

TECHSPEC[®] 12.0mm Dia. x 100.0mm FL, VIS-NIR, Inked, Plano-Convex Lens



Stock **#45-490-INK** [CONTACT US](#)

[Other Coating Options](#)

-

1

+

£48⁵⁹

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Volume Pricing	
Qty 1-9	£48.59 each
Qty 10-24	£43.56 each
Qty 25-49	£38.95 each
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SPECIFICATIONS

General

Plano-Convex Lens		Type:
Physical & Mechanical Properties		
Diameter (mm):		12.00 ±0.025
Centering (arcmin):		<1
Center Thickness CT (mm):		2.50 ±0.05
Edge Thickness ET (mm):		2.15
Clear Aperture CA (mm):		11
Bevel:		Protective as needed
Optical Properties		
Effective Focal Length EFL (mm):		100.00 @ 587.6nm
Back Focal Length BFL (mm):		98.35
Coating:		VIS-NIR (400-1000nm)
Coating Specification:		R _{abs} ≤0.25% @ 880nm R _{avg} ≤1.25% @ 400 - 870nm R _{avg} ≤1.25% @ 890 - 1000nm
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):		51.68
f/#:		8.33
Numerical Aperture NA:		0.06
Wavelength Range (nm):		400 - 1000
Damage Threshold, By Design: ☐		5 J/cm ² @ 532nm, 10ns
Regulatory Compliance		
Certificate of Conformance:		View

PRODUCT DETAILS

- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
 - <0.25% Reflectance @ 880nm
 - Designed for 0° Angle of Incidence
 - Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)
- TECHSPEC® VIS-NIR 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. Plano-Convex lenses are ideal for a multitude of optics and photonics applications, including biotech instruments such as DNA sequencers and polymerase chain reaction (PCR) testing platforms. TECHSPEC® VIS-NIR 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°](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#).
- These coated lenses are optimized for a wide range of optics and photonics applications, including biotech instruments such as DNA sequencers and polymerase chain reaction (PCR) testing platforms.

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:

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

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:

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

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

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**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:

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

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

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**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:

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

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**



COMPATIBLE MOUNTS