

TECHSPEC<sup>®</sup> 75mm Dia. x 125mm FL, NIR I Coated, Plano-Convex Lens



Stock **#71-853** **3 In Stock**

☐ [Other Coating Options](#)

-

1

+

£112<sup>.06</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £112.06 each                  |
| Qty 10-24      | £100.68 each                  |
| Qty 25-49      | £89.30 each                   |
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Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

General

|                                                       |  |                                       |
|-------------------------------------------------------|--|---------------------------------------|
| Plano-Convex Lens                                     |  | Type:                                 |
| Physical & Mechanical Properties                      |  |                                       |
| Diameter (mm):                                        |  | 75.00 +0.0/-0.025                     |
| Centering (arcmin):                                   |  | <1                                    |
| Center Thickness CT (mm):                             |  | 13.67                                 |
| Edge Thickness ET (mm):                               |  | 1.67                                  |
| Clear Aperture CA (mm):                               |  | 73.5                                  |
| Bevel:                                                |  | Protective as needed                  |
| Optical Properties                                    |  |                                       |
| Effective Focal Length EFL (mm):                      |  | 125.00                                |
| Back Focal Length BFL (mm):                           |  | 115.99                                |
| Coating:                                              |  | NIR I (600-1050nm)                    |
| Coating Specification:                                |  | R <sub>avg</sub> ≤0.5% @ 600 - 1050nm |
| Substrate: <input type="checkbox"/>                   |  | N-BK7                                 |
| Surface Quality:                                      |  | 40-20                                 |
| Power (P-V) @ 632.8nm:                                |  | 3λ                                    |
| Irregularity (P-V) @ 632.8nm:                         |  | λ/2                                   |
| Focal Length Tolerance (%):                           |  | ±1                                    |
| Radius R <sub>1</sub> (mm):                           |  | 64.60                                 |
| f/#:                                                  |  | 1.66                                  |
| Numerical Aperture NA:                                |  | 0.3                                   |
| Wavelength Range (nm):                                |  | 600 - 1050                            |
| Damage Threshold, By Design: <input type="checkbox"/> |  | 7 J/cm <sup>2</sup> @ 1064nm, 10ns    |
| Regulatory Compliance                                 |  |                                       |
| Certificate of Conformance:                           |  | <a href="#">View</a>                  |

## PRODUCT DETAILS

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF2](#), [VIS 0°](#), [VIS-NIR](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

TECHSPEC® NIR I 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. TECHSPEC® NIR I 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°](#), [VIS-NIR](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#).

## TECHNICAL INFORMATION



## 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 MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

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

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

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



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:

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

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:

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

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.

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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:

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

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:

$$\begin{aligned} R_{abs} &\leq 1.5\% @ 750 - 800\text{nm} \\ R_{abs} &\leq 1.0\% @ 800 - 1550\text{nm} \\ R_{avg} &\leq 0.7\% @ 750 - 1550\text{nm} \end{aligned}$$

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

[Click Here to Download Data](#)

Wavelength (nm)

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](#).

