

TECHSPEC[®] 12.0mm Diameter x -48 FL, MgF₂ Coated, Plano-Concave Lens



Stock **#45-019** 20+ In Stock

[Other Coating Options](#)

-

1

+

£32³⁹

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Volume Pricing	
Qty 1-9	£32.39 each
Qty 10-25	£29.11 each
Qty 26-49	£26.05 each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

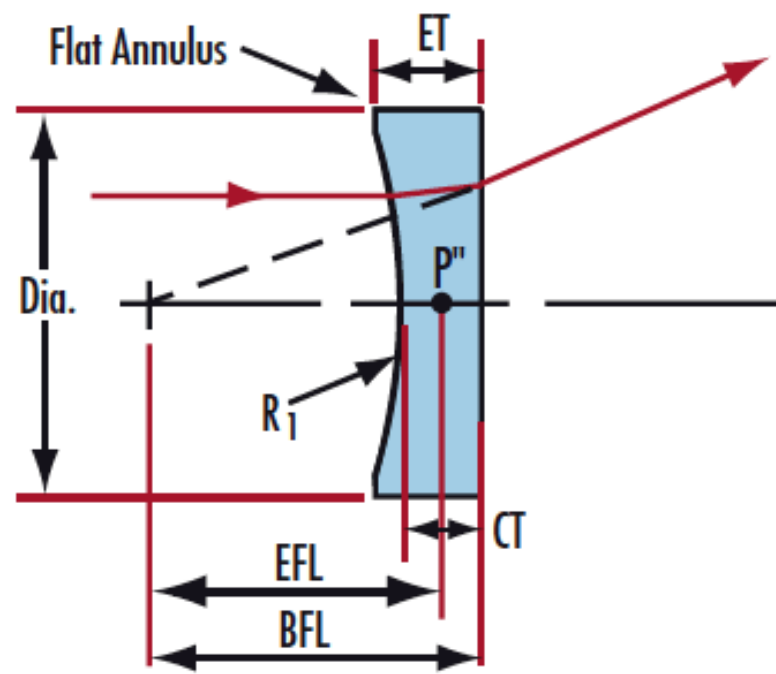
General

Plano-Concave Lens	Type:
Physical & Mechanical Properties	
12.00 +0.0/-0.025	Diameter (mm):
Protective as needed	Bevel:
3.50	Center Thickness CT (mm):
±0.05	Center Thickness Tolerance (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: ☐
4.00	f/#:
0.13	Numerical Aperture NA:
MgF ₂ (400-700nm)	Coating:
400 - 700	Wavelength Range (nm):
-50.31	Back Focal Length BFL (mm):
R _{avg} ≤1.75% @ 400 - 700nm	Coating Specification:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
-24.81	Radius R ₁ (mm):
40-20	Surface Quality:
10 J/cm ² @ 532nm, 10ns	Damage Threshold, By Design: ☐
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
Regulatory Compliance	
Compliant	RoHS 2015:
Compliant	Reach 219:
View	Certificate of Conformance:

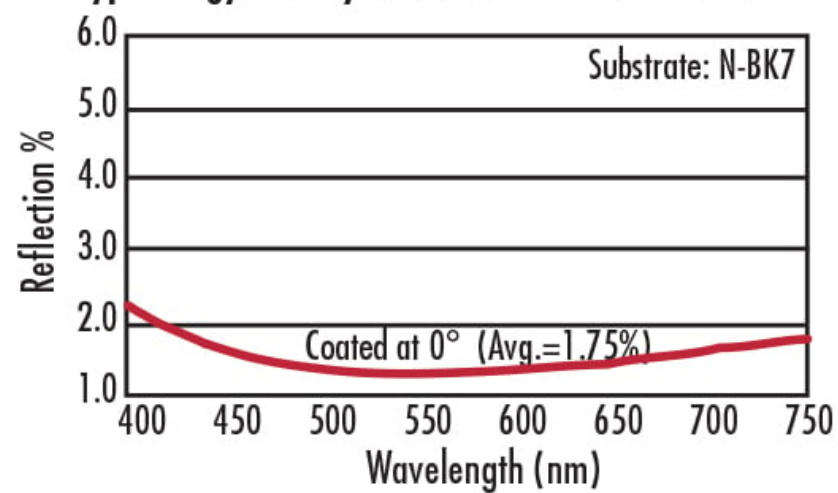
PRODUCT DETAILS

- AR Coated to Provide <1.75% Reflectance per Surface for 400 - 700nm
 - Designed for 0° Angle of Incidence
 - Various Coating Options: [Uncoated](#), [VIS-EXT](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)
- TECHSPEC® MgF₂ 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 MgF₂ Coated Plano-Concave (PCV) Lenses are ideal for broadband applications. These lenses are also available [Uncoated](#), [VIS-EXT](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

TECHNICAL INFORMATION

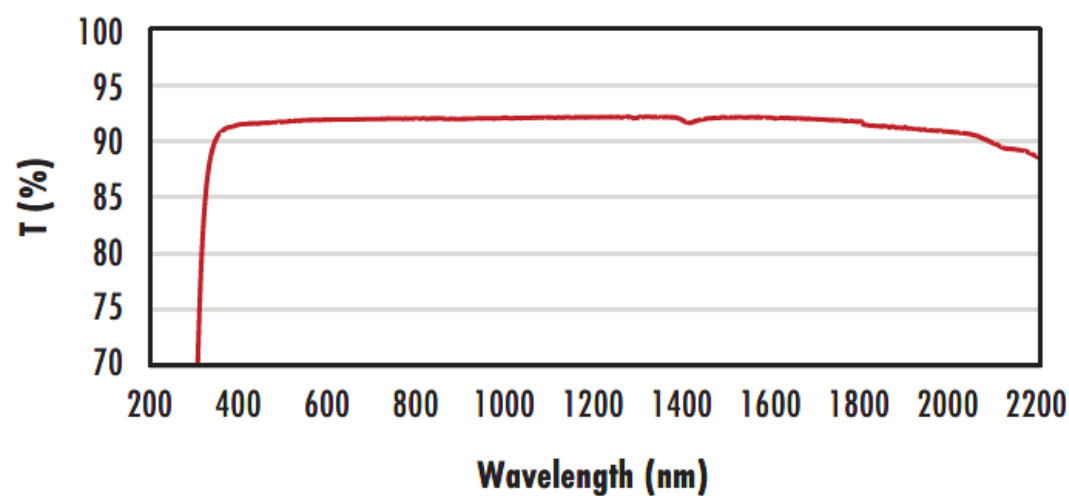


MgF₂ Coating
 $R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$
 Typ. Energy Density Limit: $10 \text{ J/cm}^2 @ 532\text{nm}, 10\text{ns}$



N-BK7

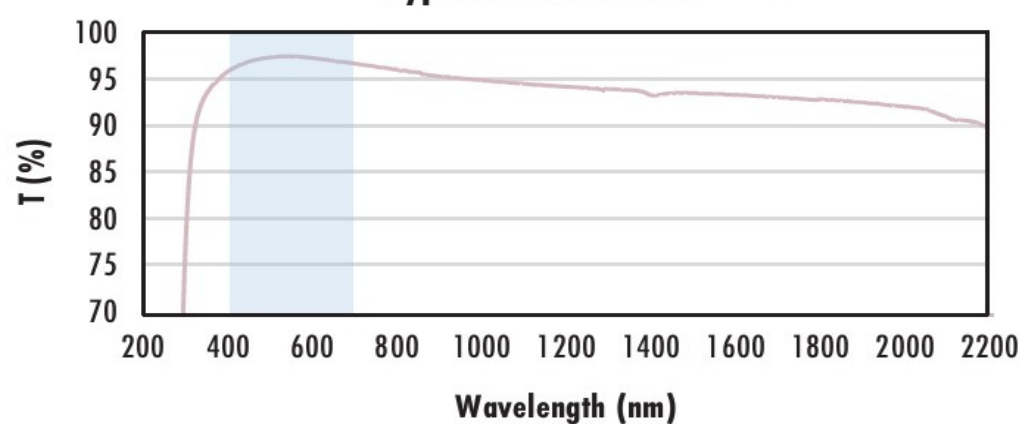
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

N-BK7 with 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)

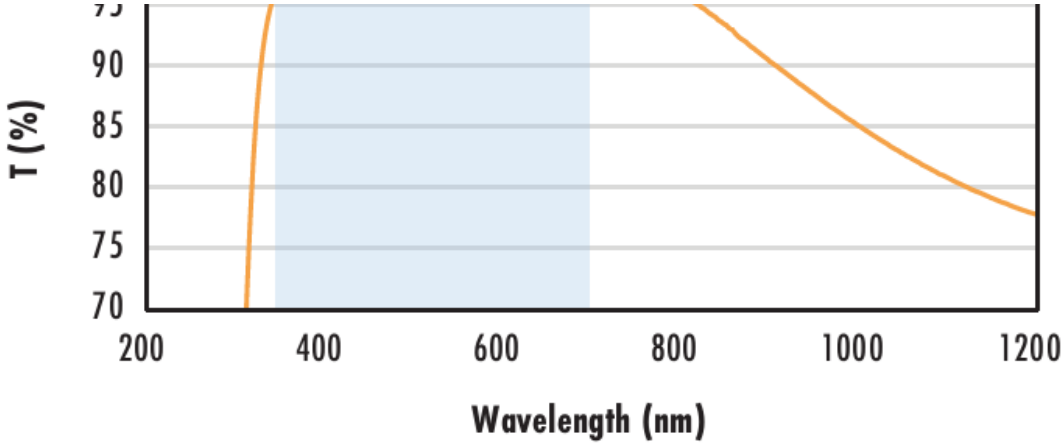
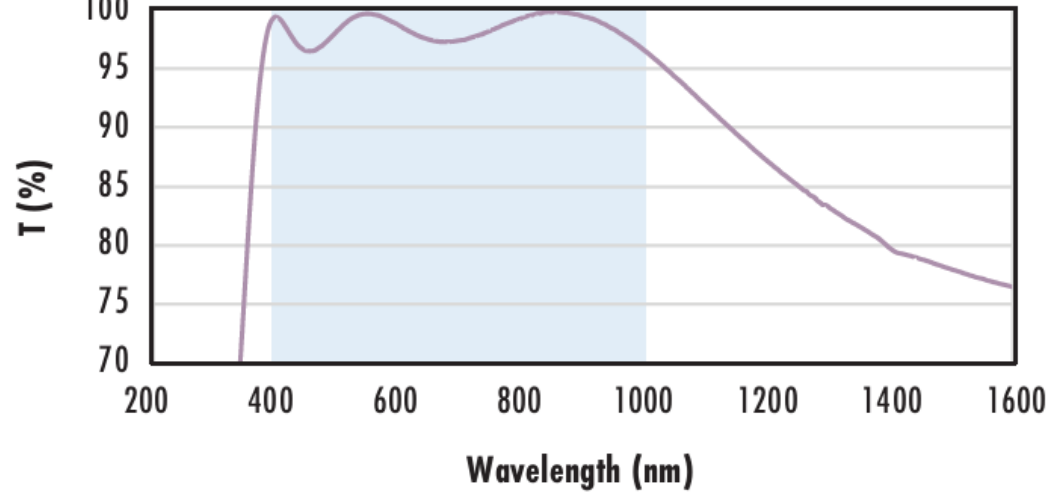
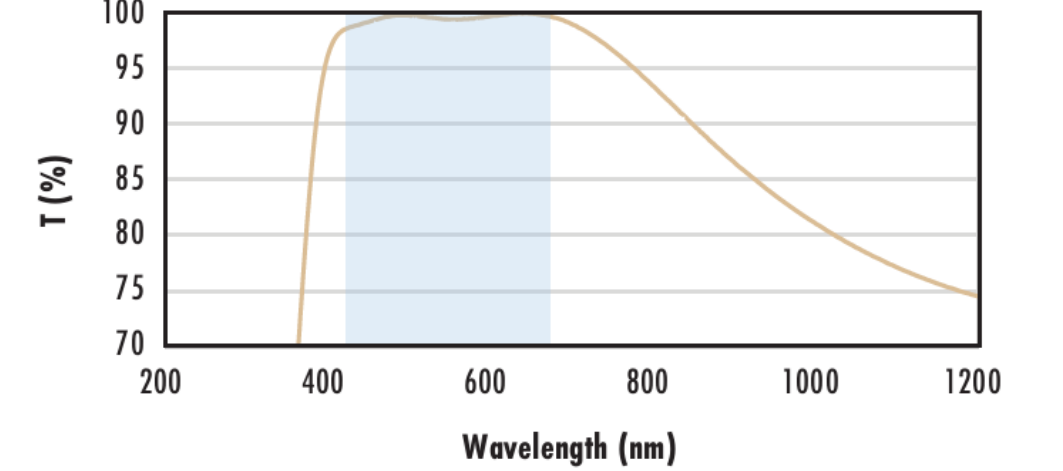
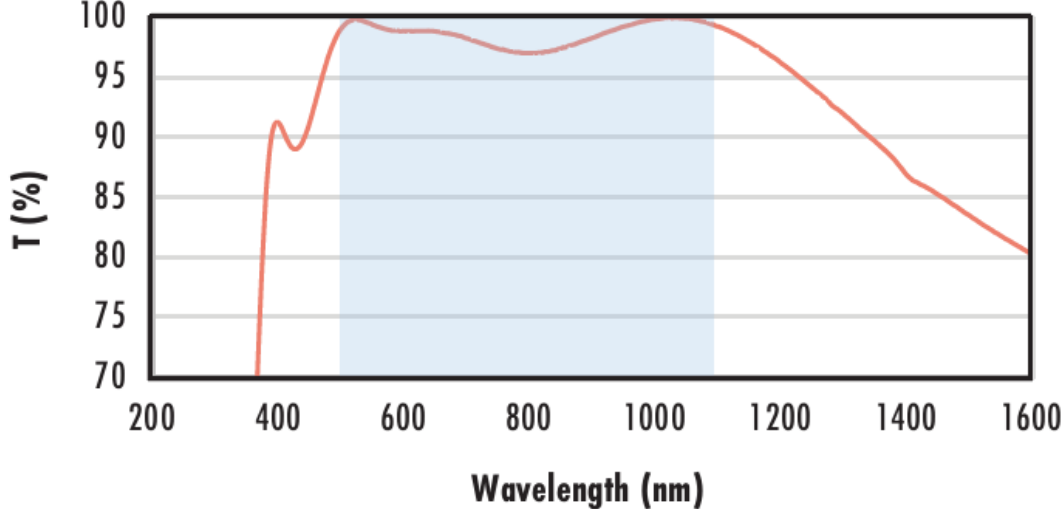
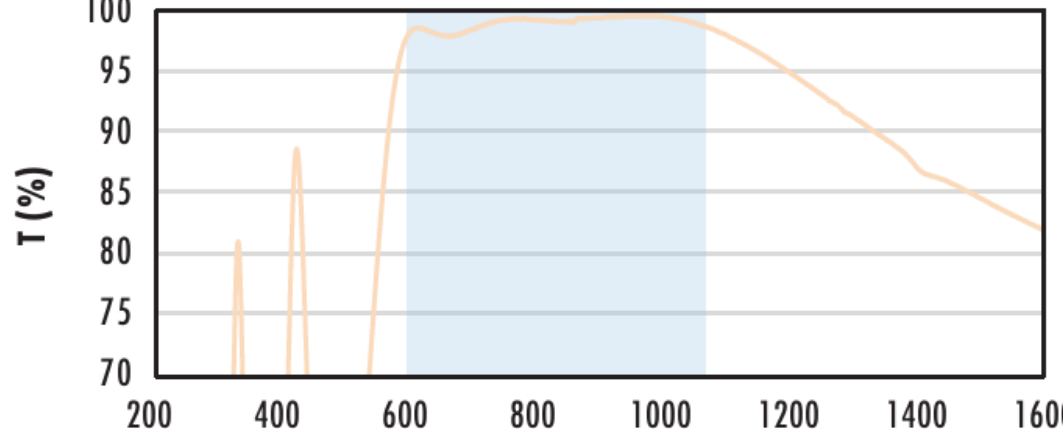
Data outside this range is not guaranteed and is for reference only.

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N-BK7 with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-EXT

	Typical transmission of a 3mm thick N-BK7 window with VIS-EXI (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 - 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: $R_{abs} \leq 0.25\%$ @ 880nm $R_{avg} \leq 1.25\%$ @ 400 - 870nm $R_{avg} \leq 1.25\%$ @ 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: $R_{avg} \leq 0.4\%$ @ 425 - 675nm 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: $R_{abs} \leq 0.25\%$ @ 532nm $R_{abs} \leq 0.25\%$ @ 1064nm $R_{avg} \leq 1.0\%$ @ 500 - 1100nm 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 - 1050nm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data

