

TECHSPEC<sup>®</sup> 12.0mm Dia. x 42.0mm FL, NIR I Coated, Plano-Convex Lens



Stock **#48-738** 9 In Stock

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-

1

+

£38<sup>.00</sup>

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| Volume Pricing |                               |
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| Qty 1-9        | £38.00 each                   |
| Qty 10-24      | £34.00 each                   |
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!

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Product Downloads

General

Plano-Convex Lens

Type:

Physical & Mechanical Properties

|                      |                           |
|----------------------|---------------------------|
| 12.00 +0.0/-0.025    | Diameter (mm):            |
| <1                   | Centering (arcmin):       |
| 2.70 ±0.05           | Center Thickness CT (mm): |
| 1.85                 | Edge Thickness ET (mm):   |
| 11                   | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Optical Properties                    |                                  |
| 42.00 @ 587.6nm                       | Effective Focal Length EFL (mm): |
| 40.22                                 | Back Focal Length BFL (mm):      |
| NIR I (600-1050nm)                    | Coating:                         |
| R <sub>avg</sub> ≤0.5% @ 600 - 1050nm | Coating Specification:           |
| N-BK7                                 | Substrate: □                     |
| 40-20                                 | Surface Quality:                 |
| 1.5λ                                  | Power (P-V) @ 632.8nm:           |
| λ/4                                   | Irregularity (P-V) @ 632.8nm:    |
| ±1                                    | Focal Length Tolerance (%):      |
| 21.71                                 | Radius R <sub>1</sub> (mm):      |
| 3.5                                   | f/#:                             |
| 0.14                                  | Numerical Aperture NA:           |
| 600 - 1050                            | Wavelength Range (nm):           |
| 7 J/cm <sup>2</sup> @ 1064nm, 10ns    | Damage Threshold, By Design: □   |

|                       |                             |
|-----------------------|-----------------------------|
| Regulatory Compliance |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant             | Reach 235:                  |

## 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

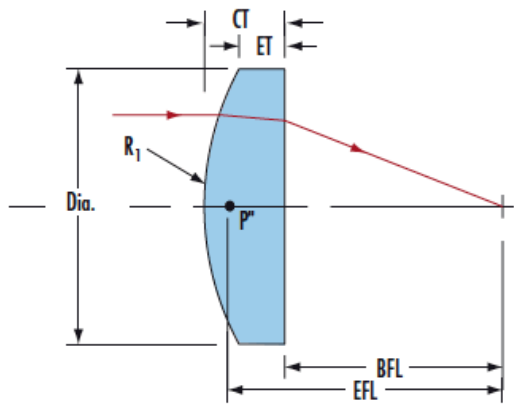
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

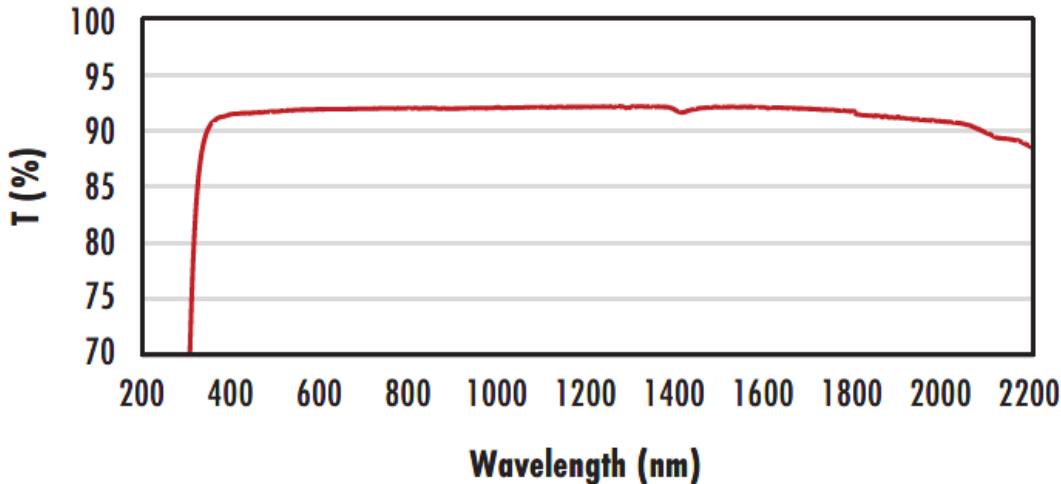
TECHSPEC® NIR I Coated Plano-Convex (PCX) Lenses have a positive focal length, making them ideal for collecting and focusing light in imaging applications. They are also useful in a variety of applications involving emitters, detectors, lasers, and fiber optics. TECHSPEC® NIR I Coated Plano-Convex (PCX) 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 [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#).

## Technical Information



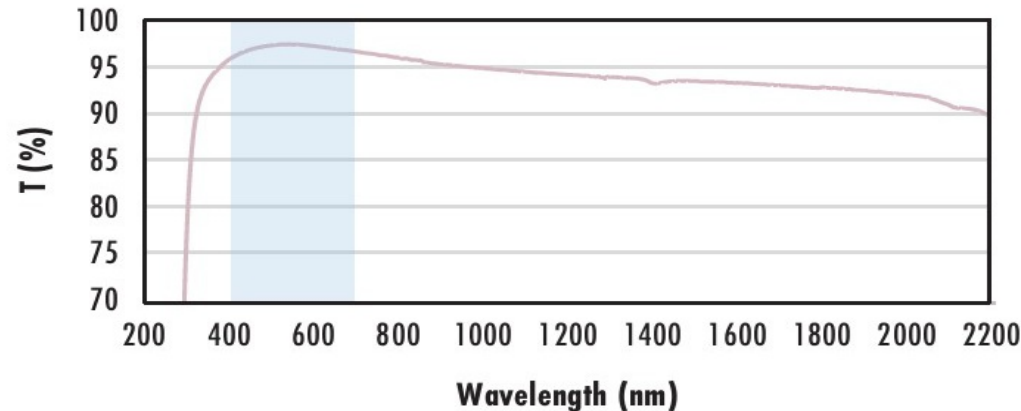
N-BK7

Uncoated N-BK7 Typical Transmission



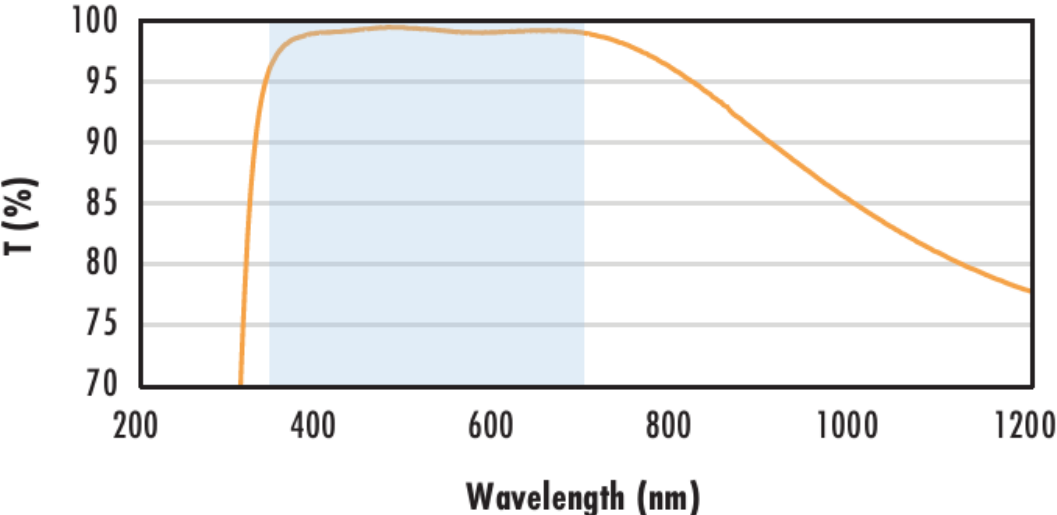
Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.  
[Click Here to Download Data](#)

N-BK7 with MgF<sub>2</sub> Coating Typical Transmission



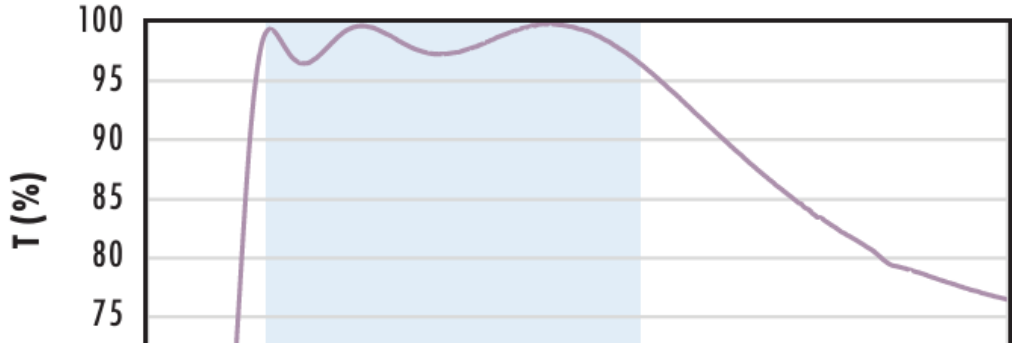
Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.  
The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$  (N-BK7)  
Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

N-BK7 with VIS-EXT Coating Typical Transmission

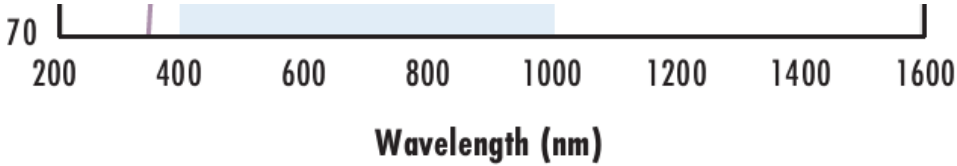
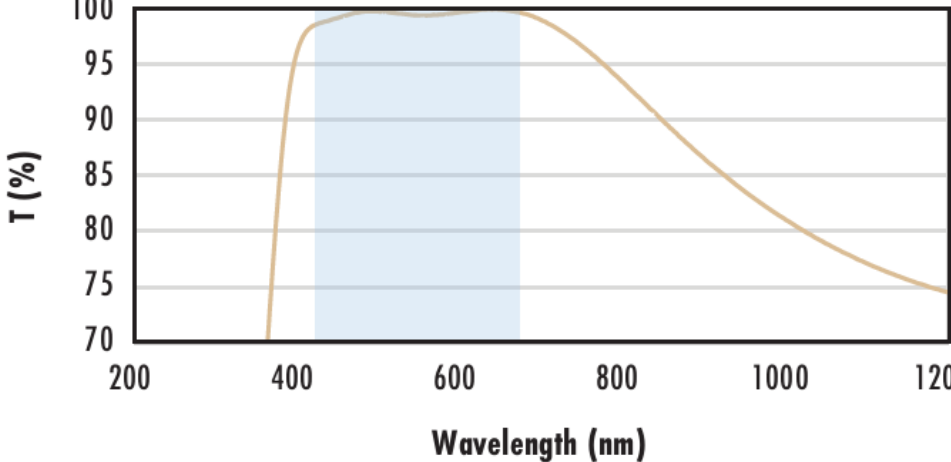
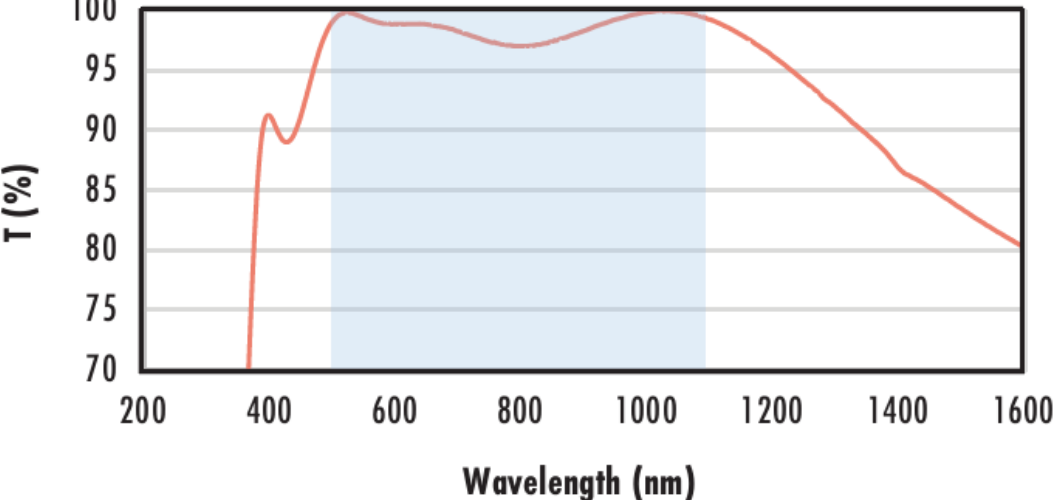
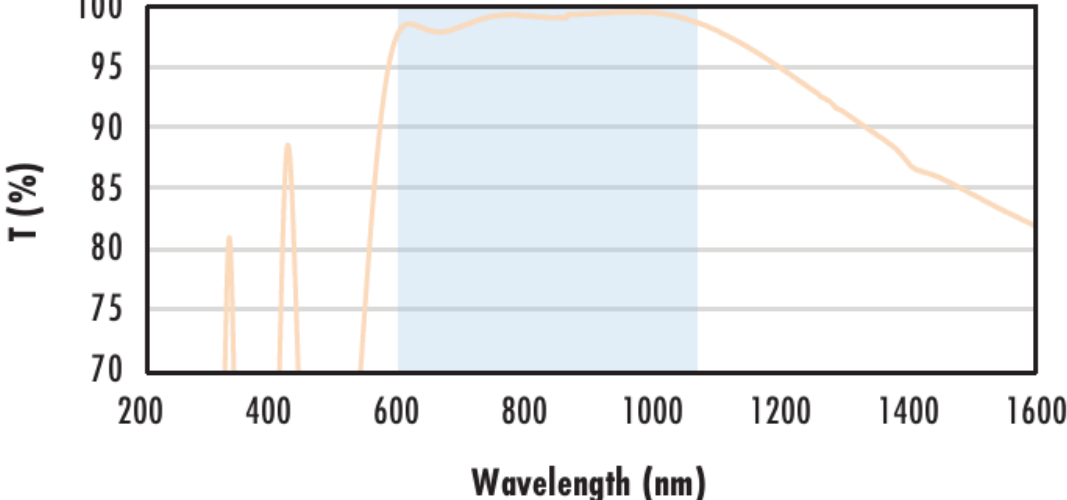
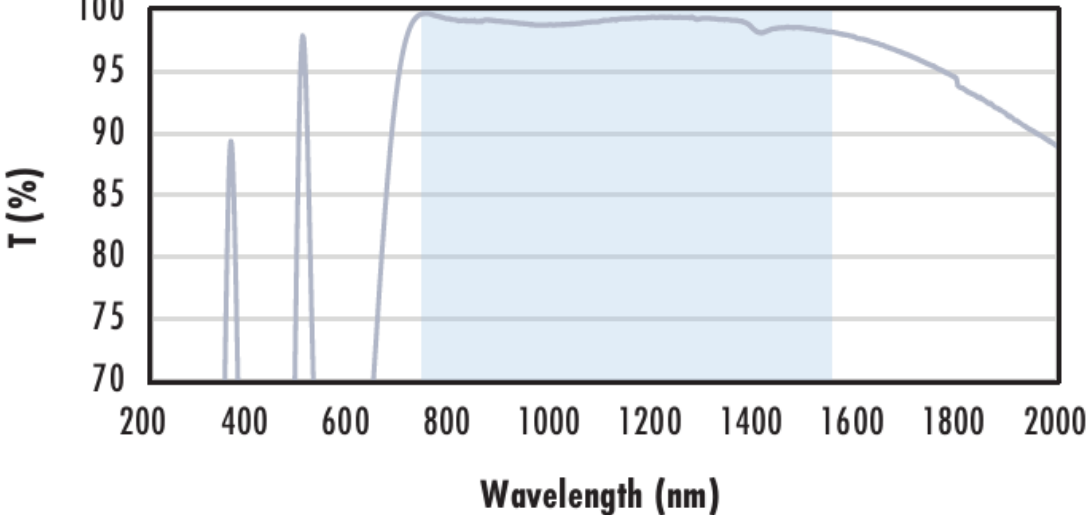


Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.  
The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$   
Data outside this range is not guaranteed and is for reference only.  
[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](#)

|                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                            | <a href="#">Click Here to Download Data</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p data-bbox="596 276 974 365"><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1337 409 1843 454">Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1337 468 1850 513">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 528 1709 557"><math>R_{avg} \leq 0.4\%</math> @ 425 - 675nm</p> <p data-bbox="1341 572 1841 617">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 632 1709 661"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                          |
| <p data-bbox="569 869 1037 958"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1341 1003 1839 1047">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1333 1062 1850 1107">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1493 1121 1688 1151"><math>R_{abs} \leq 0.25\%</math> @ 532nm</p> <p data-bbox="1493 1151 1688 1181"><math>R_{abs} \leq 0.25\%</math> @ 1064nm</p> <p data-bbox="1472 1181 1709 1210"><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</p> <p data-bbox="1341 1225 1841 1270">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 1285 1709 1314"><a href="#">Click Here to Download Data</a></p>           |
| <p data-bbox="617 1507 1010 1596"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1341 1665 1839 1709">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1333 1724 1850 1768">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1472 1783 1709 1813"><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p> <p data-bbox="1341 1828 1841 1872">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 1887 1709 1917"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                             |
| <p data-bbox="606 2145 1016 2234"><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1341 2273 1839 2318">Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1333 2332 1850 2377">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 2392 1703 2421"><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</p> <p data-bbox="1478 2421 1709 2451"><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</p> <p data-bbox="1478 2451 1709 2481"><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p> <p data-bbox="1341 2496 1841 2555">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1478 2570 1709 2599"><a href="#">Click Here to Download Data</a></p> |

# Compatible Mounts

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