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# TECHSPEC® 4.0mm Dia. x 8.0mm FL, NIR II Coated, Plano-Convex Lens

Stock **#67-448** **4 In Stock**

Other Coating Options

- 1 + **£52**.80

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## General

**Type:**

Plano-Convex Lens

## Physical & Mechanical Properties

**Diameter (mm):**
4.00 +0.0/-0.025

**Centering (arcmin):**
<3

**Center Thickness CT (mm):**
1.39 ±0.05

**Edge Thickness ET (mm):**
1.00

**Clear Aperture CA (mm):**
3.6

**Bevel:**
Protective as needed

## Optical Properties

**Effective Focal Length EFL (mm):**
8.00 @ 587.6nm

**Back Focal Length BFL (mm):**
7.17

**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-BAF10

**Surface Quality:**
20-10

**Power (P-V) @ 632.8nm:**
1.5λ

**Irregularity (P-V) @ 632.8nm:**
λ/4

**Focal Length Tolerance (%):**
±1

**Radius $R_1$ (mm):**
5.36

**f/#:**
2

**Numerical Aperture NA:**
0.25

**Wavelength Range (nm):**
750 - 1550

**Damage Threshold, By Design:**
8 J/cm$^2$ @ 1064nm, 10ns

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Certificate of Conformance:**
View

**Reach 235:**
Compliant

## 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

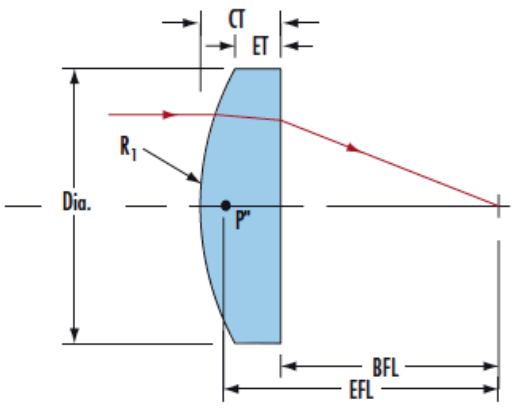
Learn more about our custom manufacturing capabilities or submit an inquiry here.

# Product Details

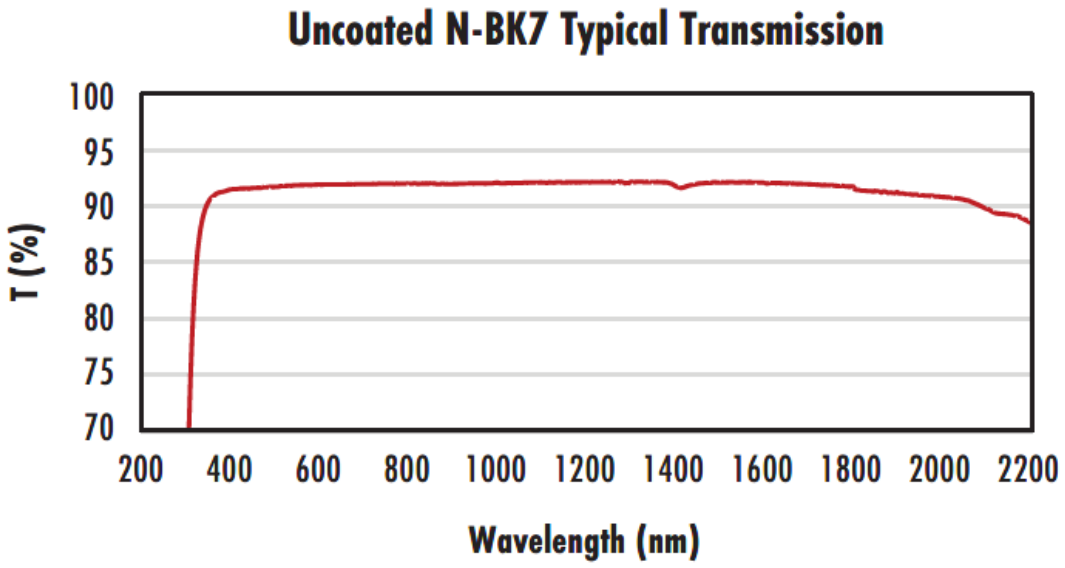
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: **Uncoated**, **$MgF_2$**, **VIS 0°**, **VIS-NIR**, **NIR I**, **VIS-EXT**, and **YAG-BBAR**

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




Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.

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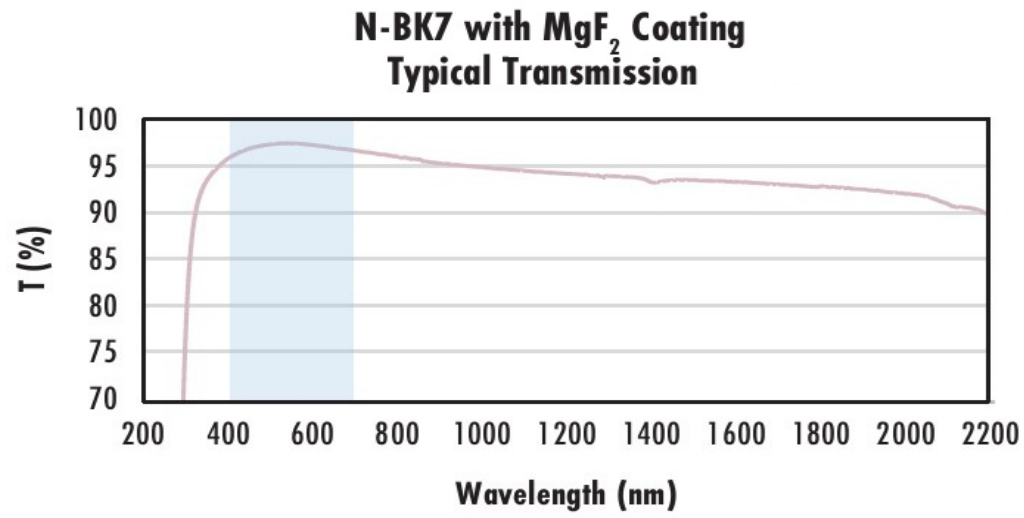


Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh 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.

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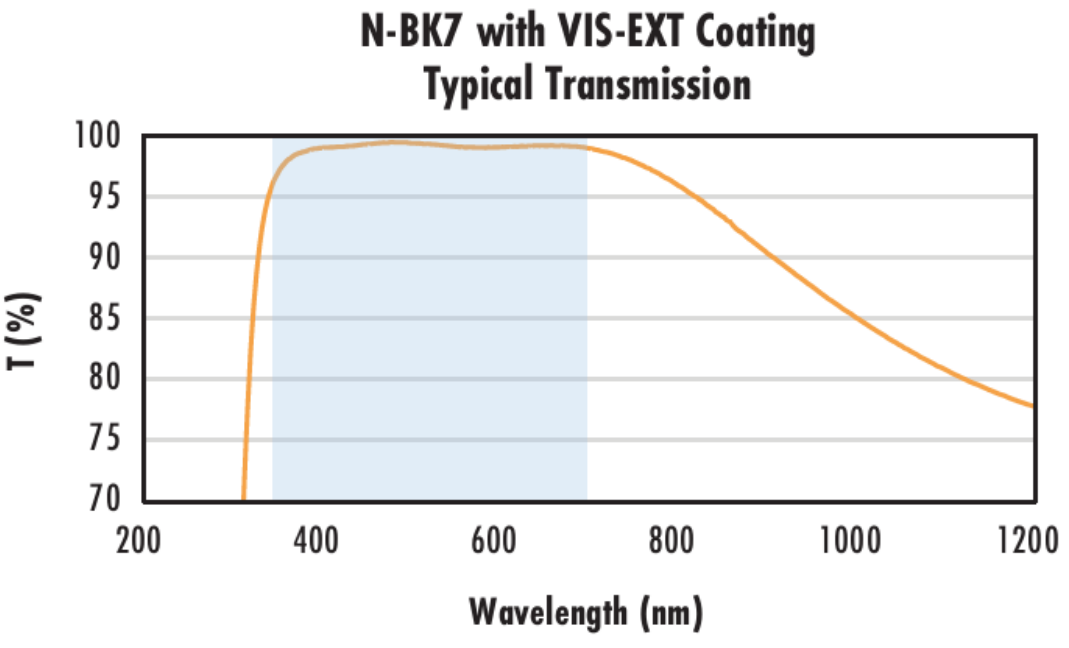


Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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

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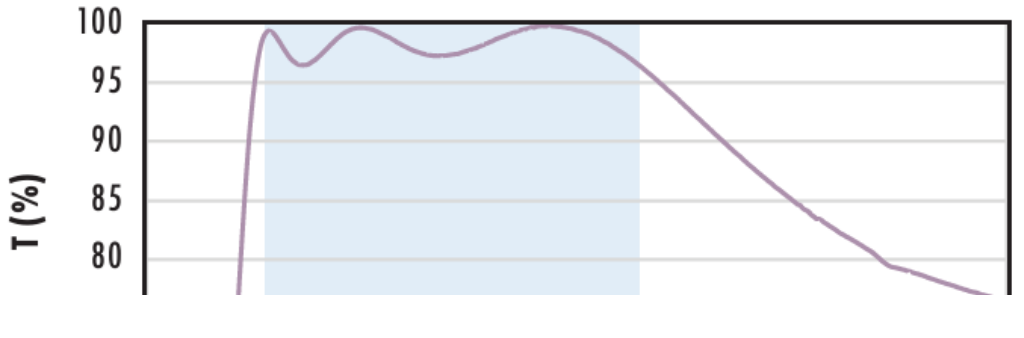
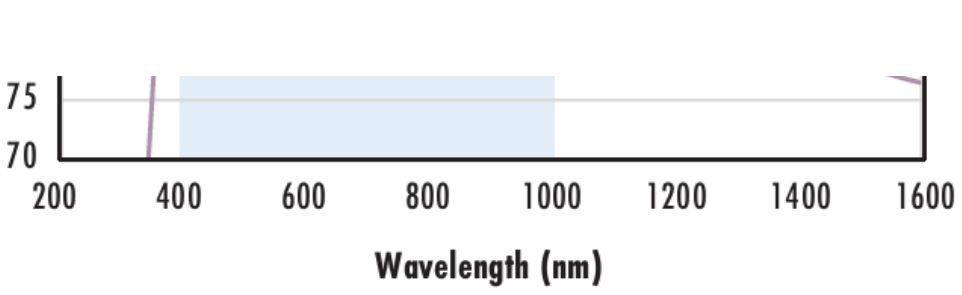



Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

Data outside this range is not guaranteed and is for reference

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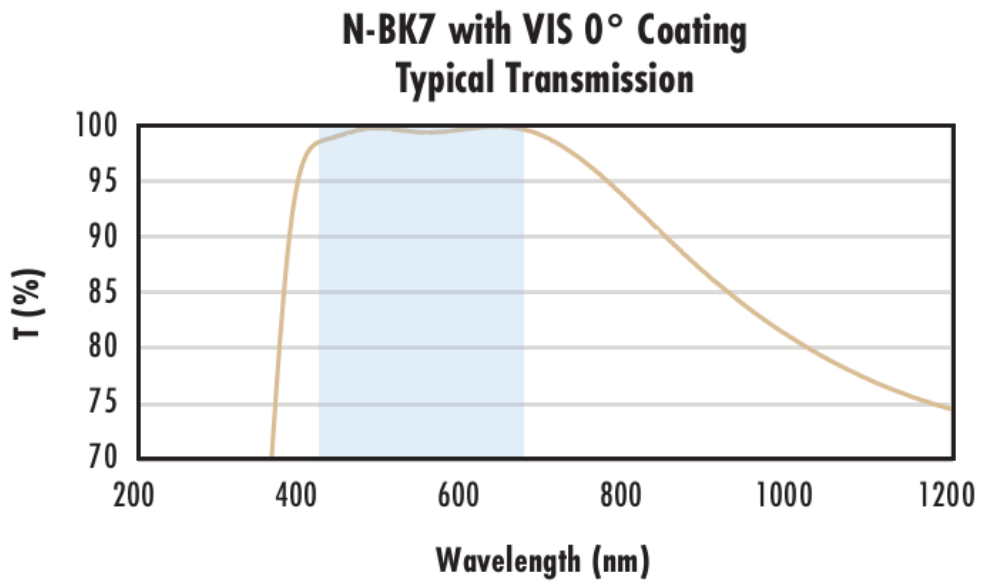


Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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

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

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

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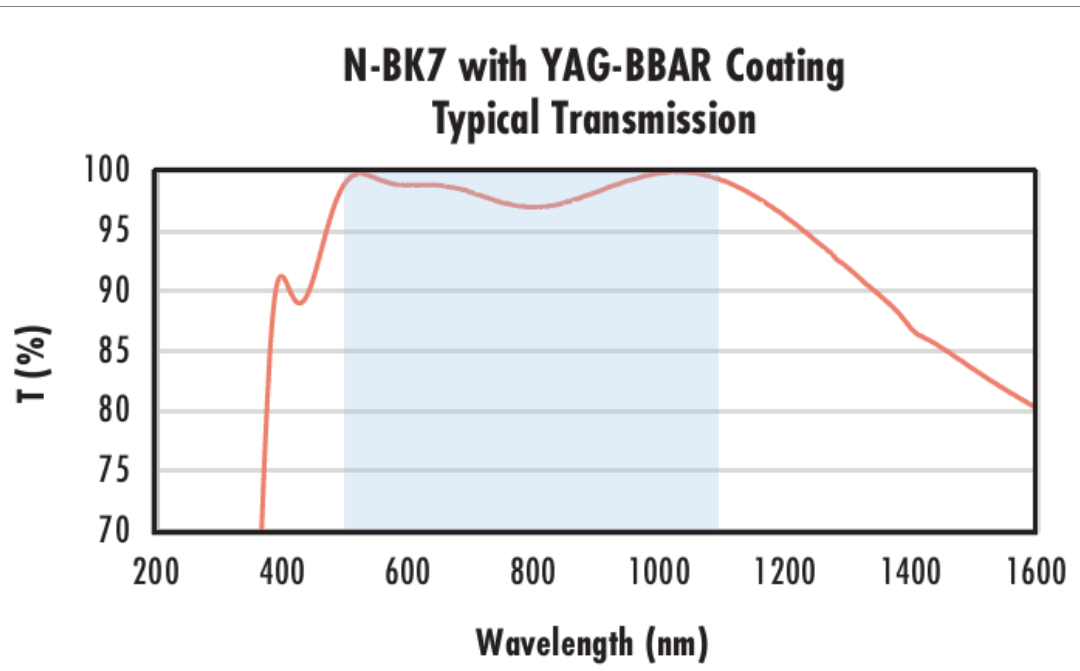


Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

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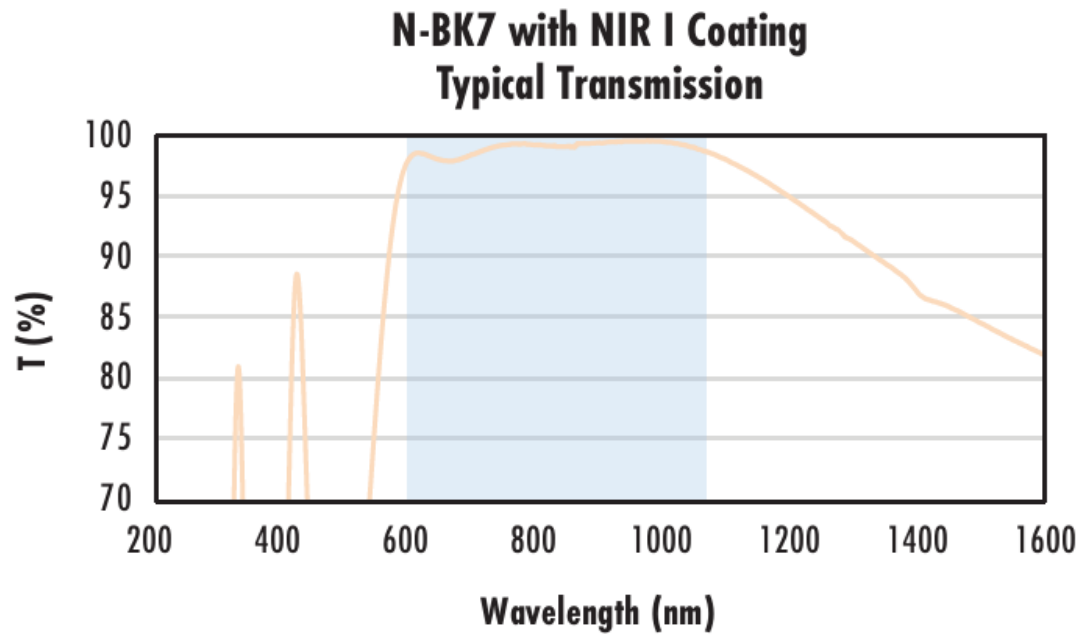


Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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

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

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

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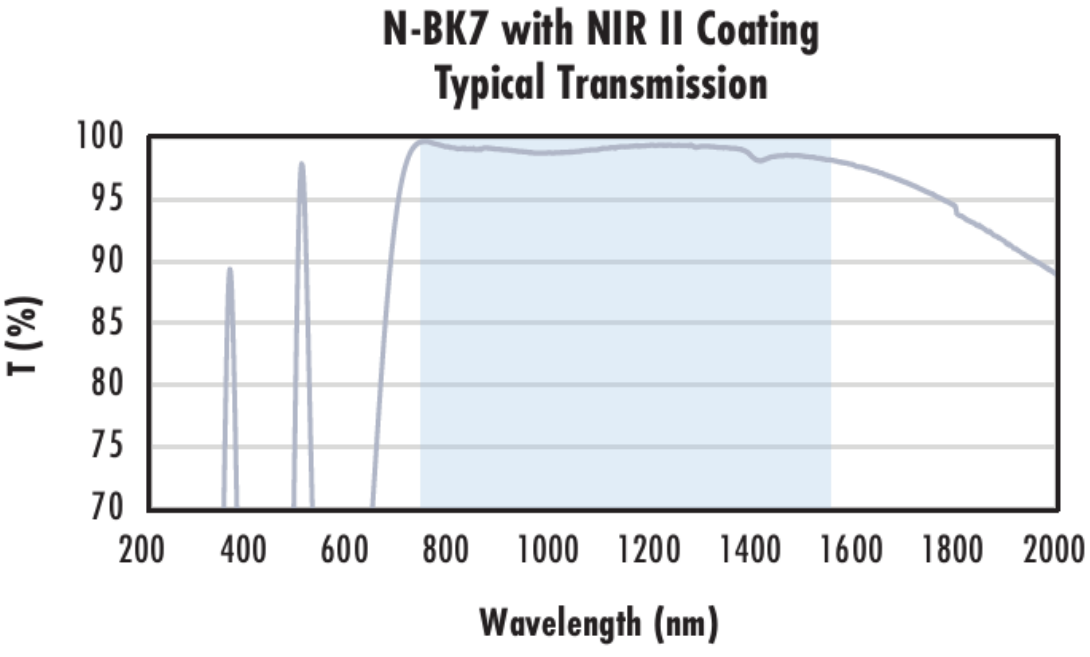


Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh 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.

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