

TECHSPEC® 20mm Diameter x -50 FL, VIS-NIR, Inked, Plano-Concave Lens



TECHSPEC VIS-NIR Coated Plano-Concave (PCV) Lenses



Stock **#45-921-INK** [CONTACT US](#)

☐ [Other Coating Options](#)

-

1

+

£51⁶⁰

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Volume Pricing	
Qty 1-9	£51.60 each
Qty 10-25	£46.40 each
Qty 26-49	£41.20 each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Plano-Concave Lens

Physical & Mechanical Properties

20.00 ±0.025	Diameter (mm):
Protective as needed	Bevel:
3.50	Center Thickness CT (mm):
±0.10	Center Thickness Tolerance (mm):
<1	Centering (arcmin):
19.00	Clear Aperture CA (mm):
5.21	Edge Thickness ET (mm):
Optical Properties	
-50.00	Effective Focal Length EFL (mm):
N-BK7	Substrate: □
2.5	f/#:
0.20	Numerical Aperture NA:
VIS-NIR (400-1000nm)	Coating:
400 - 1000	Wavelength Range (nm):
-52.31	Back Focal Length BFL (mm):
R _{abs} ≤0.25% @ 880nm R _{avg} ≤1.25% @ 400 - 870nm R _{avg} ≤1.25% @ 890 - 1000nm	Coating Specification:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
-25.84	Radius R ₁ (mm):
40-20	Surface Quality:
5 J/cm² @ 532nm, 10ns	Damage Threshold, By Design: □
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
Regulatory Compliance	
View	Certificate of Conformance:

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 Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

TECHSPEC® VIS-NIR 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® VIS-NIR Coated Plano-Concave (PCV) Lenses are optimized for transmission (>99%) in the near-infrared. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

Technical Information



N-BK7	
Uncoated N-BK7 Typical Transmission This graph shows the typical transmission of a 3mm thick, uncoated N-BK7 window. The y-axis represents % Transmittance (T (%)) from 70 to 100, and the x-axis represents Wavelength (nm) from 200 to 2200. The transmission is low (around 70%) at 200 nm, rises sharply to about 92% by 400 nm, and remains relatively stable between 90% and 92% up to 2200 nm.	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 This graph shows the typical transmission of a 3mm thick N-BK7 window with a MgF₂ coating. The y-axis represents % Transmittance (T (%)) from 70 to 100, and the x-axis represents Wavelength (nm) from 200 to 2200. A blue shaded region indicates the coating design wavelength range from 400 nm to 700 nm, where transmission is maximized at approximately 98%. Outside this range, the transmission decreases, reaching about 90% at 2200 nm.	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: $R_{avg} \leq 1.75\% @ 400 - 700nm$ (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 This graph shows the typical transmission of a 3mm thick N-BK7 window with a VIS-EXT coating. The y-axis represents % Transmittance (T (%)) from 70 to 100, and the x-axis represents Wavelength (nm) from 200 to 1200. A blue shaded region indicates the coating design wavelength range from 350 nm to 700 nm, where transmission is maximized at approximately 98%. Beyond 700 nm, the transmission decreases significantly, reaching about 78% at 1200 nm.	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: $R_{avg} \leq 0.5\% @ 350 - 700nm$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data



Coating Curves

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