

TECHSPEC®

50mm Dia. x 150mm FL, NIR II Coated, Double-Convex Lens



Stock

#67-675

6 In Stock

☐

Other Coating Options

-

1

+

€69⁰¹

ADD TO CART

Volume Pricing	
Qty 1-9	€69,01 each
Qty 10-24	€62,32 each
Qty 25-99	€55,11 each
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 Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

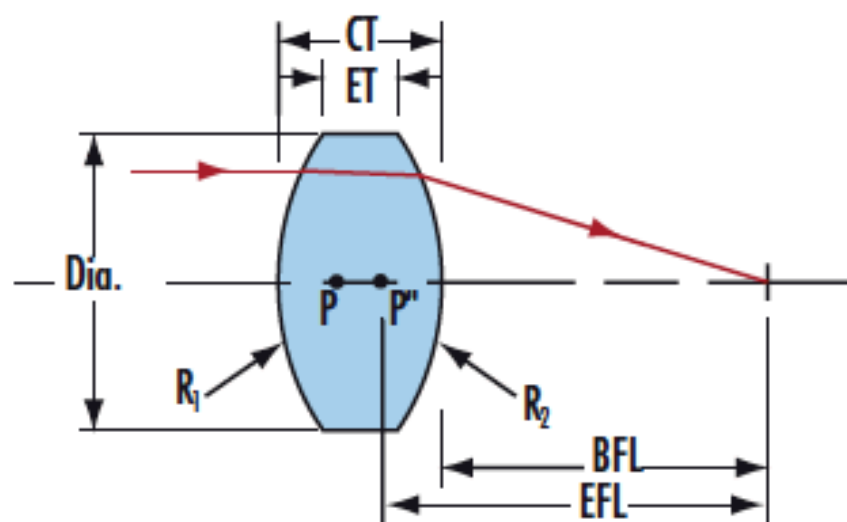
General

Double-Convex Lens		Type:
Physical & Mechanical Properties		
Diameter (mm):		50.00 +0.0/-0.025
Centering (arcmin):		<1
Center Thickness CT (mm):		9.00
Center Thickness Tolerance (mm):		±0.10
Edge Thickness ET (mm):		4.9
Clear Aperture CA (mm):		49.00
Optical Properties		
Back Focal Length BFL (mm):		147.00
Effective Focal Length EFL (mm):		150.00
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
Radius R ₁ =R ₂ (mm):		153.49
f/#:		3.00
Focal Length Specification Wavelength (nm):		587.6
Focal Length Tolerance (%):		±1.00
Numerical Aperture NA:		0.17
Wavelength Range (nm):		750 - 1550
Damage Threshold, Reference: ☐		8 J/cm ² @ 1064nm, 10ns
Regulatory Compliance		
RoHS 2015:		Compliant
Certificate of Conformance:		View
Reach 235:		Compliant

PRODUCT DETAILS

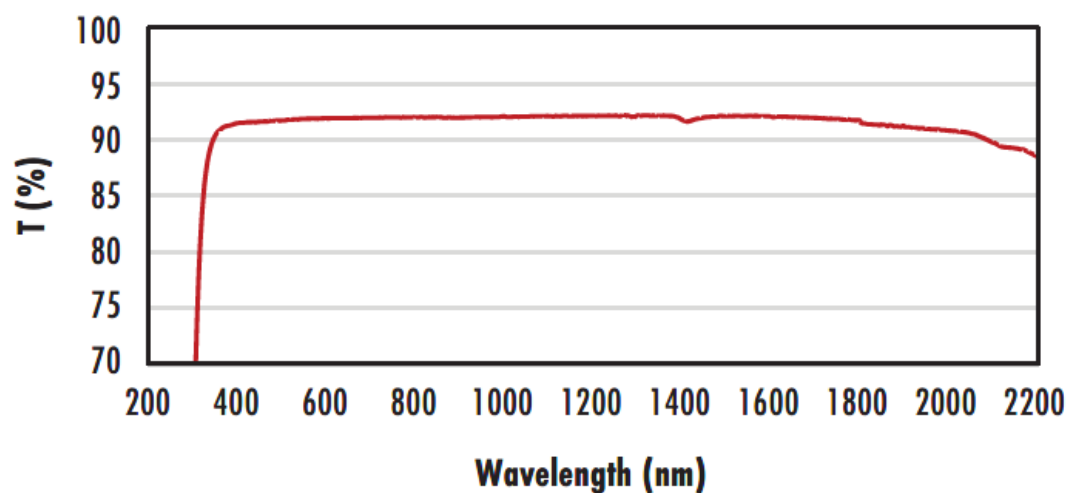
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
 - Minimize Aberrations Including Spherical and Coma
 - [UV Fused Silica DCX Lenses](#) Available
 - Other Coating Options Available: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [NIR I](#), [VIS-EXT](#), [VIS-NIR](#), and [YAG-BBAR](#)
- TECHSPEC® NIR II Coated Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) between 0.2 and 5. At a conjugate ratio of 1, aberrations such as spherical aberration, chromatic aberration, coma, and distortion are minimized or cancelled due to the symmetric lens design. TECHSPEC® NIR II Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

TECHNICAL INFORMATION



N-BK7

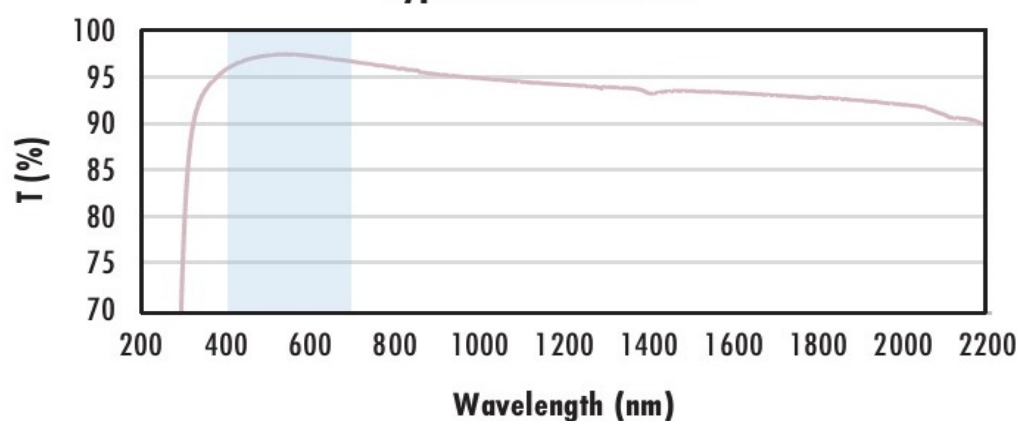
Uncoated N-BK7 Typical Transmission



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

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N-BK7 with MgF₂ Coating Typical Transmission



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

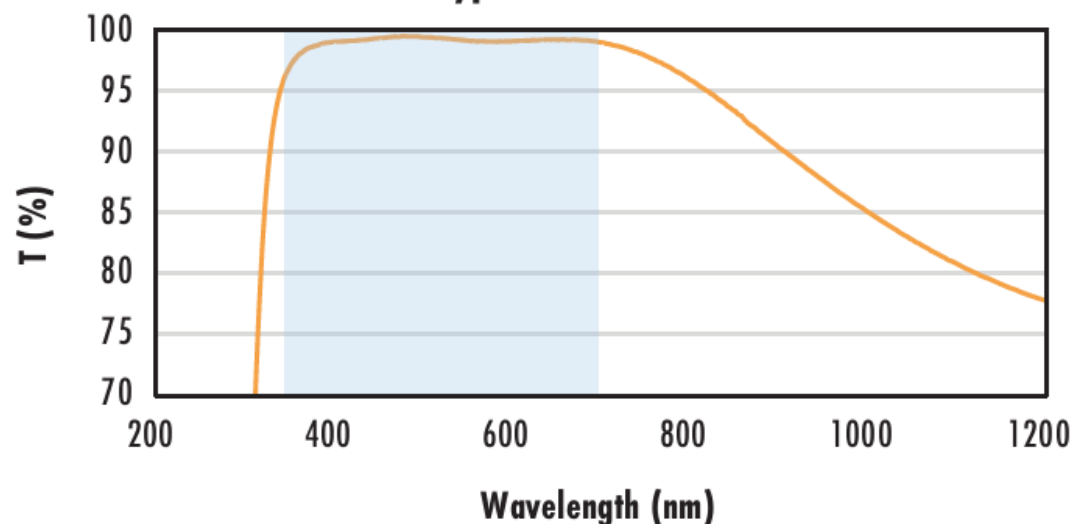
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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N-BK7 with VIS-EXT Coating Typical Transmission



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

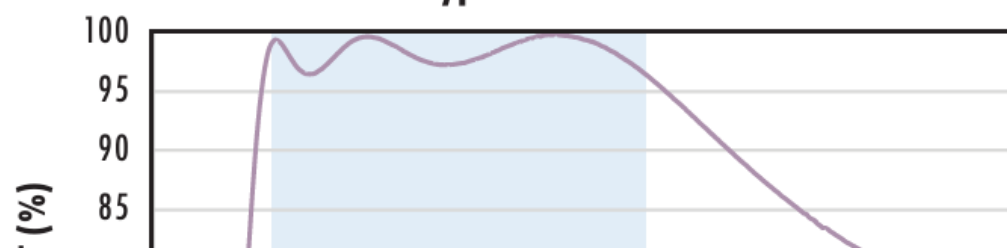
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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N-BK7 with VIS-NIR Coating Typical Transmission



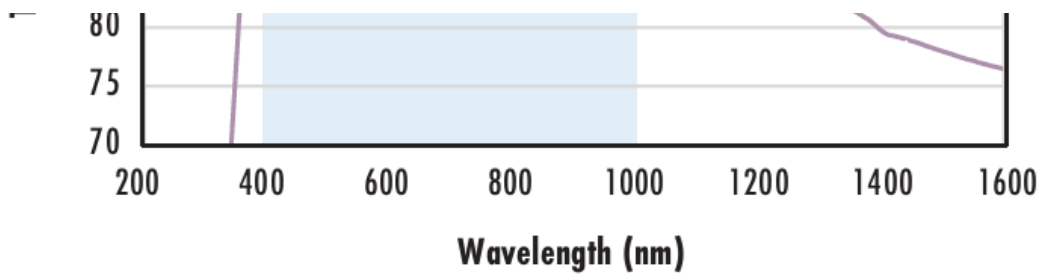
Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

$R_{abs} \leq 0.25\% @ 880\text{nm}$

$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$

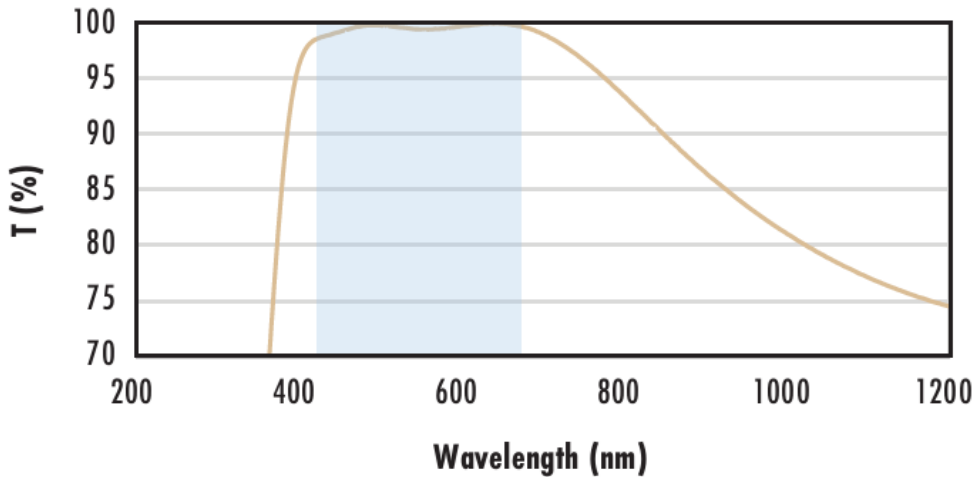
$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$



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

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**N-BK7 with VIS 0° Coating
Typical Transmission**



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

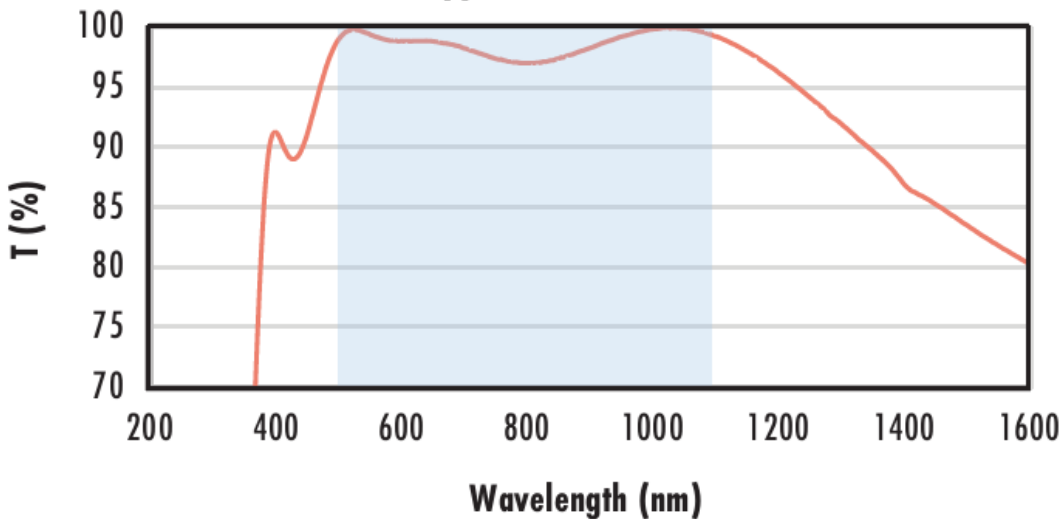
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**N-BK7 with YAG-BBAR Coating
Typical Transmission**



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 wavelength range, with the following specification:

$R_{abs} \leq 0.25\%$ @ 532nm

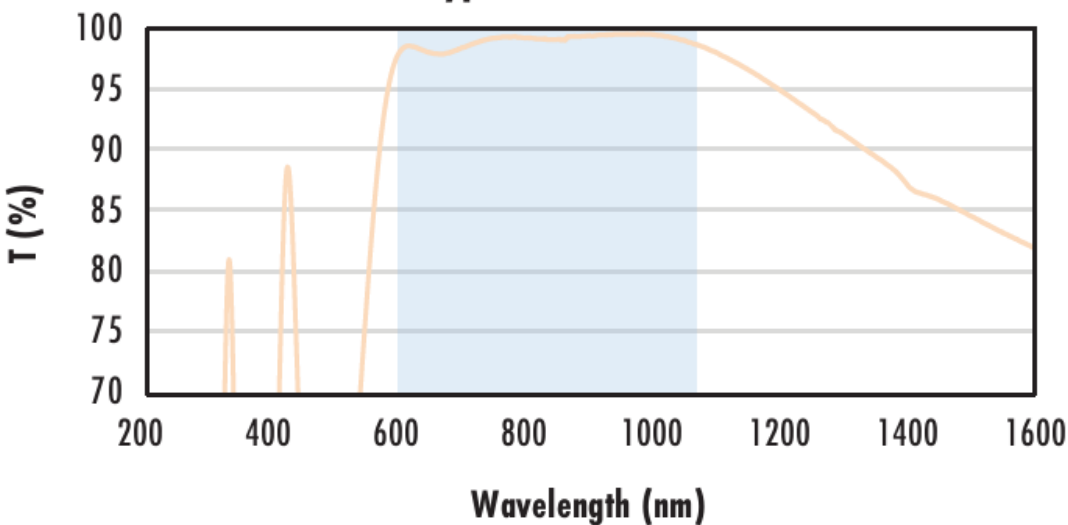
$R_{abs} \leq 0.25\%$ @ 1064nm

$R_{avg} \leq 1.0\%$ @ 500 - 1100nm

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

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**N-BK7 with NIR I Coating
Typical Transmission**



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

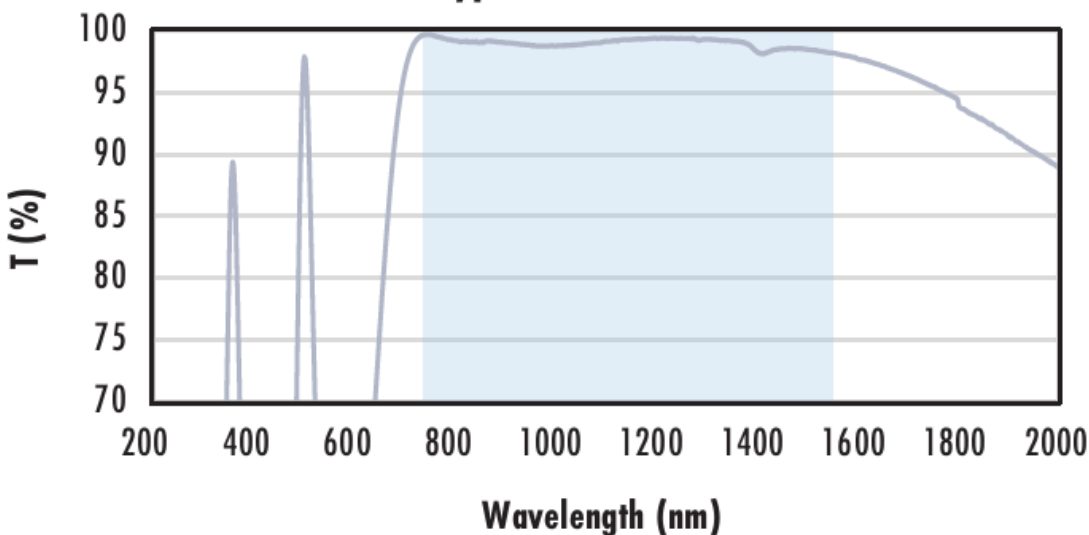
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**N-BK7 with NIR II Coating
Typical Transmission**



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 wavelength 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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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](#).

COMPATIBLE MOUNTS
