

TECHSPEC[®] 20.0mm Dia. x -40 FL, YAG-BBAR, Plano-Concave Lens



Stock **#21-316** 1 In Stock

-

1

+

£42⁰⁰

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Volume Pricing	
Qty 1-9	£42.80 each
Qty 10-25	£38.40 each
Qty 26-49	£34.20 each
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Product Downloads

General

Type:
Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):

20.00	
	Bevel:
Protective as needed	
Center Thickness CT (mm):	
3.50 ±0.10	
Centering (arcmin):	
<1	
Clear Aperture CA (mm):	
19.00	
Edge Thickness ET (mm):	
5.69	

Optical Properties	
Effective Focal Length EFL (mm):	
-40.00	
Substrate: ☐	
N-BK7	
f/#:	
1.5	
Numerical Aperture NA:	
0.25	
Coating:	
YAG-BBAR (500-1100nm)	
Wavelength Range (nm):	
500 - 1100	
Back Focal Length BFL (mm):	
-42.31	
Coating Specification:	
R _{abs} <0.25% @ 532nm R _{abs} <0.25% @ 1064nm R _{avg} <1.0% @ 500 - 1100nm	
Focal Length Specification Wavelength (nm):	
587.6	
Focal Length Tolerance (%):	
±1	
Radius R ₁ (mm):	
-20.67	
Surface Quality:	
40-20	
Damage Threshold, By Design: ☐	
5 J/cm² @ 532nm, 10ns	
Power (P-V) @ 632.8nm:	
1.5λ	
Irregularity (P-V) @ 632.8nm:	
λ/4	

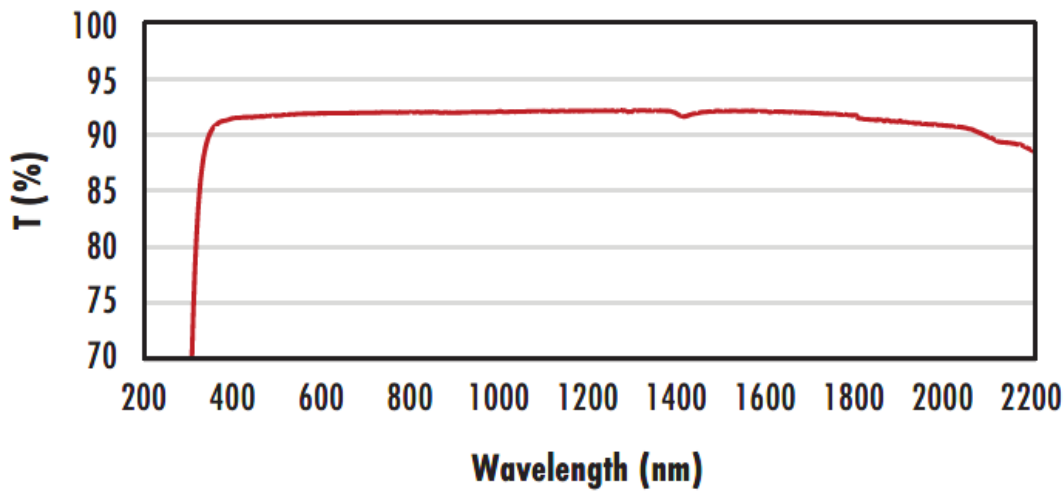
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

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

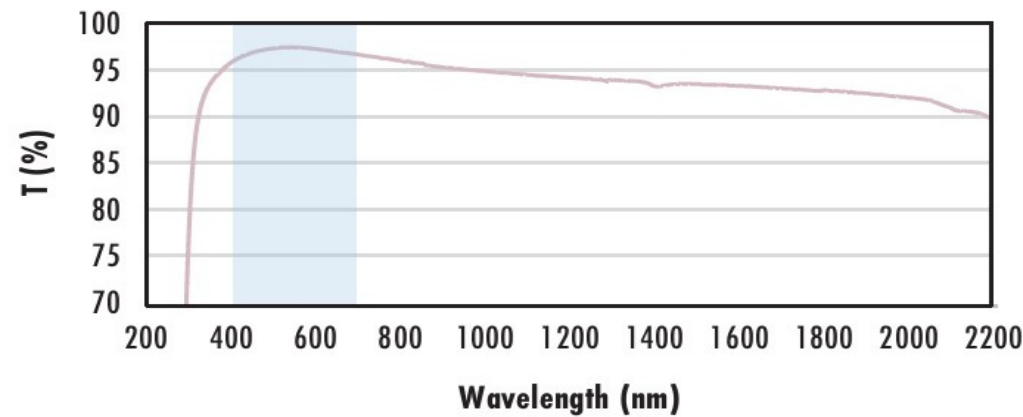
N-BK7	
Uncoated N-BK7 Typical Transmission	



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

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**N-BK7 with MgF₂ Coating
Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

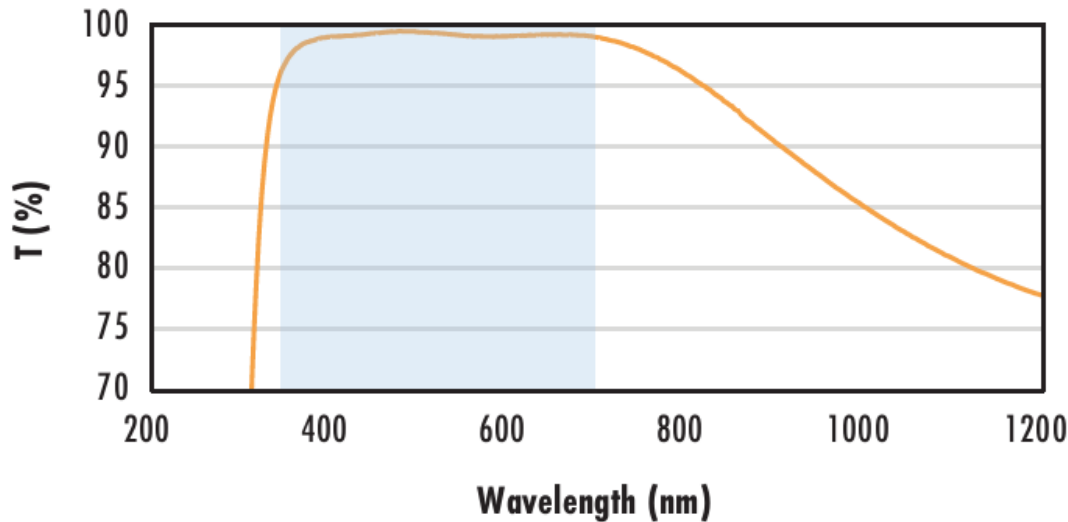
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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**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.

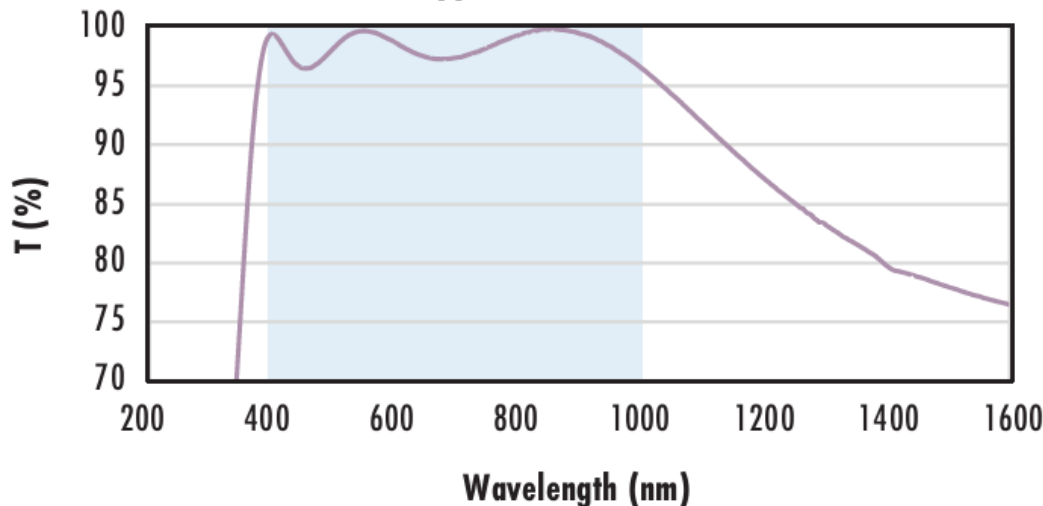
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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**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.

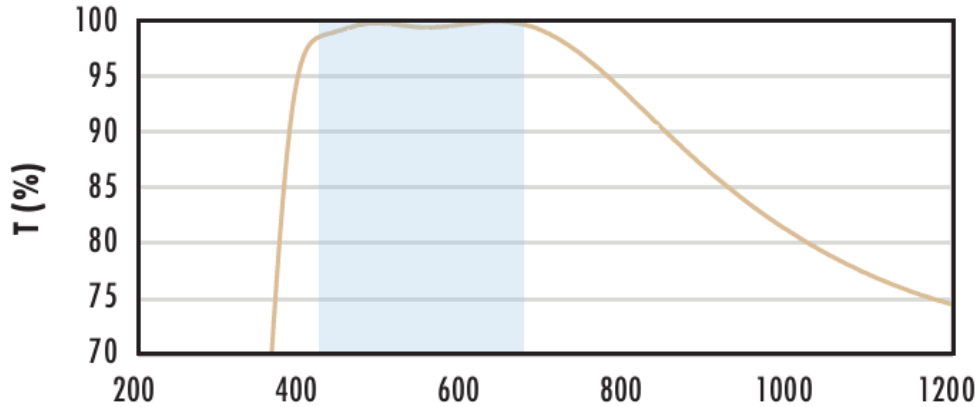
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 0.25\% @ 880\text{nm}$
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$

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

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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.

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