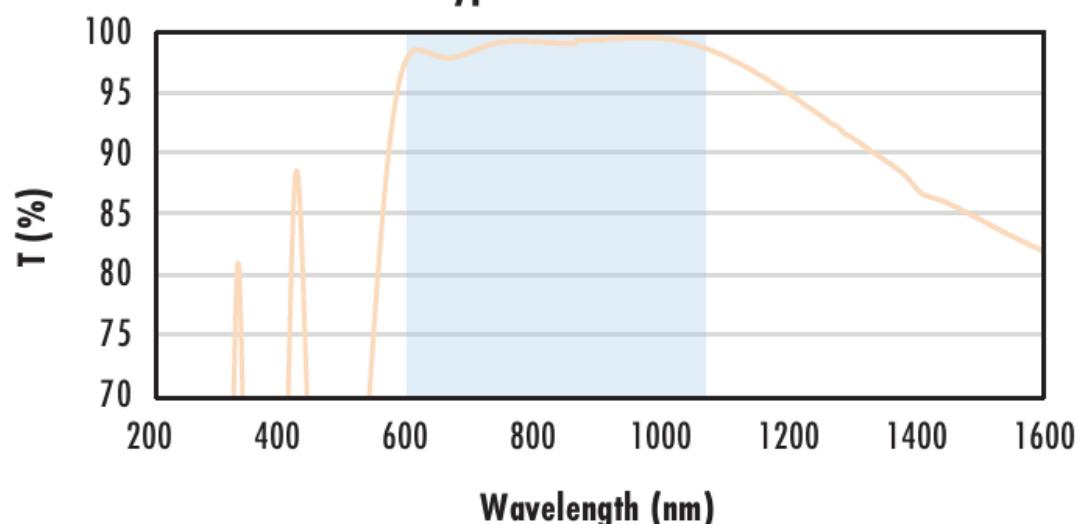
[Click Here to Download Data](#)

Wavelength (nm)

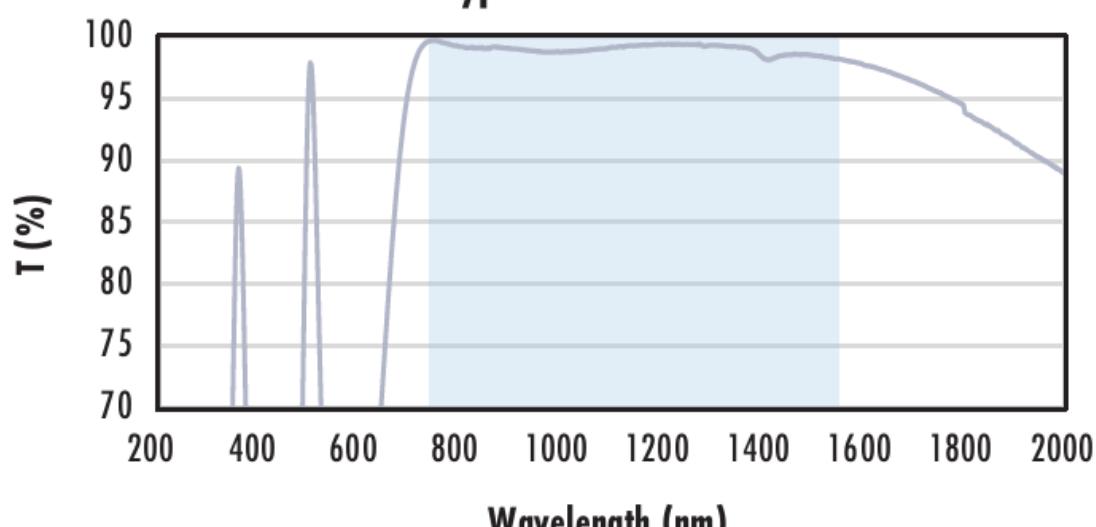
N-BK7 with YAG-BBAR Coating Typical Transmission



N-BK7 with NIR I Coating Typical Transmission



N-BK7 with NIR II Coating Typical Transmission



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

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