

TECHSPEC® 18.0mm Dia. x 50.0mm FL, NIR II Coated, Plano-Convex Lens



Stock #38-420 **3 In Stock**

[Other Coating Options](#)

1 MRP ₹4,742

Price inclusive of all taxes

ADD TO CART

Volume Pricing	
Qty 1-9	₹4,742 each
Qty 10-24	₹4,263 each
Qty 25-49	₹3,783 each
Need More?	Request Quote

Product Downloads

General

Plano-Convex Lens **Type:**

Physical & Mechanical Properties

Diameter (mm):

18.00 +0.0/-0.025

Centering (arcmin):
<1

Center Thickness CT (mm):
2.90 ±0.10

Edge Thickness ET (mm):
1.28

Clear Aperture CA (mm):
17

Bevel:
Protective as needed

Optical Properties

Effective Focal Length EFL (mm):
50.00 @ 587.6nm

Back Focal Length BFL (mm):
48.09

Coating:
NIR II (750-1550nm)

Coating Specification:
R_{abs} ≤1.5% @ 750 - 800nm
R_{abs} ≤1.0% @ 800 - 1550nm
R_{avg} ≤0.7% @ 750 - 1550nm

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 R₁ (mm):
25.84

f#:
2.78

Numerical Aperture NA:
0.18

Wavelength Range (nm):
750 - 1550

Damage Threshold, Reference:
8 J/cm² @ 1064nm, 10ns

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
[View](#)

Reach 235:
Compliant

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

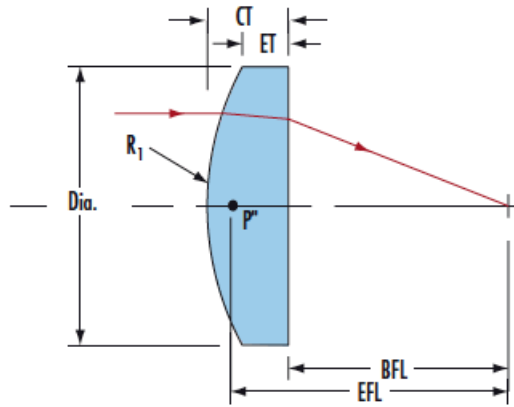
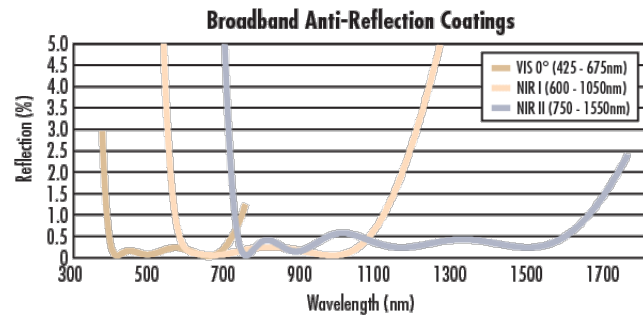
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

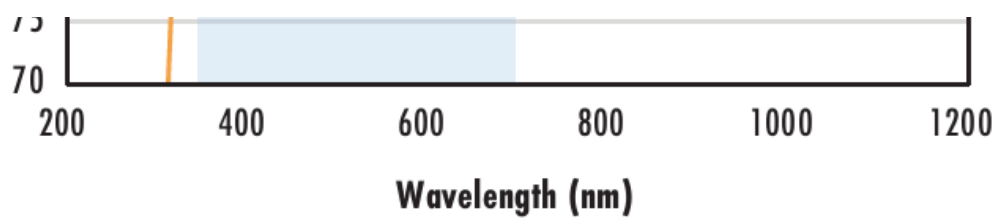
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [VIS-EXT](#), and [YAG-BBAR](#)

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

Technical Information

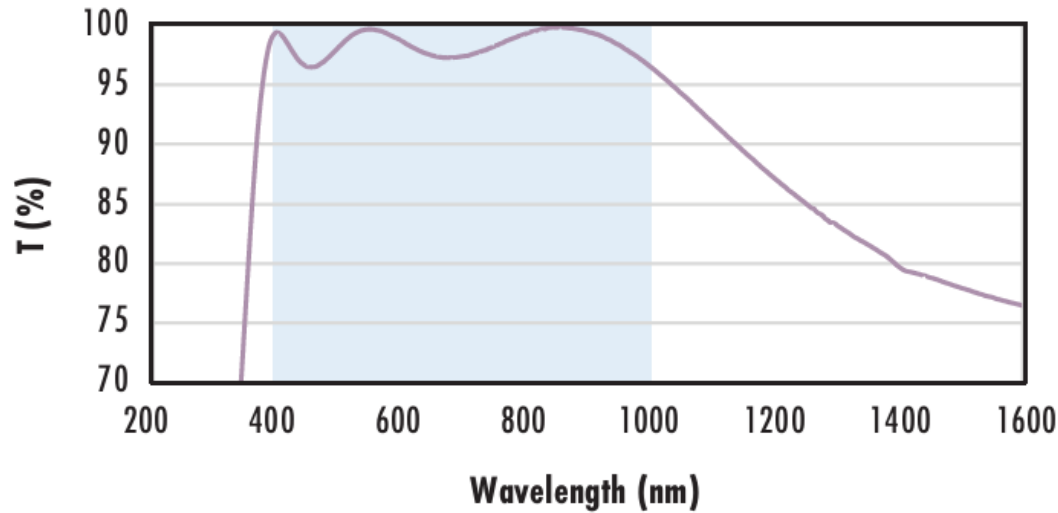


N-BK7	
<p align="center">Uncoated N-BK7 Typical Transmission</p> <p>The graph shows transmission T (%) on the y-axis (70 to 100) and wavelength (nm) on the x-axis (200 to 2200). The transmission is approximately 92% across the visible spectrum (400-700nm) and slightly lower in the near-infrared (700-2200nm).</p>	<p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p align="center">Click Here to Download Data</p>
<p align="center">N-BK7 with MgF₂ Coating Typical Transmission</p> <p>The graph shows transmission T (%) on the y-axis (70 to 100) and wavelength (nm) on the x-axis (200 to 2200). A blue shaded region highlights the coating 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 MgF₂ (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p align="center">$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p align="center">Click Here to Download Data</p>
<p align="center">N-BK7 with VIS-EXT Coating Typical Transmission</p> <p>The graph shows transmission T (%) on the y-axis (75 to 100) and wavelength (nm) on the x-axis (200 to 2200). A blue shaded region highlights the coating 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 align="center">$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p align="center">Click Here to Download Data</p>



[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:

$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

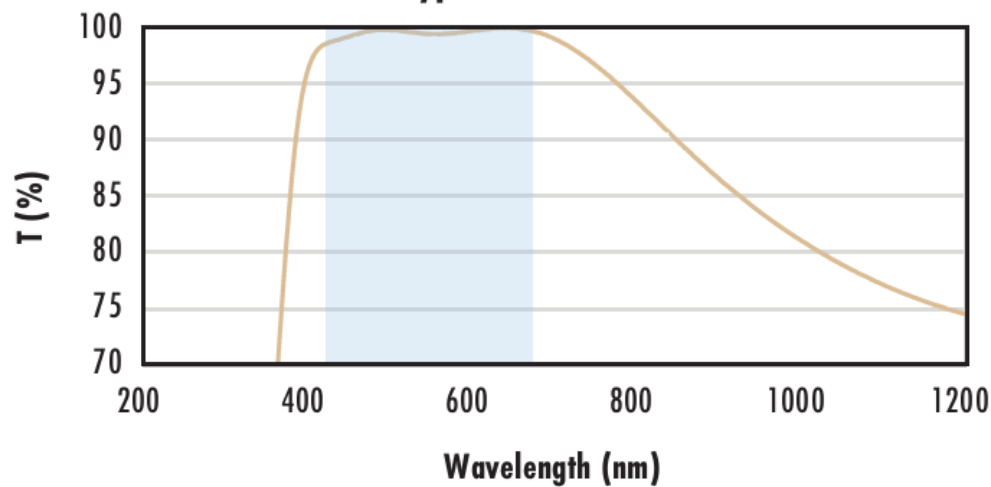
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$$

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.

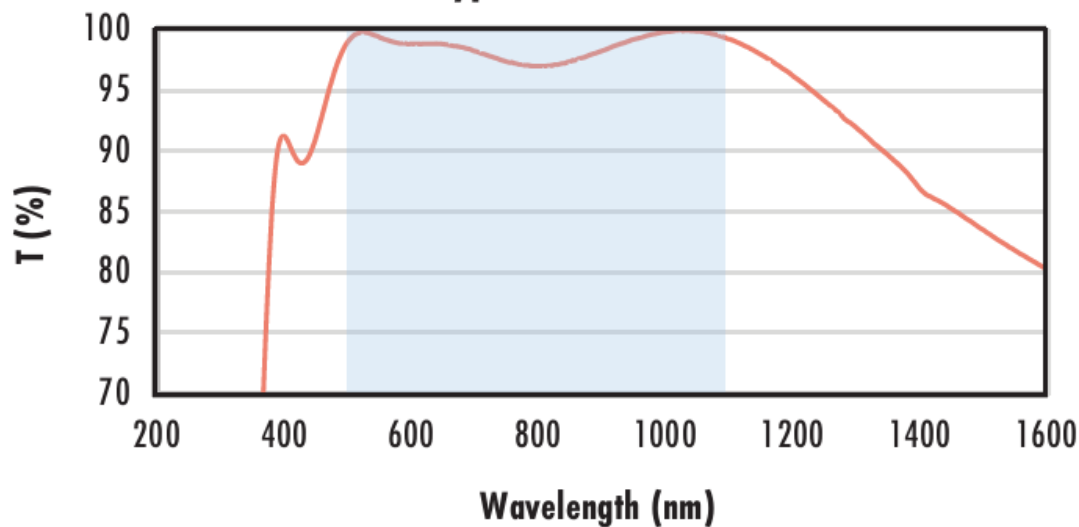
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{abs} \leq 0.25\% @ 532\text{nm}$$

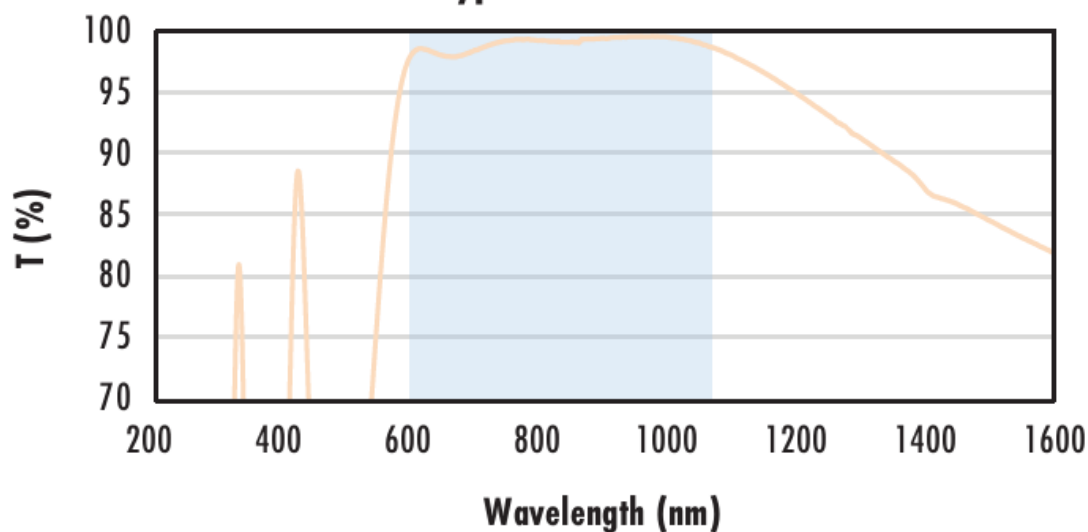
$$R_{abs} \leq 0.25\% @ 1064\text{nm}$$

$$R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$$

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:

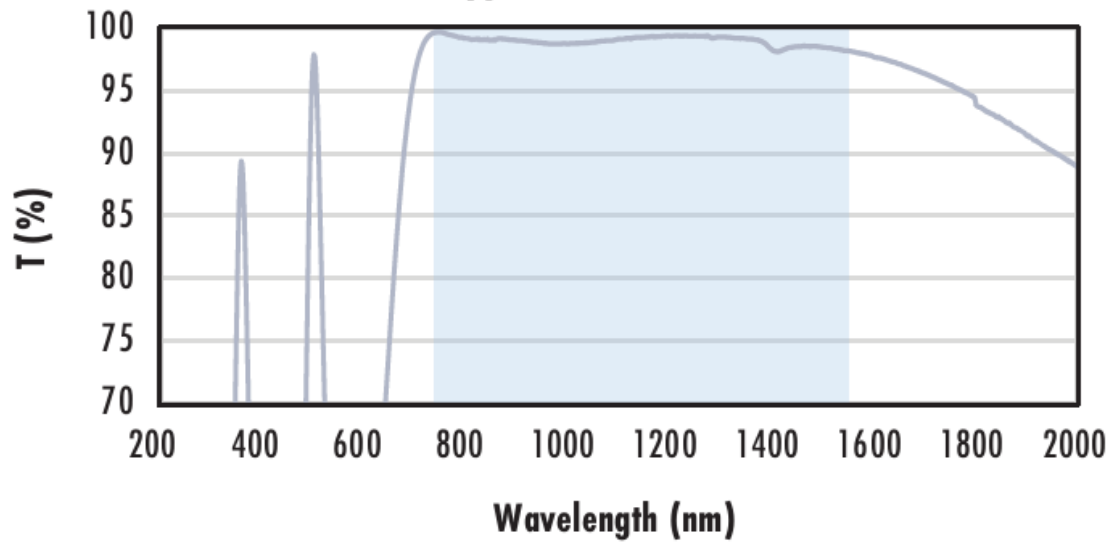
$$R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$$

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](#)

Compatible Mounts