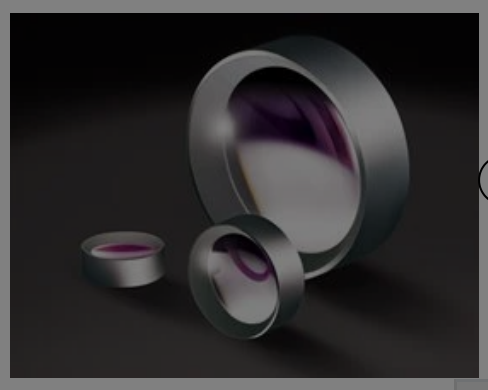
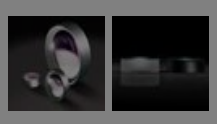
TECHSPEC®

50mm Diamete oncave Lens





Stock **#68-003** **6 In Stock** Other Coating Options

- 1 +

€74,50

ADD TO CART

Volume Pricing	
Qty 1-9	**€74,50** each
Qty 10-25	**€67,50** each
Qty 26-49	**€59,50** each
Need More?	**Request Quote**

Prices shown are exclusive of VAT/local taxes

Product Downloads

- STEP:step
- 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
- Download All

General

Type:	Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):	50.00 +0.0/-0.025	**Center Thickness CT (mm):**	5.00
Center Thickness Tolerance (mm):	±0.10	**Centering (arcmin):**	<1
Clear Aperture CA (mm):	49.00	**Edge Thickness ET (mm):**	11.23

Optical Properties

Effective Focal Length EFL (mm):	-100.00	**Substrate:** ⓘ	**N-BK7**
f/#:	2.00	**Coating:**	NIR II (750-1550nm)
Wavelength Range (nm):	750 - 1550	**Back Focal Length BFL (mm):**	-103.3
Coating Specification:	R_{abs} ≤1.5% @ 750 - 800nm R_{abs} ≤1.0% @ 800 - 1550nm R_{avg} ≤0.7% @ 750 - 1550nm	**Focal Length Specification Wavelength (nm):**	587.6
Focal Length Tolerance	±1.00	**Radius R_1 (mm):**	-51.68

(%):			
Surface Quality:	40-20	**Damage Threshold, Reference:** ⓘ	8 J/cm^2 @ 1064nm, 10ns
Power (P-V) @ 632.8nm:	1.5λ		

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

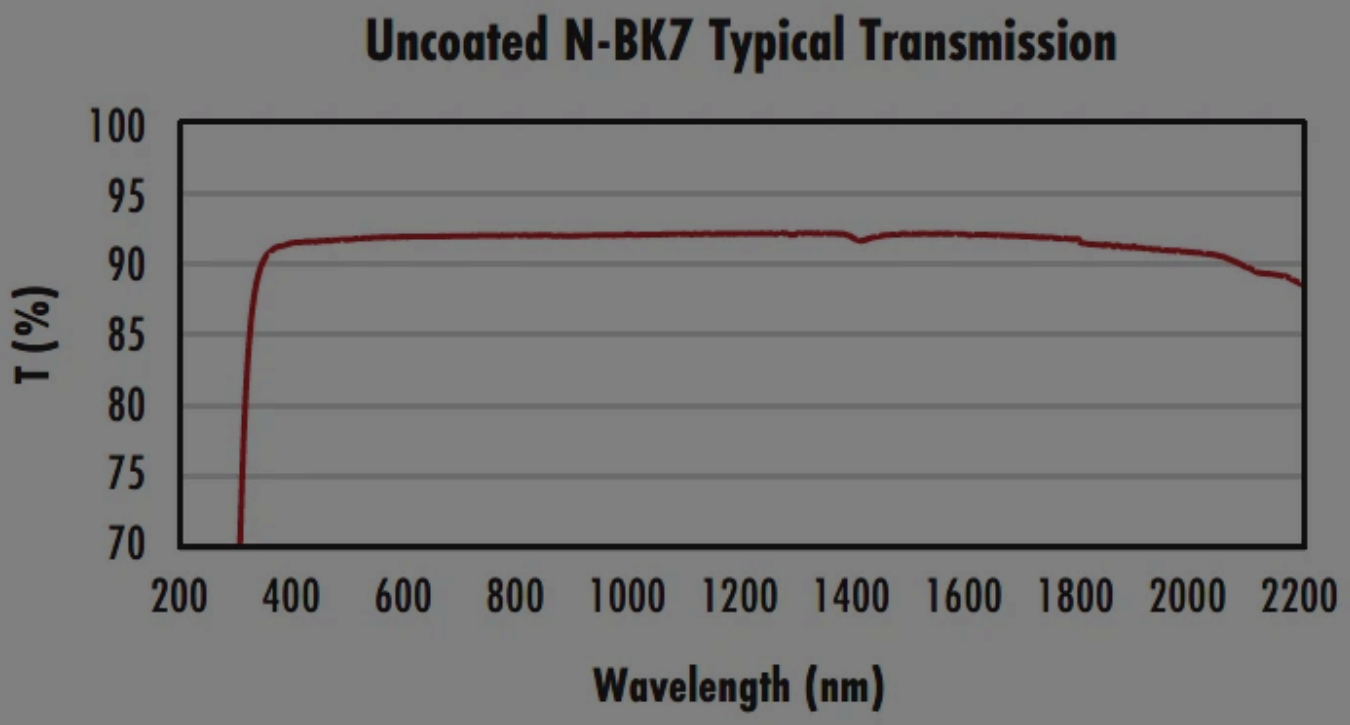
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

Product Details

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

TECHSPEC® NIR II Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the lens's output side 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 II Coated Plano-Concave (PCV) Lenses offer optimal performance in the 750 to 1550nm range. These lenses are also available **Uncoated**, **VIS-EXT**, **MgF_2**, **VIS 0°**, **VIS-NIR**, **YAG-BBAR**, or with **NIR I** AR coating options.

Technical Information



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

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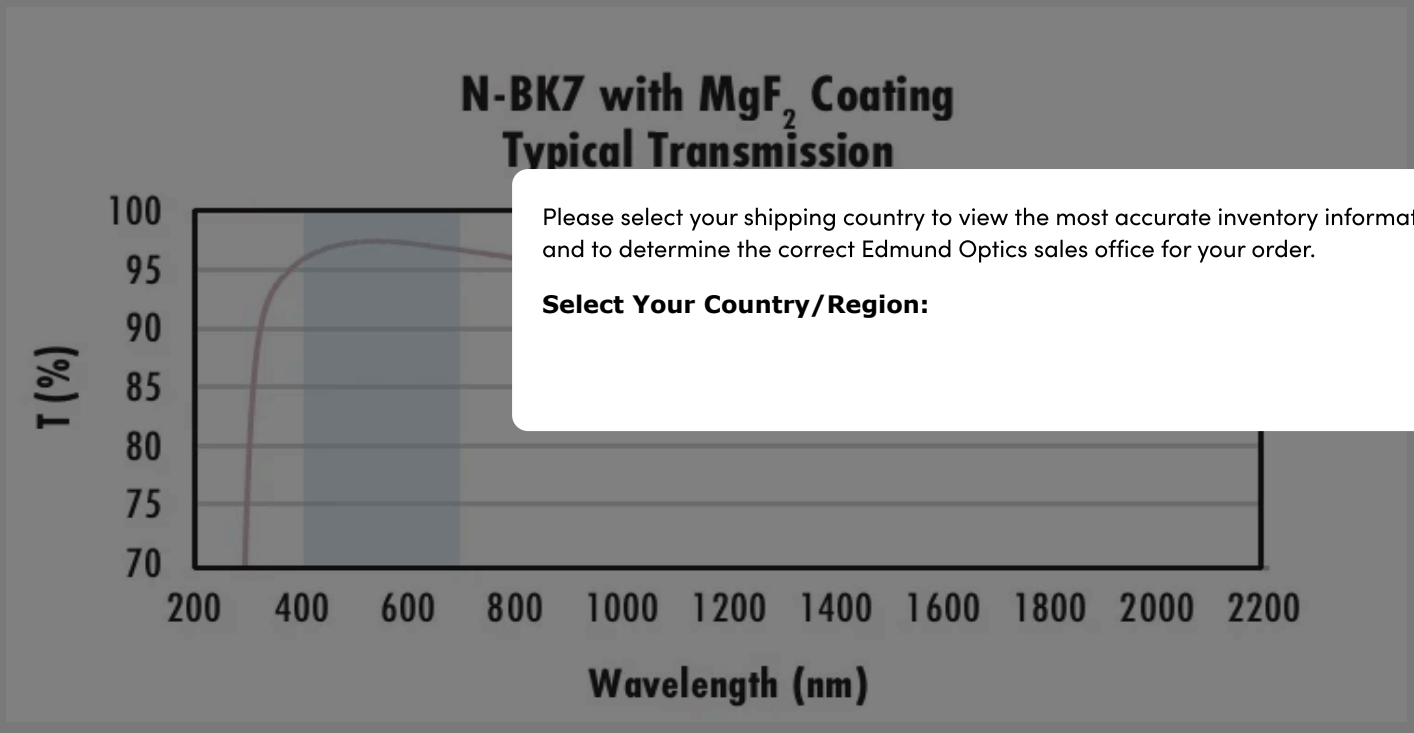

ical transmission of a 3mm thick N-BK7 window w
MgF2 (400-700nm) coating at 0° AOI.

he 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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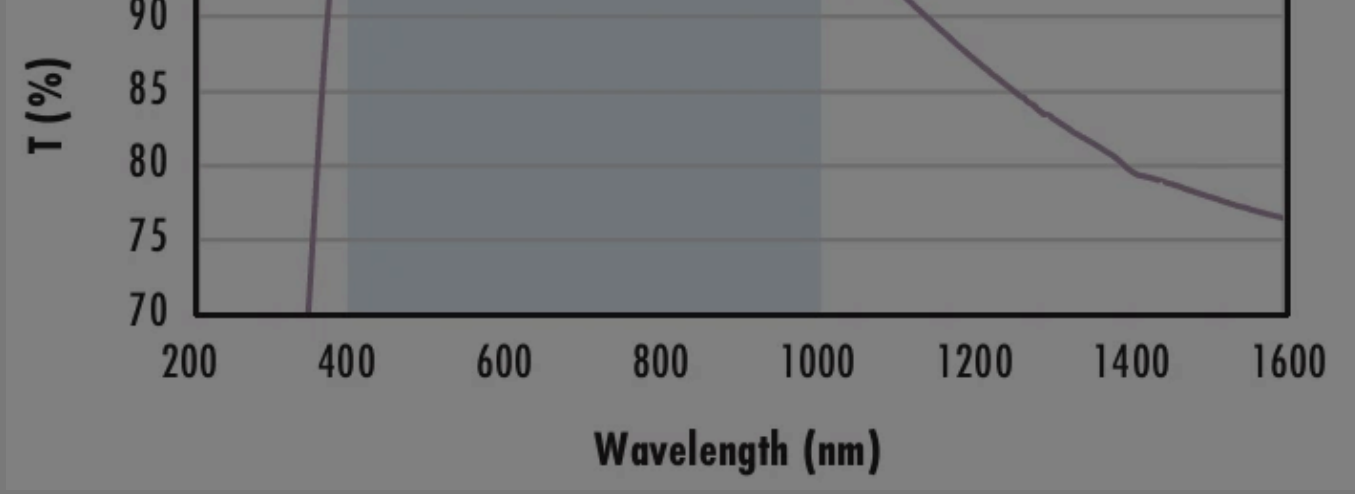

Typical transmission of a 3mm thick N-BK7 window w
VIS-EXT (350-700nm) coating at 0° AOI.

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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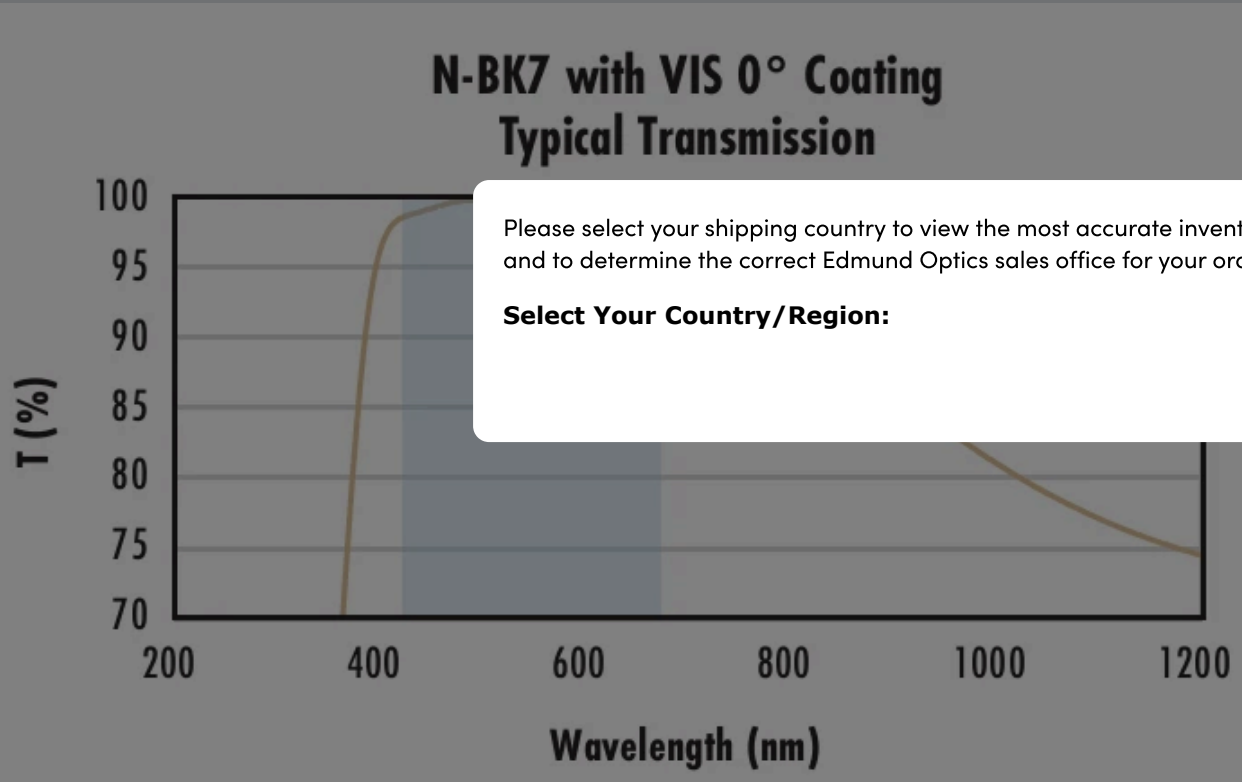

al transmission of a 3mm thick N-BK7 window wit
0° (425-675nm) coating at 0° AOI.

he 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.

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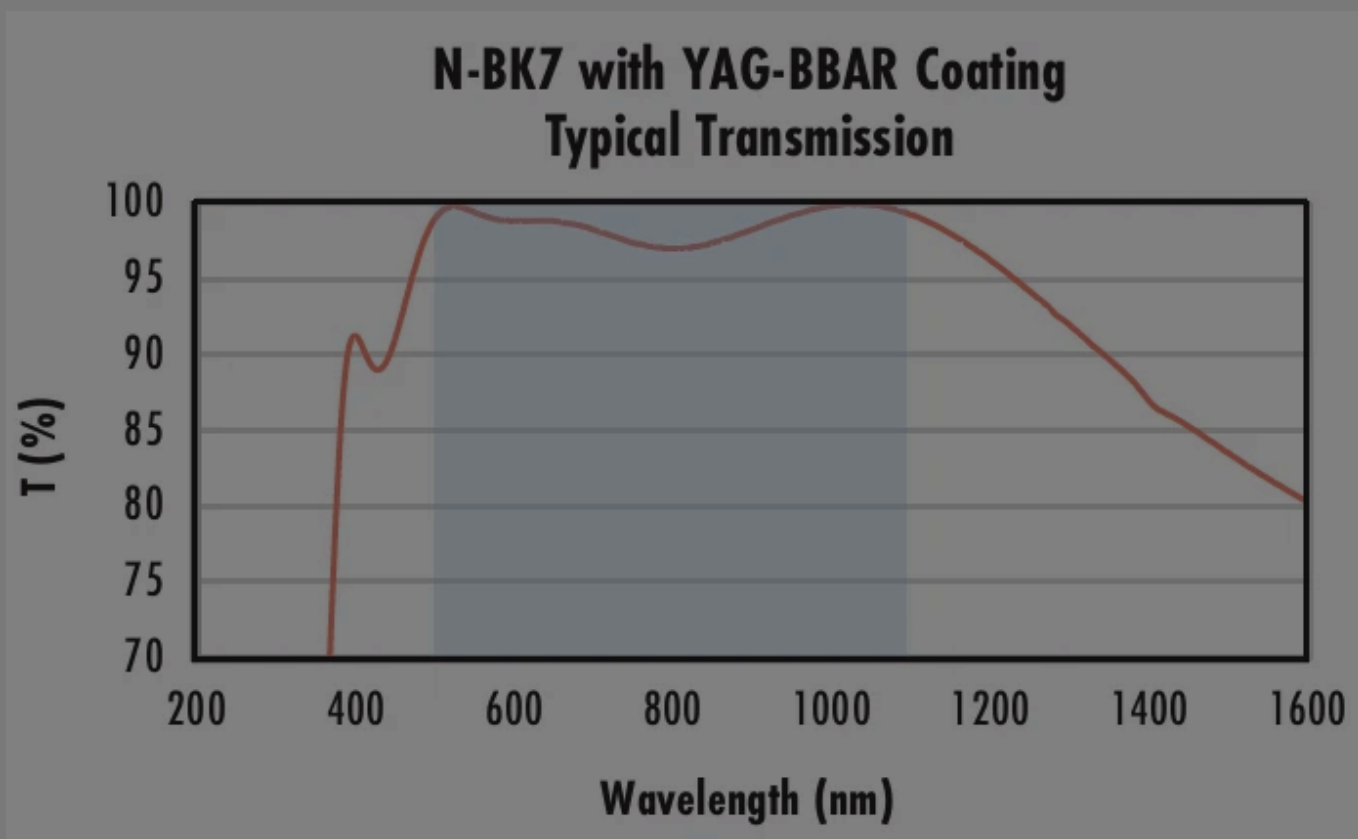

Typical transmission of a 3mm thick N-BK7 window w
YAG-BBAR (500-1100nm) coating at 0° AOI.

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

$R_{abs} \leq 0.25\%$ @ 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.

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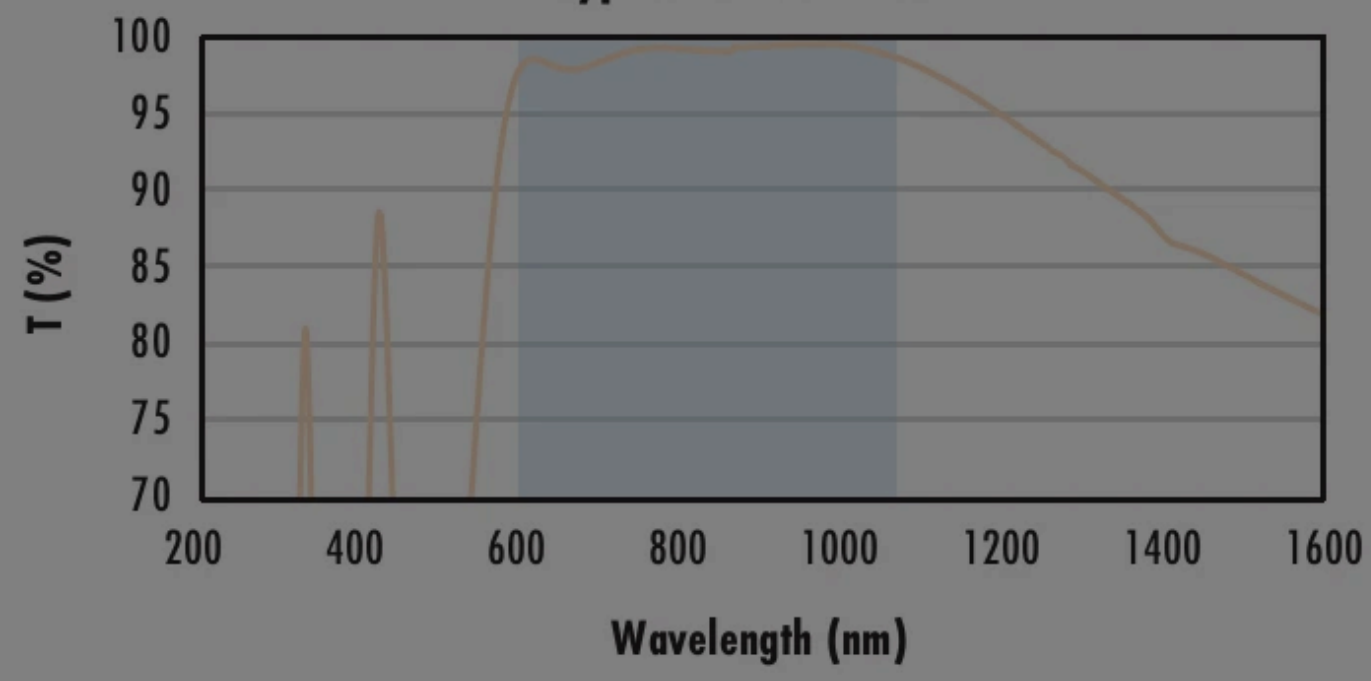

Typical transmission of a 3mm thick N-BK7 window witl
I (600 - 1050nm) coating at 0° AOI.

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

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

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

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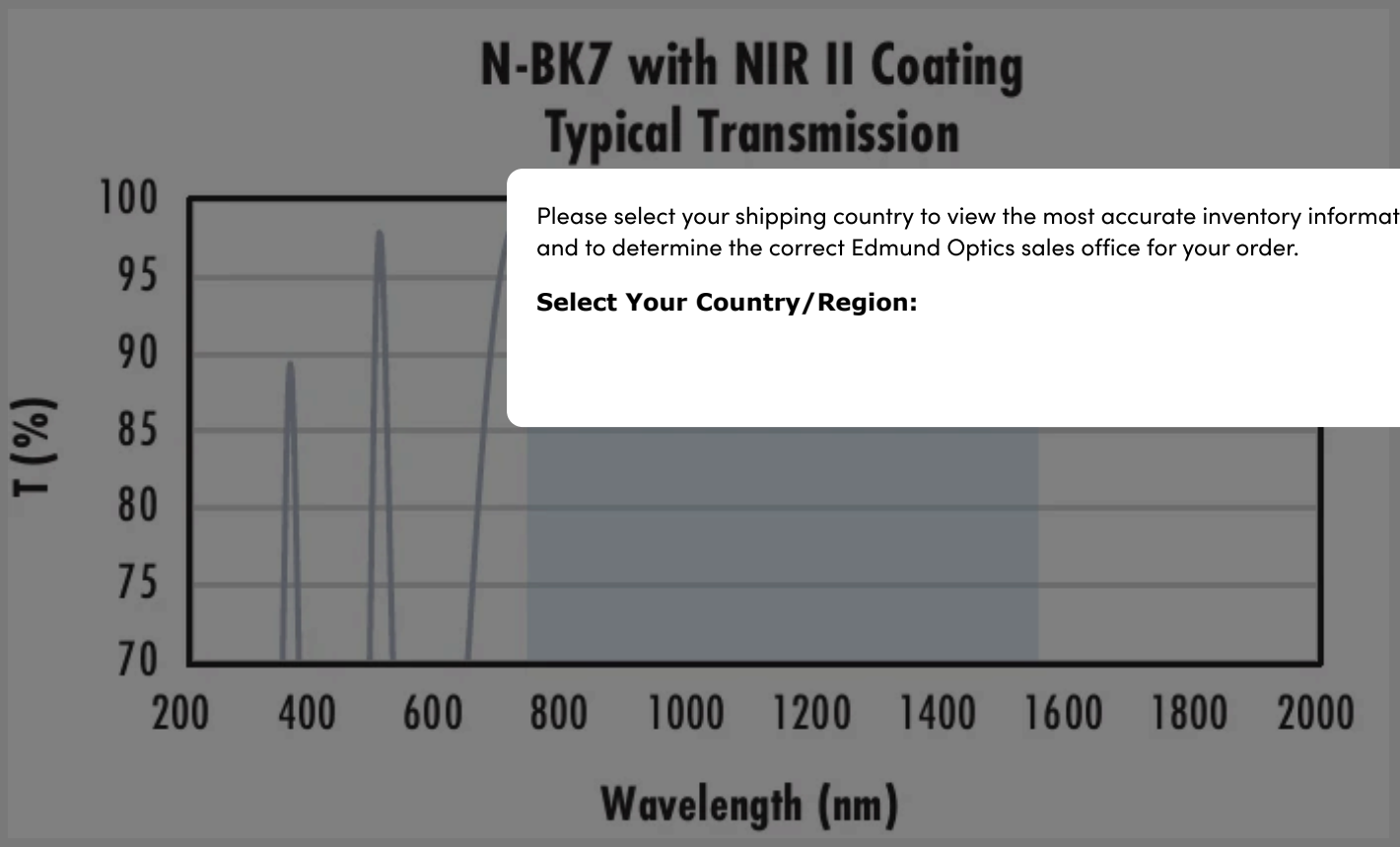

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al transmission of a 3mm thick N-BK7 window witl
II (750 - 1550nm) coating at 0° AOI.

he blue shaded region indicates the coating desig
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 fo
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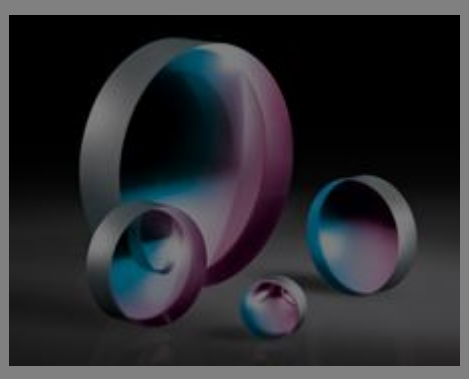
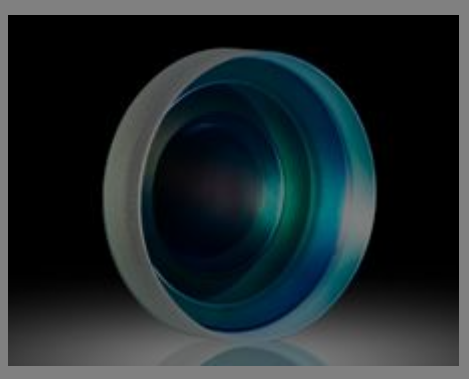
Related Products



UV Fused Silica Plano-Concave (PCV) Lenses



NIR II Coated Double-Concave (DCV) Lenses

Optical Cleaning

Optical Lens and Filter Mounts

Frequently Purchased Together

#27-513 - 200mm Dia x 400mm Focal Length, PCX Condenser Lens
€428,00
Qty

#32-978 - 50mm Dia. x 50mm FL Uncoated, Double-Convex Lens
€54,50
Qty

#33-431 - 25mm Dia, 0 - 26° Risley Prism Mount
€478,00
Qty

#33-499 - 1.5" Angle Mirror Mount
€86,00
Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price ☐	Buy
MORE+ 	50.0mm Optic Dia., Optic Mount	Fixed		#64-568	€49,25 Request Quote	8 In Stock 1
MORE+ 	50mm Diameter, T-Mount Thick Optic Mount	Fixed		#88-944	€108,00 Request Quote	20+ In Stock 1

	Title	Type	Compare	Stock Number	Price ☐	Buy
MORE+ 	50.0/50.8mm Optic Dia., X-Y Translating Mount				€308.00	3 In Stock 1
MORE+ 	50.0/50.8m Dia., 5 Axes Mount					10 In Stock 1

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

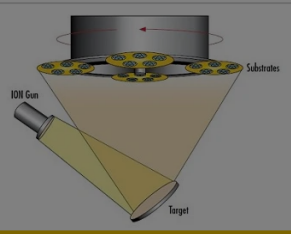
Resources

Media Type

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

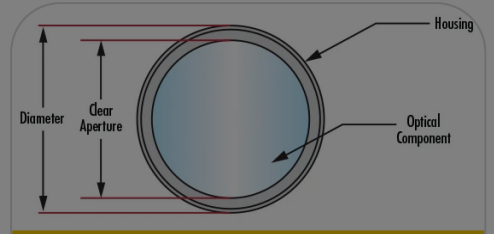
APPLICATION NOTE

Anti-Reflection (AR) Coatings



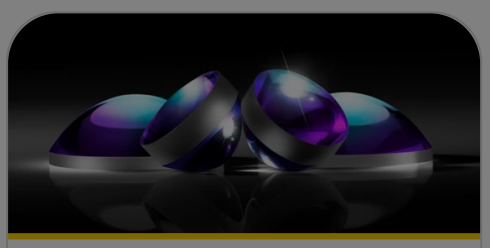
APPLICATION NOTE

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

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