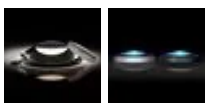
TECHSPEC®

12.0mm Dia. x 54.0mm FL, NIR II, Inked, Plano-Convex Lens



Stock #67-502-INK CONTACT US Other Coating Options

- 1 +

C$81.90

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Volume Pricing	
Qty 1-9	C$81.90 each
Qty 10-24	C$73.50 each
Qty 25-49	C$65.80 each
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Product Downloads

- STEP:stp
- Curve:pdf
- PDF Drawing:pdf
- ISO 10110 Drawing
- IGES:igs
- Curve (xslx):xlsx
- Zemax:zar
- Zemax:zmx
- eDrawing:eprt
- Code V:seq
- EO Spec Sheet

General

Type:	Plano-Convex Lens		

Physical & Mechanical Properties

Diameter (mm):	12.00 ±0.025	**Centering (arcmin):**	<1
Center Thickness CT (mm):	3.00 ±0.05	**Edge Thickness ET (mm):**	2.35
Clear Aperture CA (mm):	11	**Bevel:**	Protective as needed

Optical Properties

Effective Focal Length EFL (mm):	54.00 @ 587.6nm	**Back Focal Length BFL (mm):**	52.02
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 R_1 (mm):**	27.91
f/#:	4.5	**Numerical Aperture NA:**	0.11

Wavelength Range (nm):	750 - 1550	**Damage Threshold, By Design:** ⓘ	8 J/cm^2 @ 1064nm, 10ns

Regulatory Compliance

Certificate of Conformance:	**View**

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

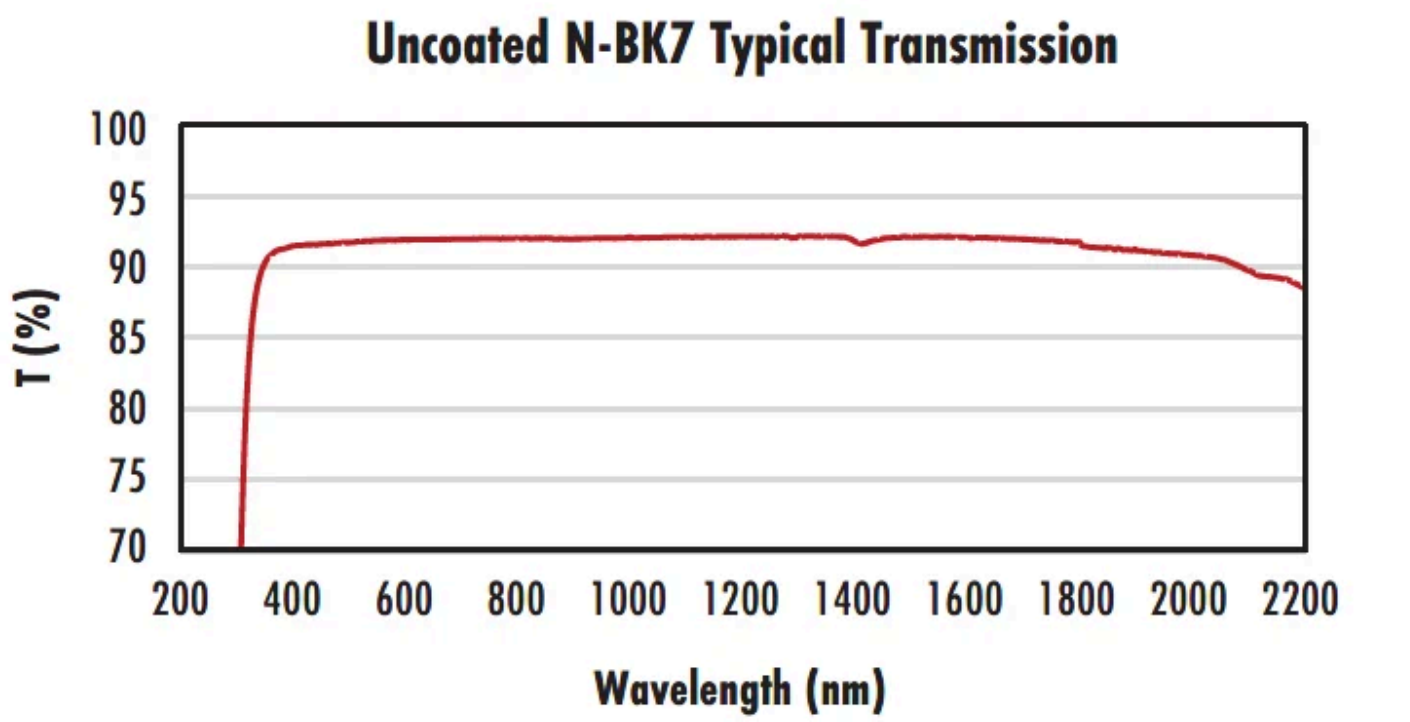
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

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



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

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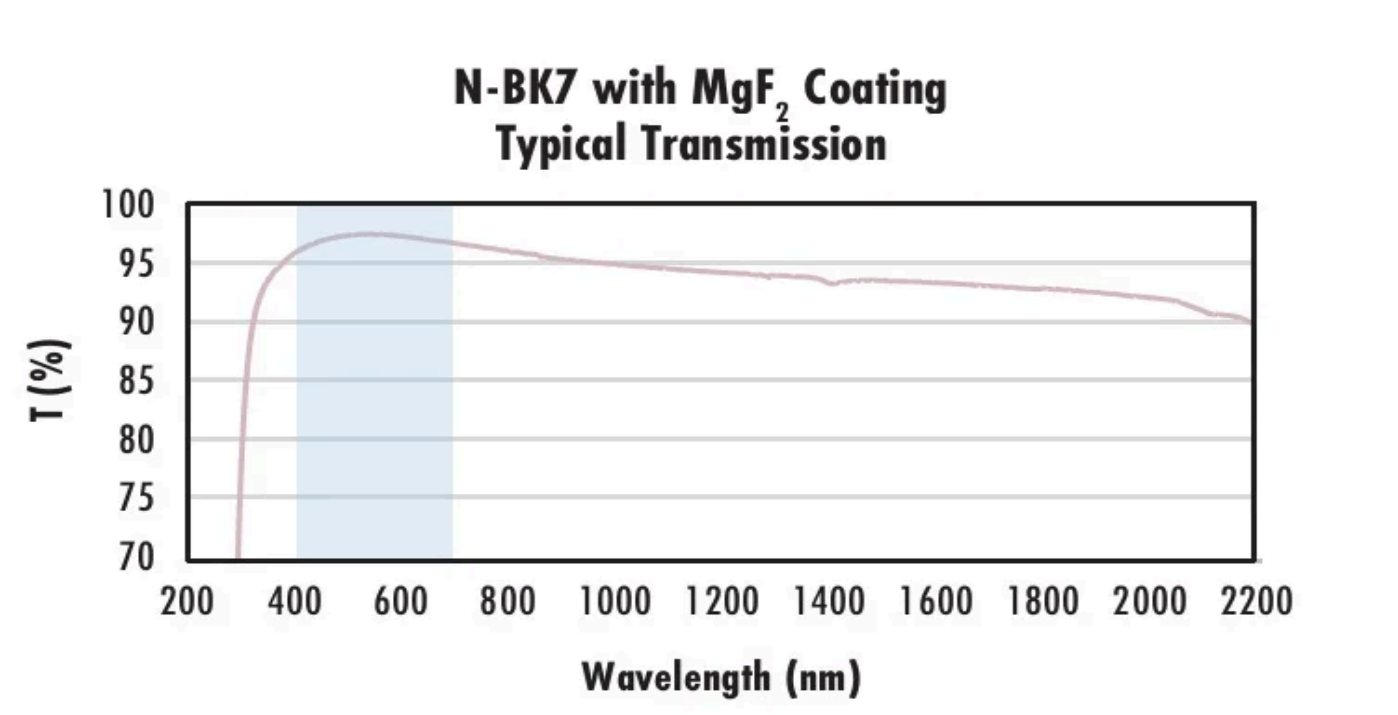

Typical transmission of a 3mm thick N-BK7 window w
MgF2 (400-700nm) coating at 0° AOI.

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

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

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

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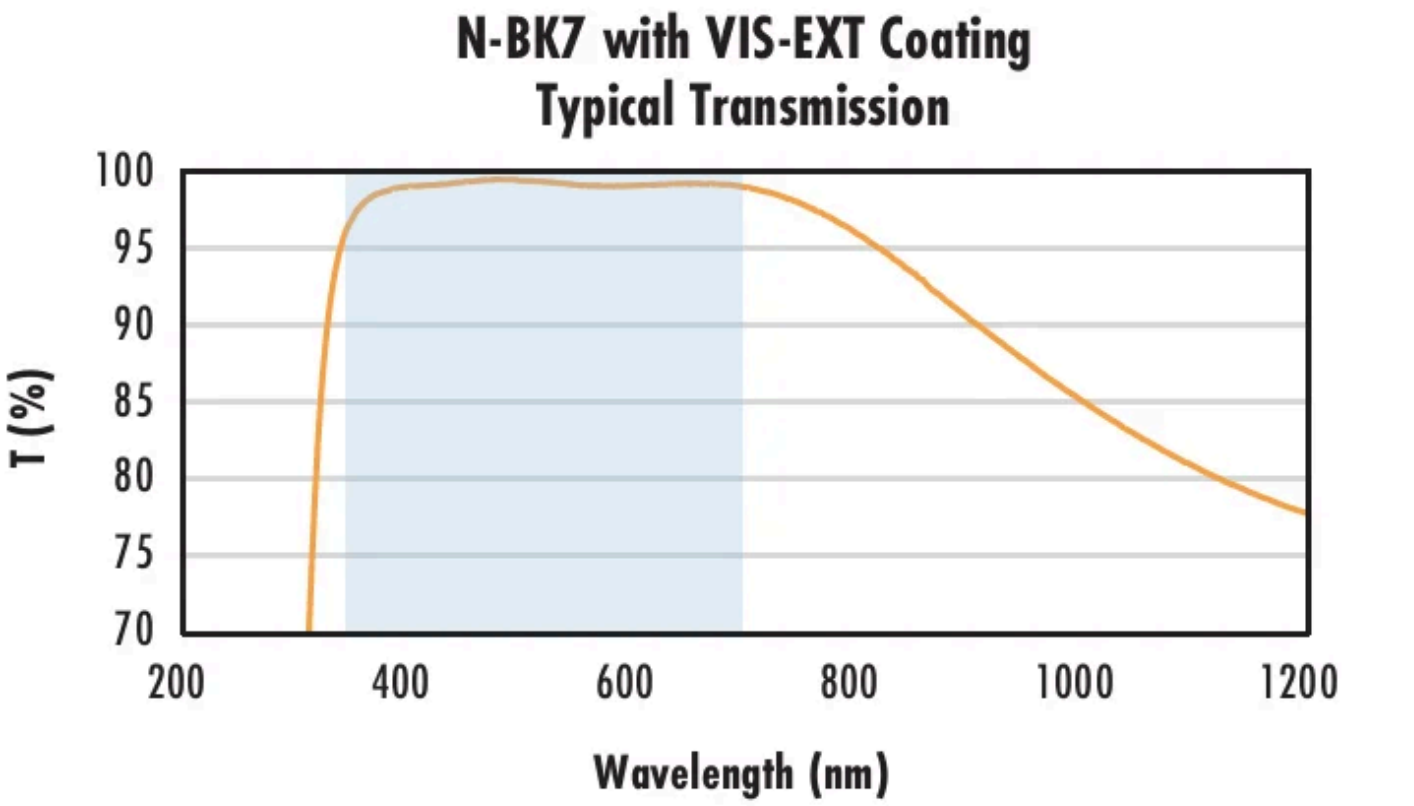

Typical transmission of a 3mm thick N-BK7 window w
VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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

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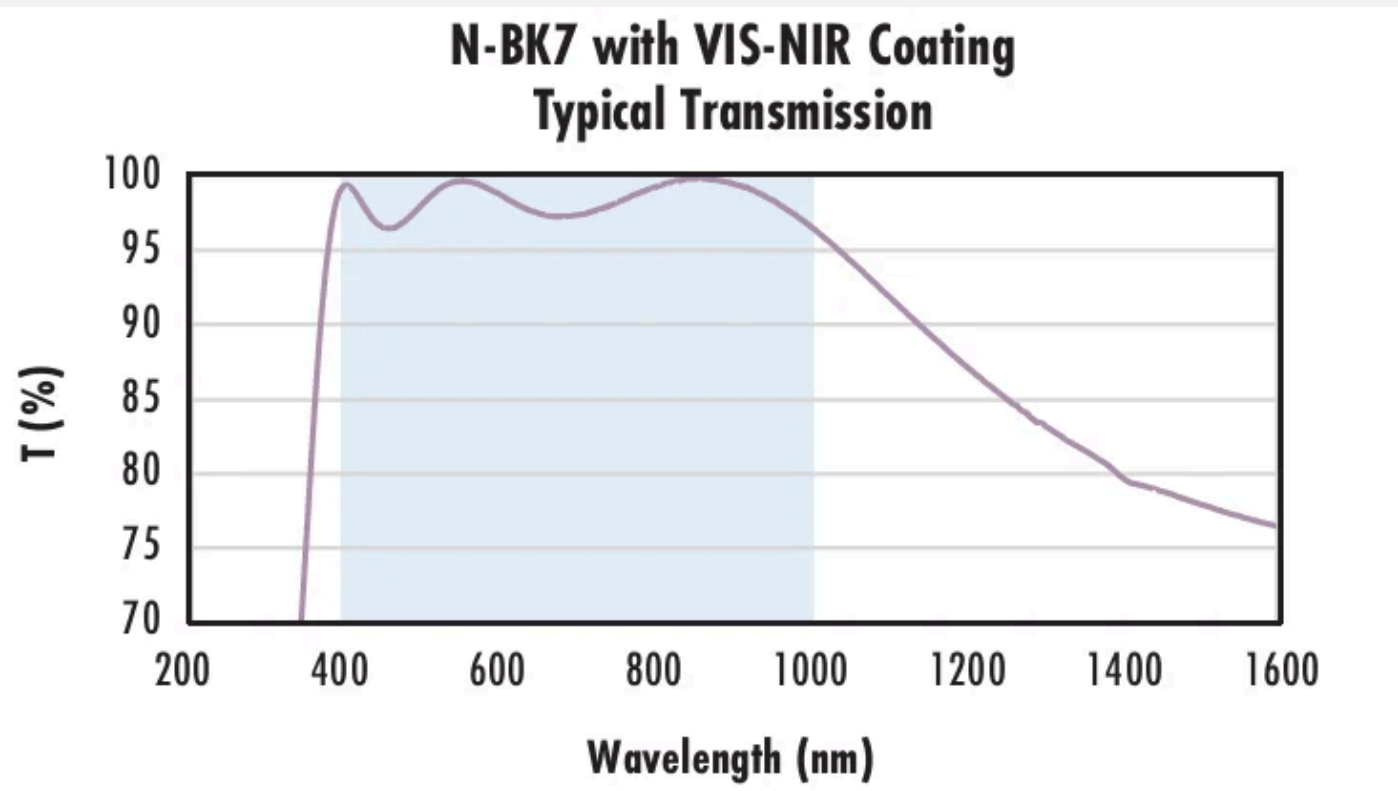

Typical transmission of a 3mm thick N-BK7 window w
VIS-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating desig
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 fo
reference only.

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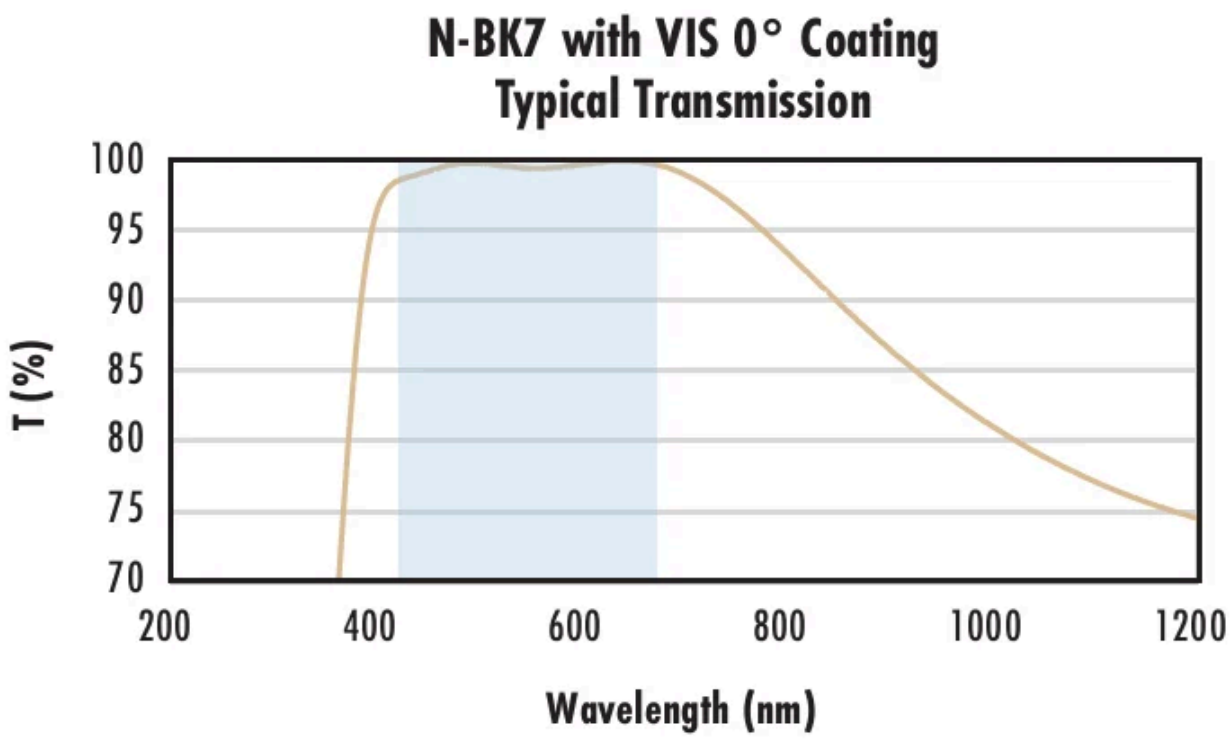

Typical transmission of a 3mm thick N-BK7 window wit
0° (425-675nm) coating at 0° AOI.

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

R_{avg} ≤ 0.4% @ 425 - 675nm

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

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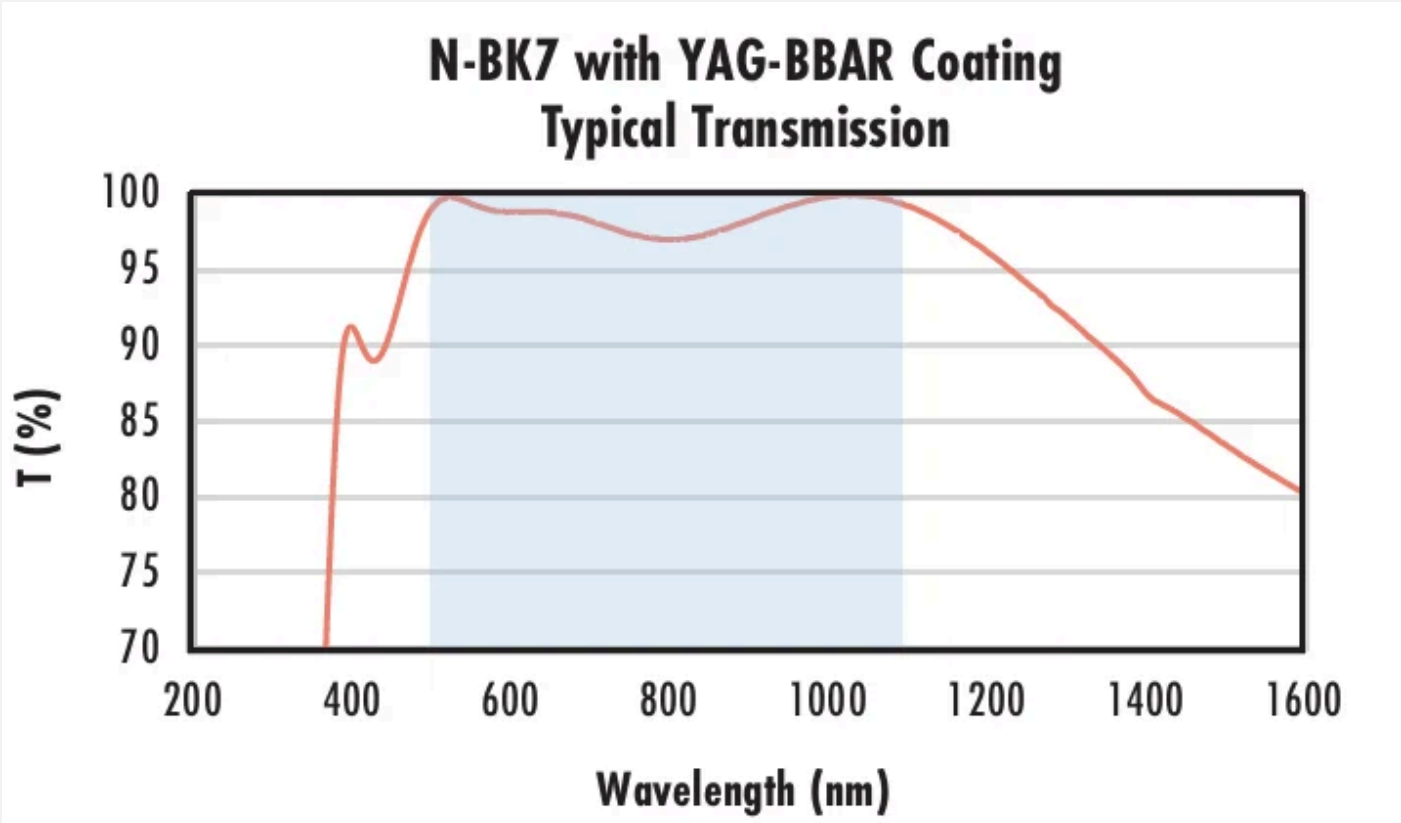

Typical transmission of a 3mm thick N-BK7 window w
YAG-BBAR (500-1100nm) coating at 0° AOI.

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

R_{abs} ≤ 0.25% @ 532nm
R_{abs} ≤ 0.25% @ 1064nm
R_{avg} ≤ 1.0% @ 500 - 1100nm

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

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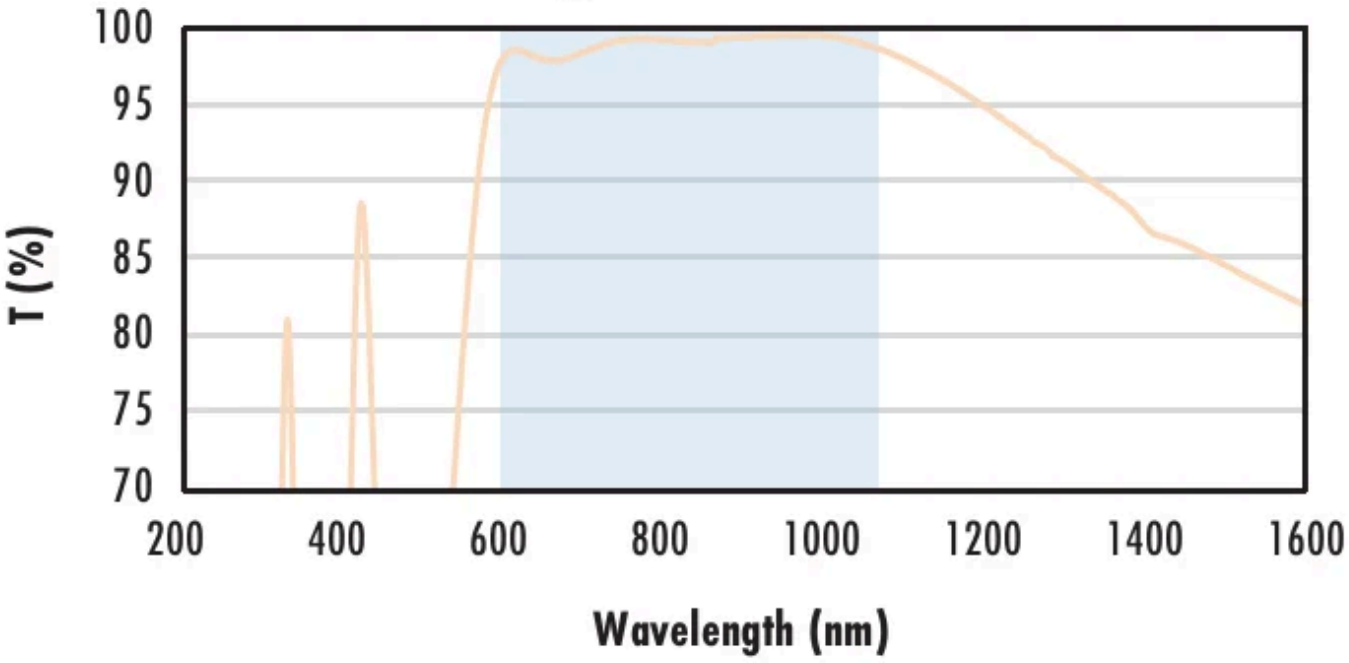

Typical transmission of a 3mm thick N-BK7 window witl
I (600 - 1050nm) coating at 0° AOI.

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

R_{avg} ≤ 0.5% @ 600 - 1050nm

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

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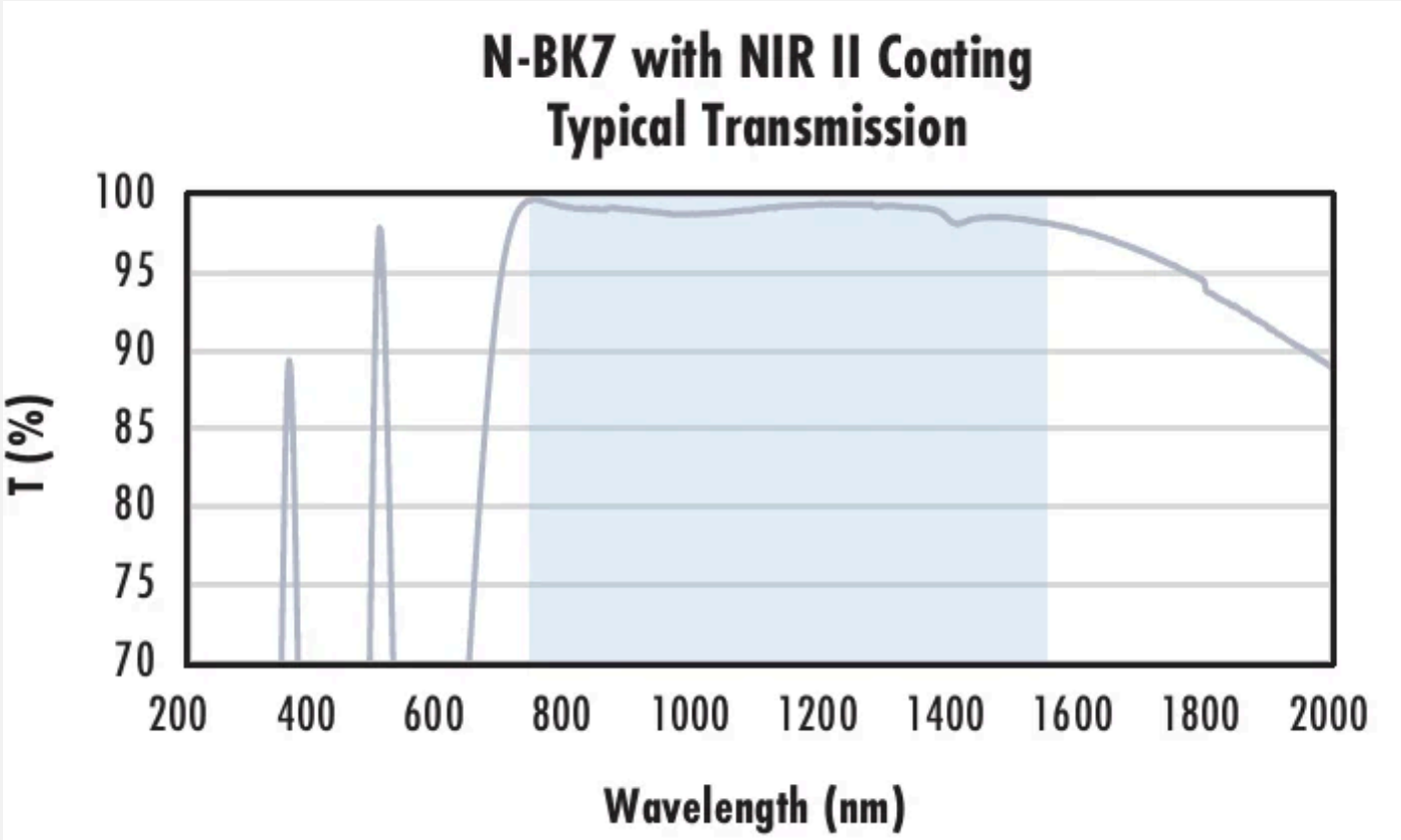

Typical transmission of a 3mm thick N-BK7 window witl
II (750 - 1550nm) coating at 0° AOI.

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

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

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

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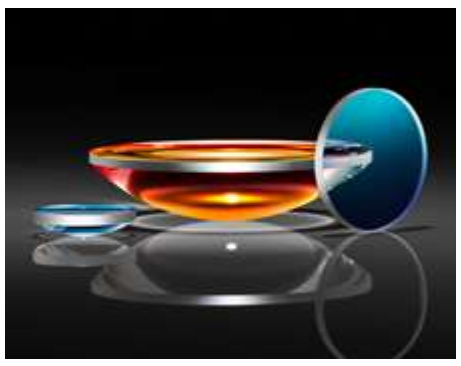
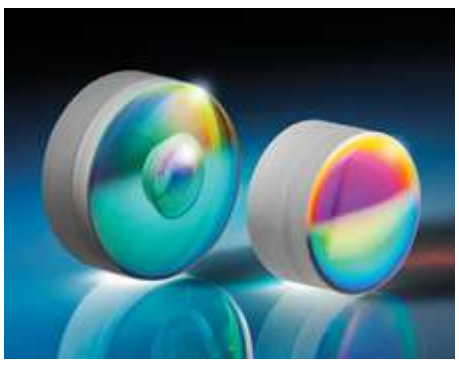
Related Products



UV Fused Silica Plano-Convex (PCX) Lenses - NIR II Coated



Near-IR (NIR) Achromatic Lenses

NIR II Coated Double-Convex (DCX) Lenses

Optical Cleaning

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	12.0mm Optic Dia., Optic Mount	Fixed		#64-555	C$45.85 Request Quote	10 In Stock 1
MORE+	12mm Inner Single Optic Mount	Fixed		#38-749	C$57.40 Request Quote	20+ In Stock 1
MORE+	25mm Cage 12mm Diameter Lens Mount	Fixed		#85-550	C$64.05 Request Quote	3 In Stock 1
MORE+	12mm Inner Pair Optic Mounts	Fixed		#11-405	C$112.70 Request Quote	10 In Stock 1

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Anti-Reflection (AR) Coatings

APPLICATION NOTE
An Introduction to Optical Coatings

APPLICATION NOTE
Understanding Optical Specifications

APPLICATION NOTE
Lens Geometry Performance Comparison

GLOSSARY
NIR (Near Infrared)

GLOSSARY
VIS/NIR Coating

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