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TECHSPEC® 50.0mm Dia. x 175.0mm FL, VIS 0°, Inked, Plano-Convex Lens

Stock **#48-249-INK** CONTACT US

Other Coating Options

- 1 + C$112.70

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Volume Pricing	
Qty 1-9	**C$112.70** each
Qty 10-24	**C$101.50** each
Qty 25-49	**C$90.30** each
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General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

50.00 ±0.025

Centering (arcmin):
<1

Center Thickness CT (mm):
9.00 ±0.10

Edge Thickness ET (mm):
5.48

Clear Aperture CA (mm):
49

Bevel:
Protective as needed

Optical Properties

Effective Focal Length EFL (mm):
175.00 @ 587.6nm

Back Focal Length BFL (mm):
169.05

Coating:
VIS 0° (425-675nm)

Coating Specification:
R_{avg} ≤0.4% @ 425 - 675nm

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 R_1 (mm):
90.44

f/#:
3.5

Numerical Aperture NA:
0.14

Wavelength Range (nm):
425 - 675

Damage Threshold, By Design:
5 J/cm^2 @ 532nm, 10ns

Regulatory Compliance

Certificate of Conformance:
View

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.

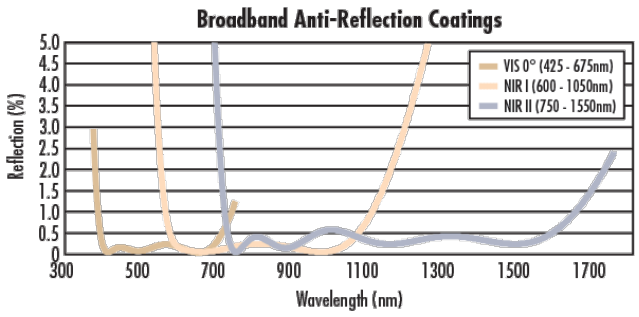
Product Details

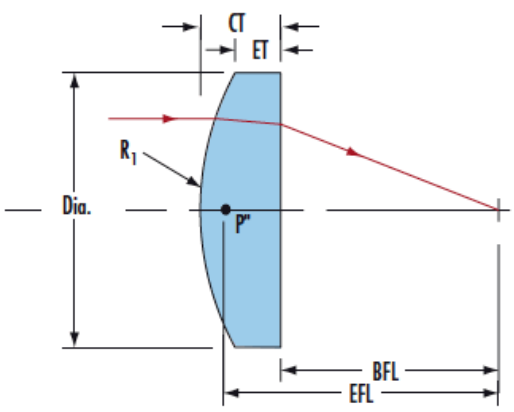
- AR Coated to Provide <0.4% Reflectance per Surface for 425 - 675nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: Uncoated, MgF_2, VIS-NIR, NIR I, NIR II, VIS-EXT, and YAG-BBAR

TECHSPEC® VIS 0° 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. TECHSPEC® VIS 0° 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-NIR, NIR I, NIR II, VIS-EXT, and YAG-BBAR.

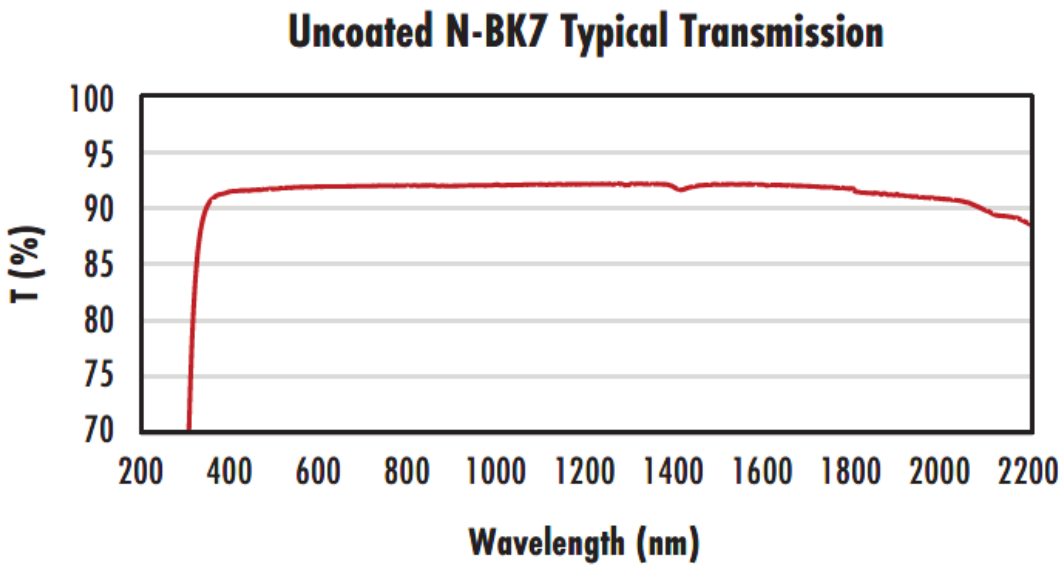
These coated lenses can be utilized in a host of optics and photonics applications, including biotech instruments such as DNA sequencers and polymerase chain reaction (PCR) testing platforms.

Technical Information





N-BK7



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

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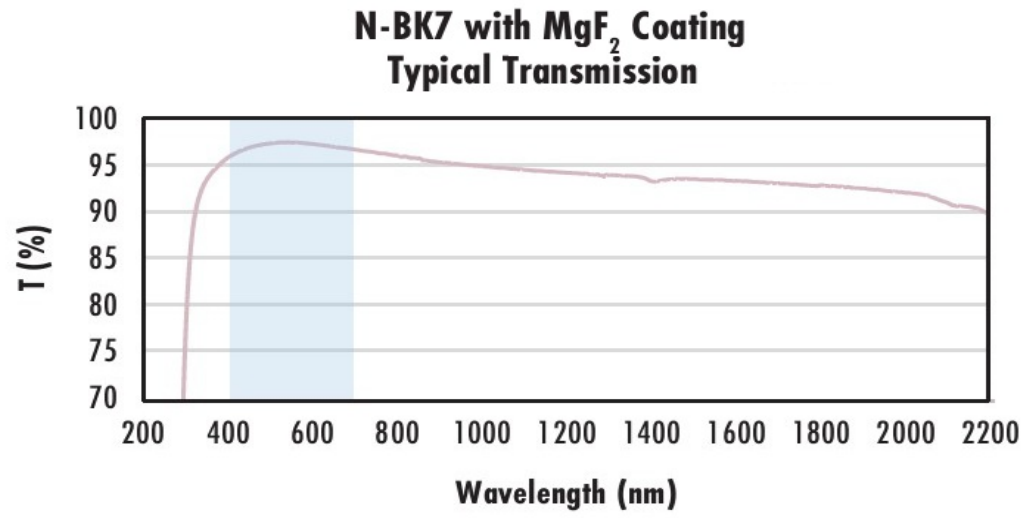

Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

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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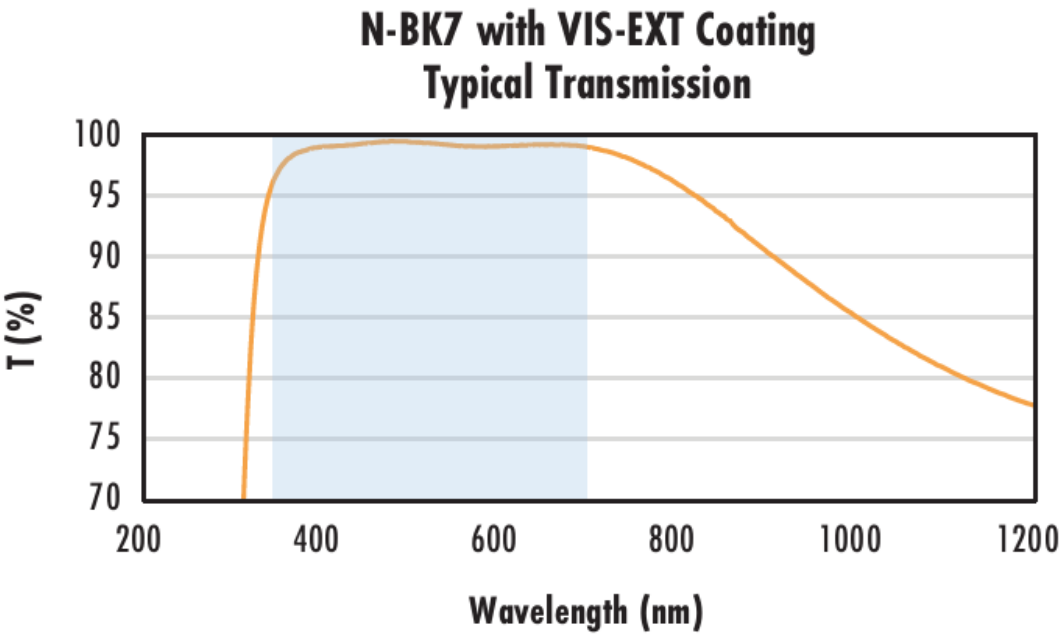

Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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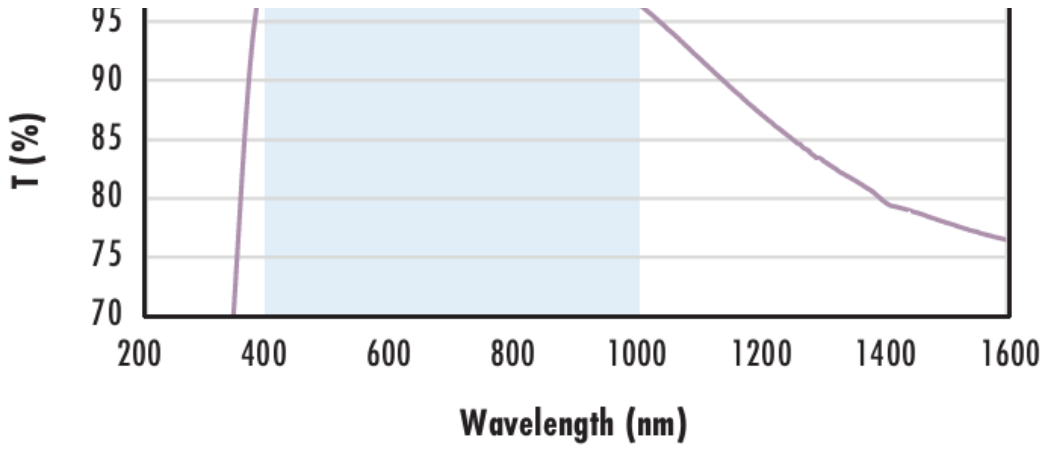
Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.



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 only.

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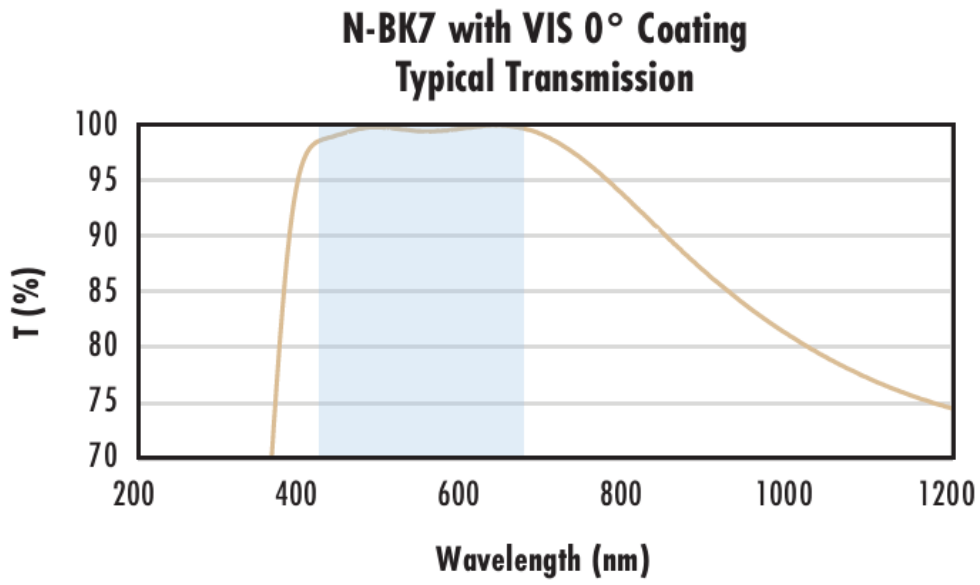

Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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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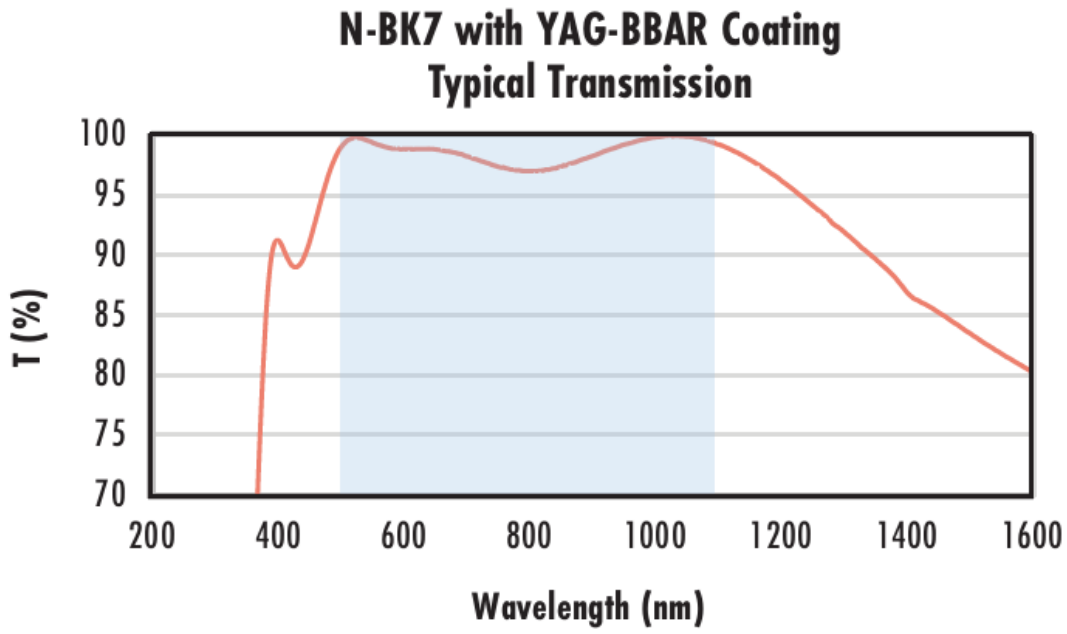

Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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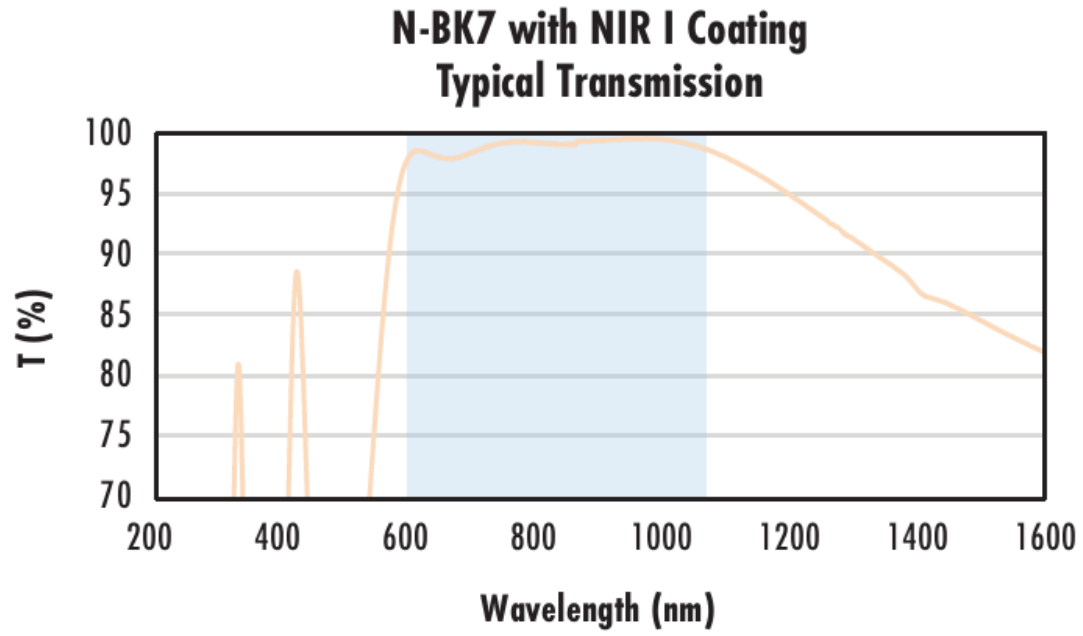

Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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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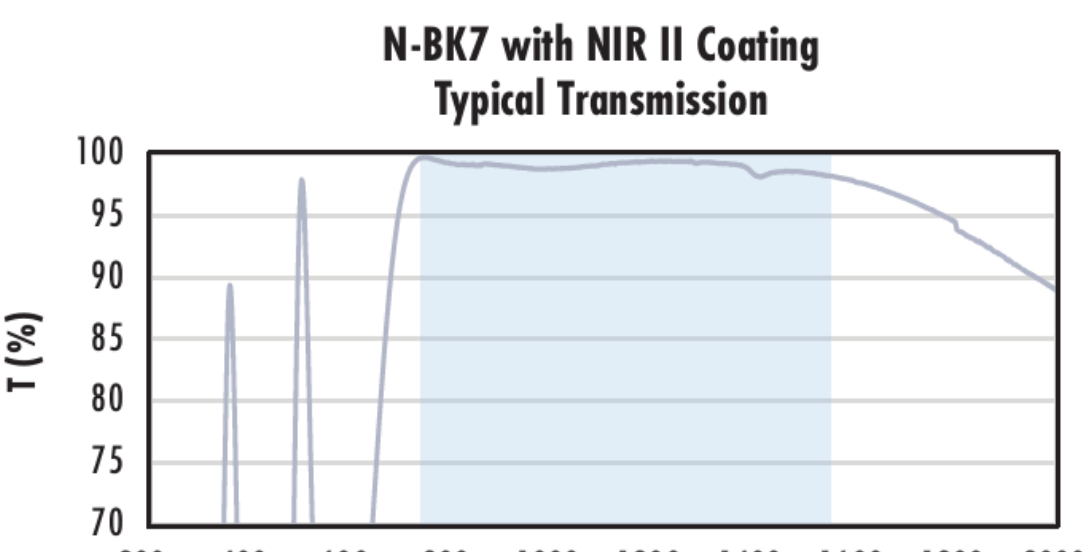

Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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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Coating Curves

Compatible Mounts

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