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**TECHSPEC® 20.0mm Dia. x 20.0mm FL, VIS-NIR, Inked, Plano-Convex Lens**



Stock **#45-499-INK** [CONTACT US](#)

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1  MRP ₹6,850

Price inclusive of all taxes

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Volume Pricing	
Qty 1-9	₹6,850 each
Qty 10-24	₹6,160 each
Qty 25-49	₹5,469 each
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**General**

Plano-Convex Lens **Type:**

**Physical & Mechanical Properties**

**Diameter (mm):**

20.00 ±0.025

Centering (arcmin):

<1

Center Thickness CT (mm):

4.60 ±0.10

Edge Thickness ET (mm):

1.00

Clear Aperture CA (mm):

19

Bevel:

Protective as needed

## Optical Properties

Effective Focal Length EFL (mm):

20.00 @ 587.6nm

Back Focal Length BFL (mm):

17.42

Coating:

VIS-NIR (400-1000nm)

Coating Specification:

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

Substrate:

N-SF11

Surface Quality:

40-20

Power (P-V) @ 632.8nm:

1.5λ

Irregularity (P-V) @ 632.8nm:

λ/4

Focal Length Tolerance (%):

±1

Radius R<sub>1</sub> (mm):

15.70

f##:

1.00

Numerical Aperture NA:

0.50

Wavelength Range (nm):

400 - 1000

Damage Threshold, By Design:

5 J/cm<sup>2</sup> @ 532nm, 10ns

## Regulatory Compliance

Certificate of Conformance:

[View](#)

Country of Origin:

Japan

Imported By:

Edmund Optics India Private Limited  
267, Greystone Building, Second Floor,  
6th Cross Rd, Binnamangala,  
Stage 1, Indiranagar, Bengaluru,  
Karnataka, India 560038  
Phone: +91- 80-6845 0000

## Need different specs or modifications?

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](#).

## 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](#), [MgF<sub>2</sub>](#), [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.

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	
<p style="text-align: center;"><b>Uncoated N-BK7 Typical Transmission</b></p> <p>The graph shows transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 2200). The transmission is approximately 90% across the entire range, with a slight dip around 1400 nm.</p>	<p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</b></p> <p>The graph shows transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 2200). A blue shaded region highlights the design wavelength range from approximately 400 nm to 700 nm, where transmission is maintained above 95%.</p>	<p>Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>N-BK7 with VIS-EXT Coating Typical Transmission</b></p> <p>The graph shows transmission T (%) on the y-axis (70 to 100) versus wavelength (nm) on the x-axis (200 to 1200). A blue shaded region highlights the design wavelength range from approximately 350 nm to 700 nm, where transmission is maintained above 95%.</p>	<p>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>

Wavelength (nm)

### 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.

[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:

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

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:

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

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:

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

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



Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength



range, with the following specification:

- $R_{abs} \leq 1.5\%$  @ 750 - 800nm
- $R_{abs} \leq 1.0\%$  @ 800 - 1550nm
- $R_{avg} \leq 0.7\%$  @ 750 - 1550nm

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

[Click Here to Download Data](#)

## Coating Curves

## Compatible Mounts