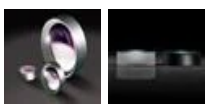
TECHSPEC®

9.0mm Diameter x -9 FL, NIR I Coated, Plano-Concave Lens



Stock #49-521 15 In Stock

Other Coating Options

- 1 +

C$64.40

ADD TO CART

Volume Pricing	
Qty 1-9	C$64.40 each
Qty 10-25	C$57.75 each
Qty 26-49	C$51.45 each
Need More?	Request Quote

Product Downloads

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

General

Type:	Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):	9.00 +0.0/-0.025	**Bevel:**	Protective as needed
Center Thickness CT (mm):	2.25	**Center Thickness Tolerance (mm):**	±0.05
Centering (arcmin):	<3	**Clear Aperture CA (mm):**	8.1
Edge Thickness ET (mm):	3.63		

Optical Properties

Effective Focal Length EFL (mm):	-9.00	**Substrate:** ⓘ	N-SF11
f/#:	1.00	**Numerical Aperture NA:**	0.50
Coating:	NIR I (600-1050nm)	**Wavelength Range (nm):**	600 - 1050
Back Focal Length BFL (mm):	-10.21	**Coating Specification:**	R_{avg} ≤0.5% @ 600 - 1050nm
Focal Length Specification Wavelength (nm):	587.6	**Focal Length Tolerance (%):**	±1

Radius R_1 (mm):	-7.07	**Surface Quality:**	40-20
Damage Threshold, By Design: ⓘ	7 J/cm^2 @ 1064nm, 10ns	**Power (P-V) @ 632.8nm:**	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4		

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

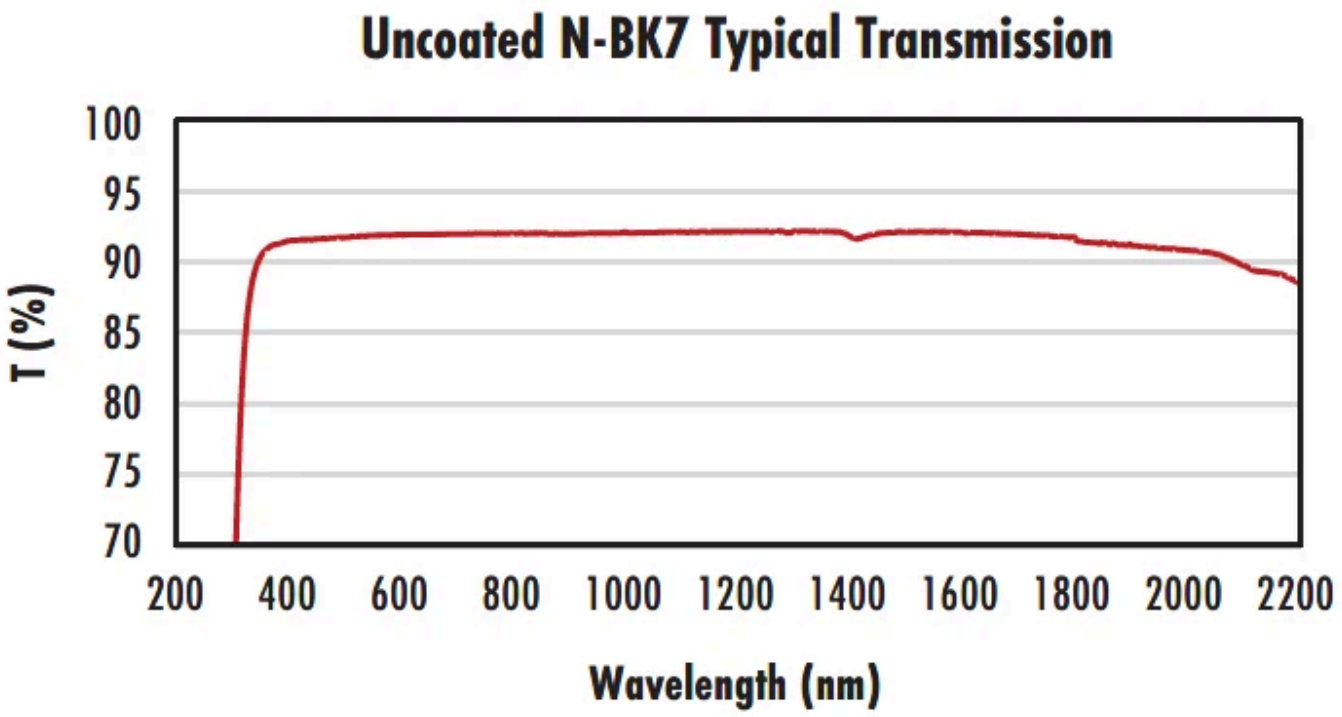
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various Coating Options: **Uncoated**, **VIS-EXT**, **MgF_2**, **VIS 0°**, **VIS-NIR**, **YAG-BBAR**, and **NIR II**

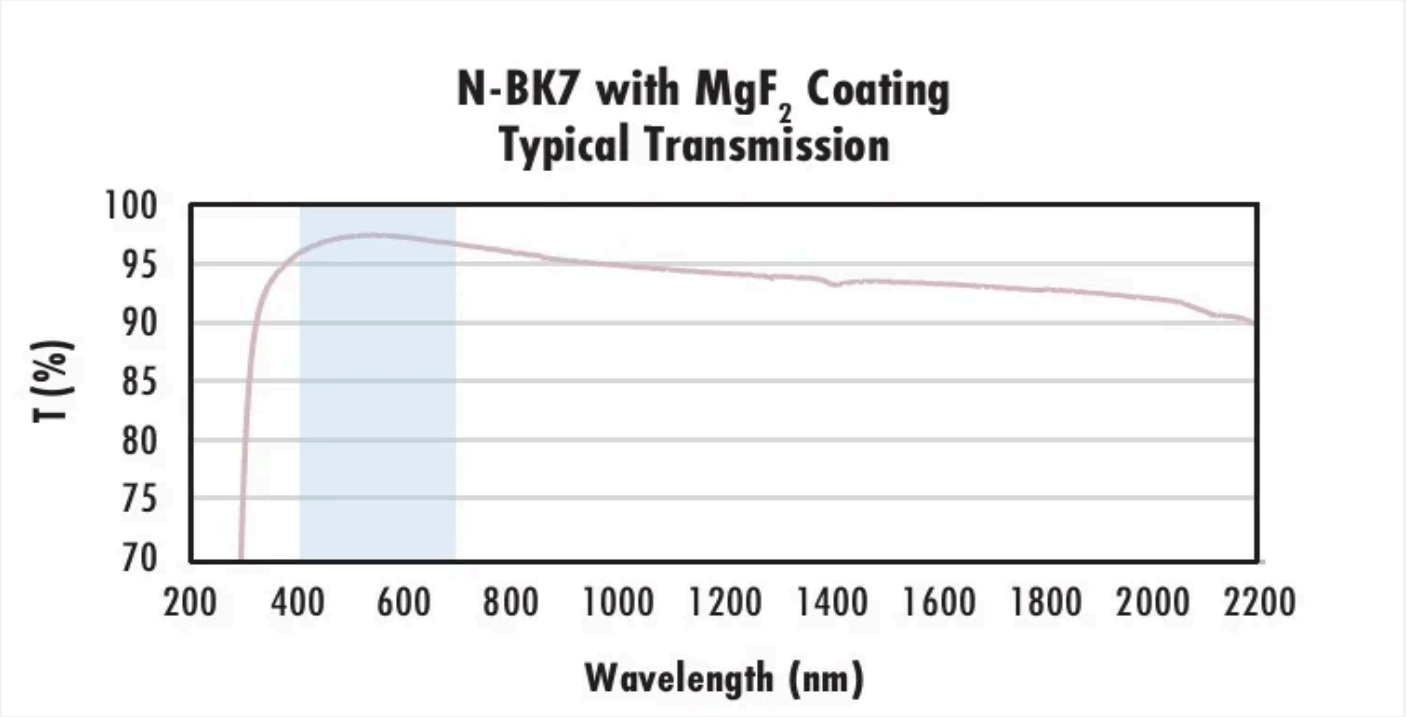
TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses offer optimal performance in the 600nm to 1050nm range. These lenses are also available **Uncoated**, **VIS-EXT**, **MgF_2**, **VIS 0°**, **VIS-NIR**, **YAG-BBAR**, or with **NIR II** AR coating options.

Technical Information



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

Click Here to Download Data



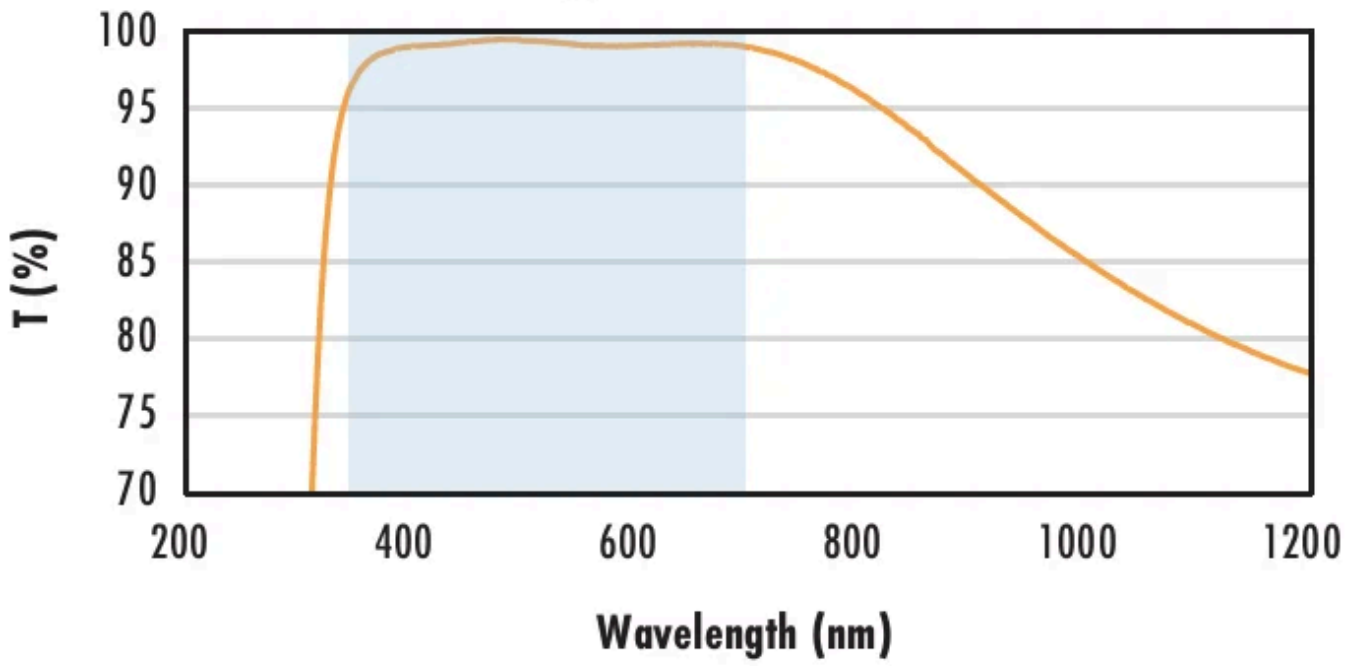
Typical transmission of a 3mm thick N-BK7 window w MgF2 (400-700nm) coating at 0° AOI.

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.

Click Here to Download Data



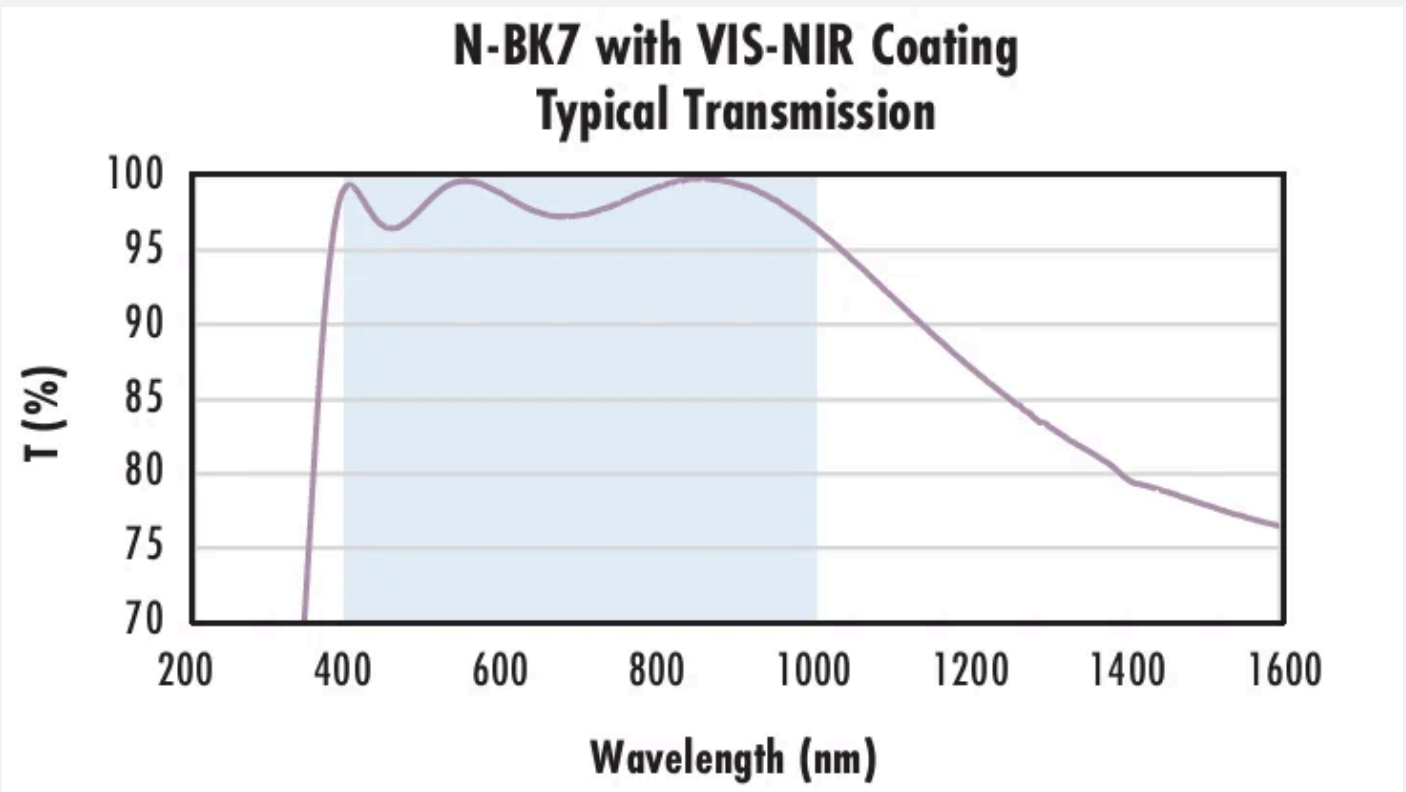
Typical transmission of a 3mm thick N-BK7 window w VIS-EXT (350-700nm) coating at 0° AOI.

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.

Click Here to Download Data



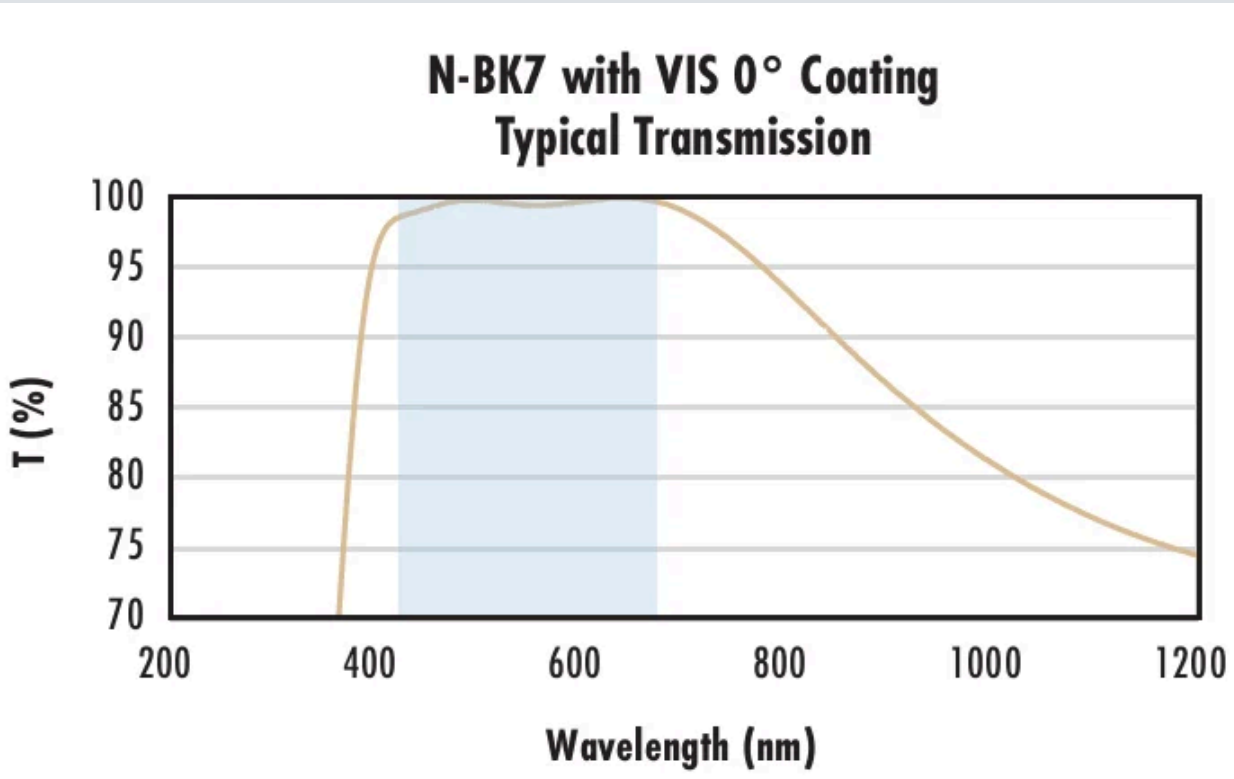
Typical transmission of a 3mm thick N-BK7 window w VIS-NIR (400-1000nm) coating at 0° AOI.

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.

Click Here to Download Data



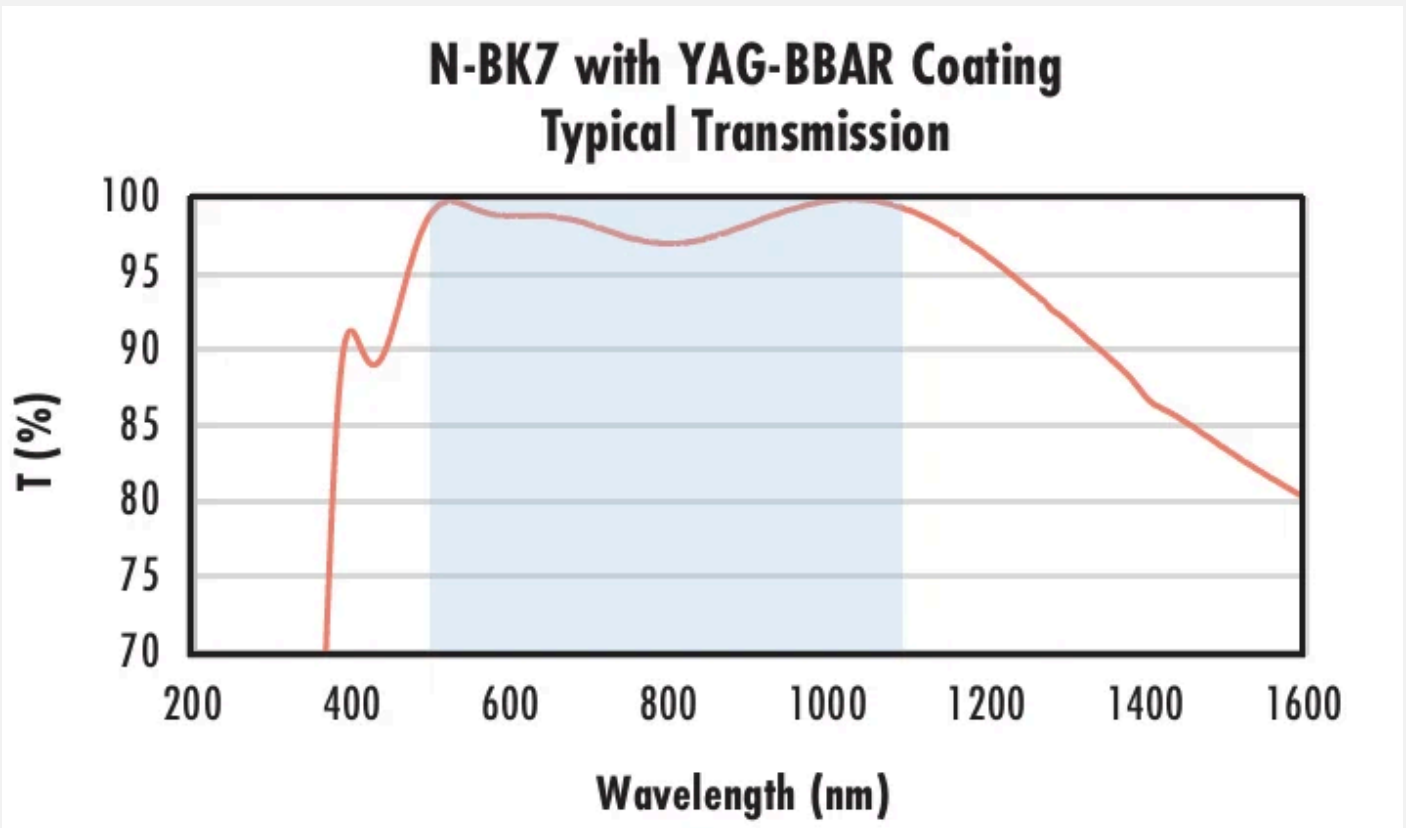
Typical transmission of a 3mm thick N-BK7 window wit 0° (425-675nm) coating at 0° AOI.

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

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

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

Click Here to Download Data



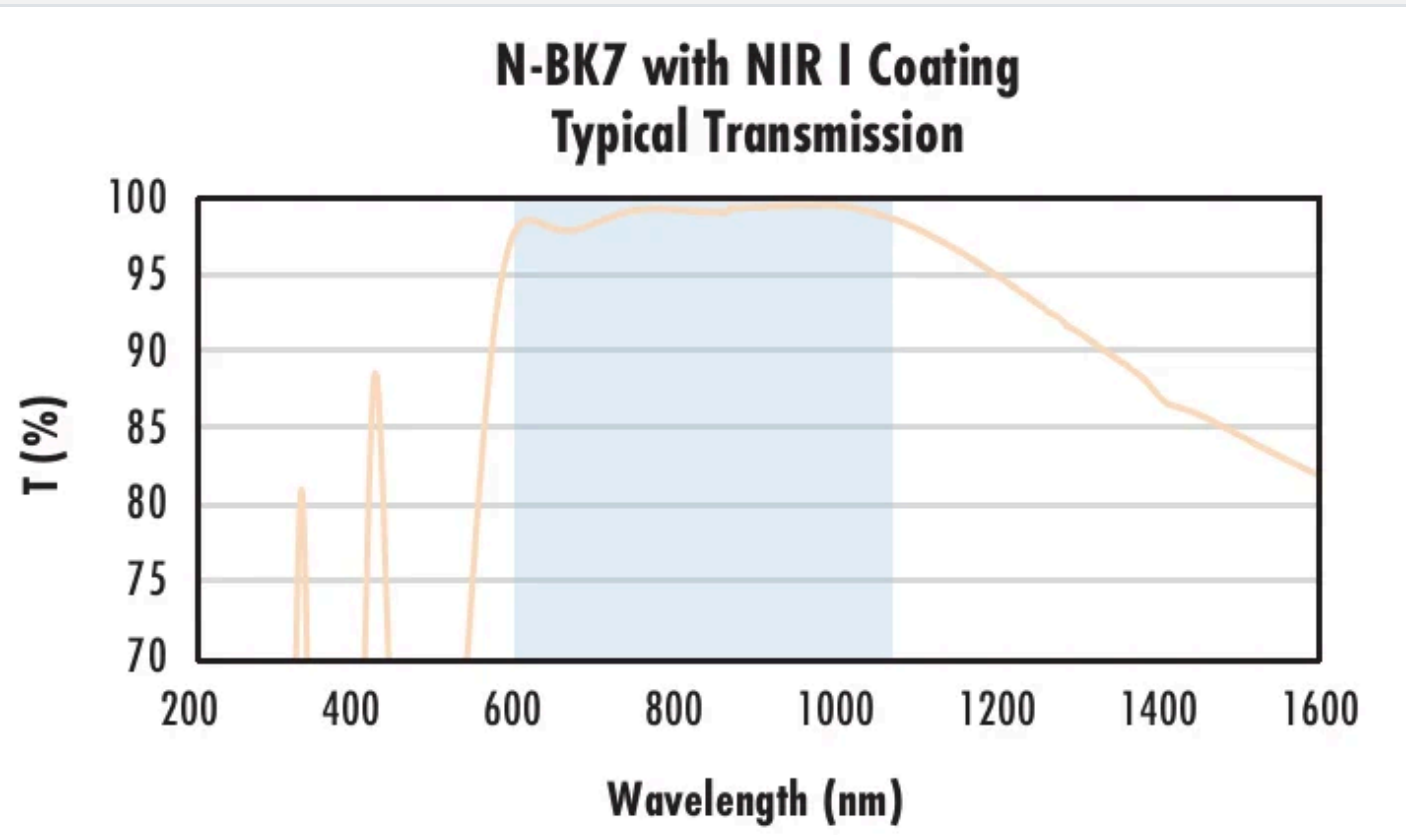
Typical transmission of a 3mm thick N-BK7 window w YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

Click Here to Download Data



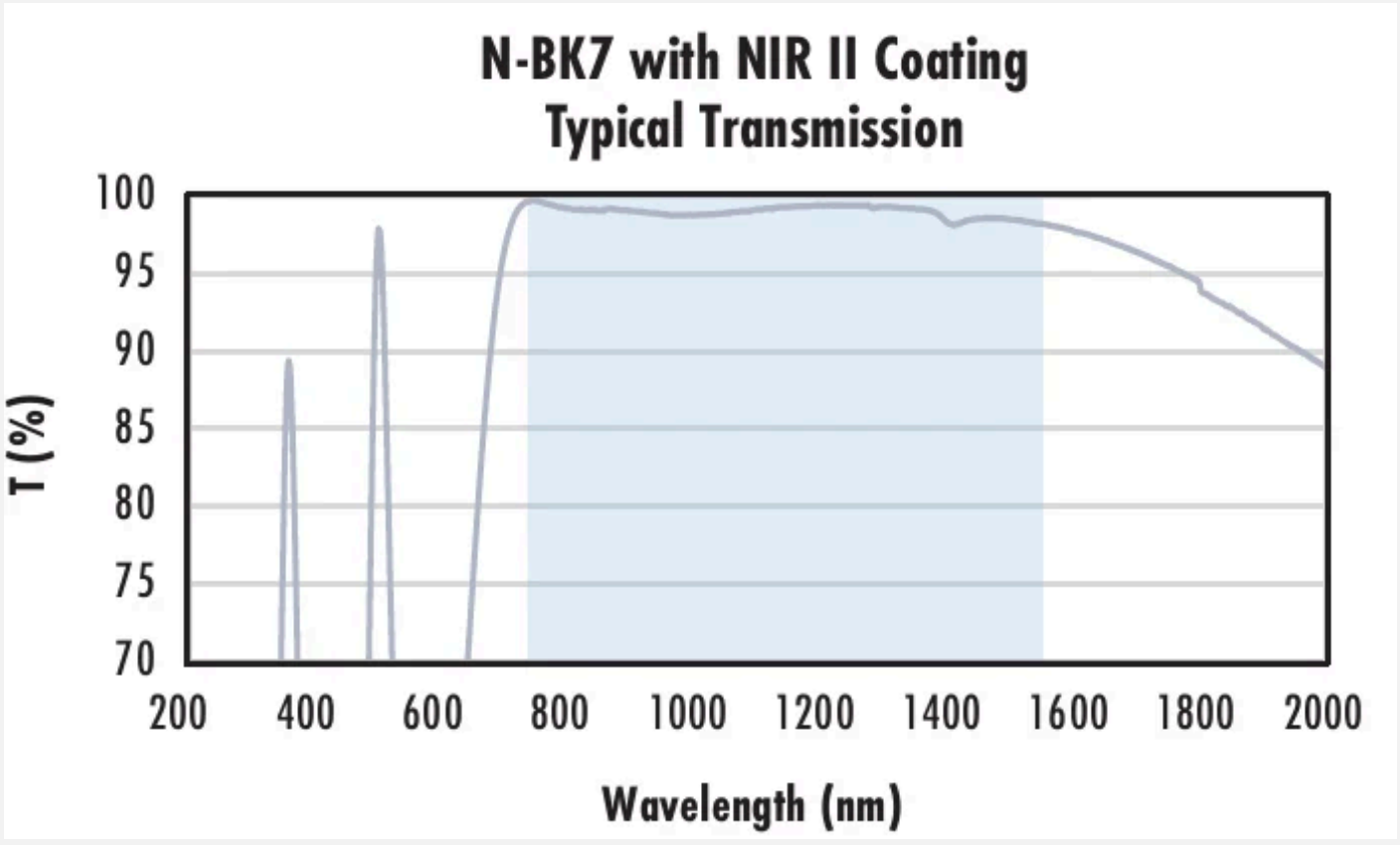
Typical transmission of a 3mm thick N-BK7 window witl I (600 - 1050nm) coating at 0° AOI.

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

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

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

Click Here to Download Data



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

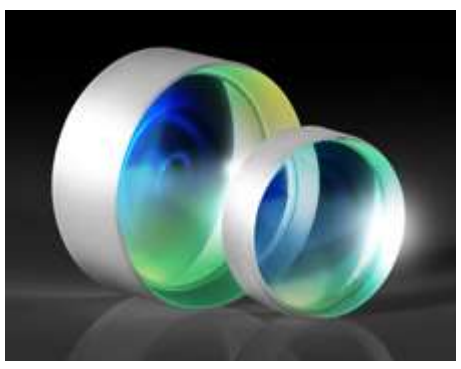
The blue shaded region indicates the coating desig
wavelengh range, with the following specification:

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.

Click Here to Download Data

Related Products



NIR I Coated Double-Concave (DCV) Lenses

Optical Cleaning

Optical Lens and Filter Mounts

Optical Lenses

Frequently Purchased Together

#27-507 – 125mm Dia x 500mm Focal Length, PCX Condenser Lens
C$194.60

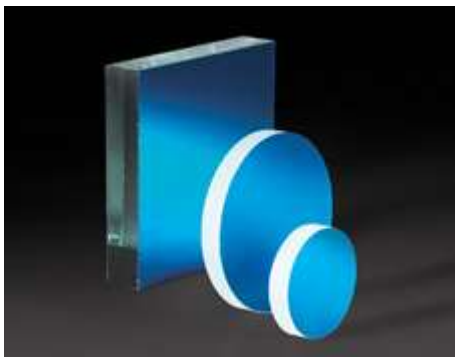
Qty

#32-327 – 25mm Dia. x 100mm FL, MgF_2 Coated, Achromatic Doublet Lens
C$170.80

Qty

#37-322 – Norland Optical Adhesive NOA 61, 1 oz. Application Bottle
C$57.00

Qty



#43-532 – 25mm Diameter Laser Diode Mirror
C$44.80

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price ☐	Buy
MORE+ 	9.0mm Optic Dia., Optic Mount	Fixed		#64-553	C$45.85 Request Quote	8 In Stock 1

	Title	Type	Compare	Stock Number	Price ☐	Buy
MORE+ 	9mm Diameter, S-Mount Thick Optic Mount	Fixed		#63-950	C$57.05 Request Quote	3 In Stock 1
MORE+ 	25mm Cage 9mm Diameter Lens Mount	Fixed		#85-552	C$64.05 Request Quote	3 In Stock 1
MORE+ 	9mm Diameter, C-Mount Thick Optic Mount	Fixed		#54-622	C$83.30 Request Quote	3 In Stock 1

Check out our full selection of mounts **here**.

Resources

Media Type

- ☐ Application Note
- ☐ Glossary
- ☐ Technical Tool
- ☐ Video
- ☐ FAQ
- ☐ Trending in Optics

APPLICATION NOTE
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

View More

;