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**TECHSPEC®**

# 12.7mm Dia. x 19.1mm FL, NIR I Coated, Plano-Convex Lens



Stock #62-578 **20+ In Stock** [Other Coating Options](#)

1 C\$66<sup>.50</sup>

**ADD TO CART**



Volume Pricing	
Qty 1-9	C\$66.50 each
Qty 10-24	C\$59.50 each
Qty 25-49	C\$53.20 each
Need More?	<a href="#">Request Quote</a>

Product Downloads	
STEP:stp	Curve:pdf
PDF Drawing:pdf	
ISO 10110 Drawing	
IGES:igs	Curve (xlsx)
Zemax:zar	Zemax:zmx
eDrawing:eprt	Code V:seq
EO Spec Sheet	<a href="#">Download All</a>

General			
<b>Type:</b>	Plano-Convex Lens		
Physical & Mechanical Properties			
<b>Diameter (mm):</b>	12.70 +0.0/-0.025	<b>Centering (arcmin):</b>	<1
<b>Center Thickness CT (mm):</b>	4.00 ±0.10	<b>Edge Thickness ET (mm):</b>	1.69
<b>Clear Aperture CA (mm):</b>	11.7	<b>Bevel:</b>	Protective as needed
Optical Properties			
<b>Effective Focal Length EFL (mm):</b>	19.10 @ 587.6nm	<b>Back Focal Length BFL (mm):</b>	16.46
<b>Coating:</b>	NIR I (600-1050nm)	<b>Coating Specification:</b>	R <sub>avg</sub> ≤0.5% @ 600 - 1050nm
<b>Substrate:</b> ⓘ	<b>N-BK7</b>	<b>Surface Quality:</b>	40-20
<b>Power (P-V) @ 632.8nm:</b>	1.5λ	<b>Irregularity (P-V) @ 632.8nm:</b>	λ/4
<b>Focal Length Tolerance (%):</b>	±1	<b>Radius R<sub>1</sub> (mm):</b>	9.87
<b>f/#:</b>	1.5	<b>Numerical Aperture NA:</b>	0.33
<b>Wavelength Range (nm):</b>	600 - 1050	<b>Damage Threshold, By Design:</b> ⓘ	7 J/cm <sup>2</sup> @ 1064nm, 10ns

## 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](#).

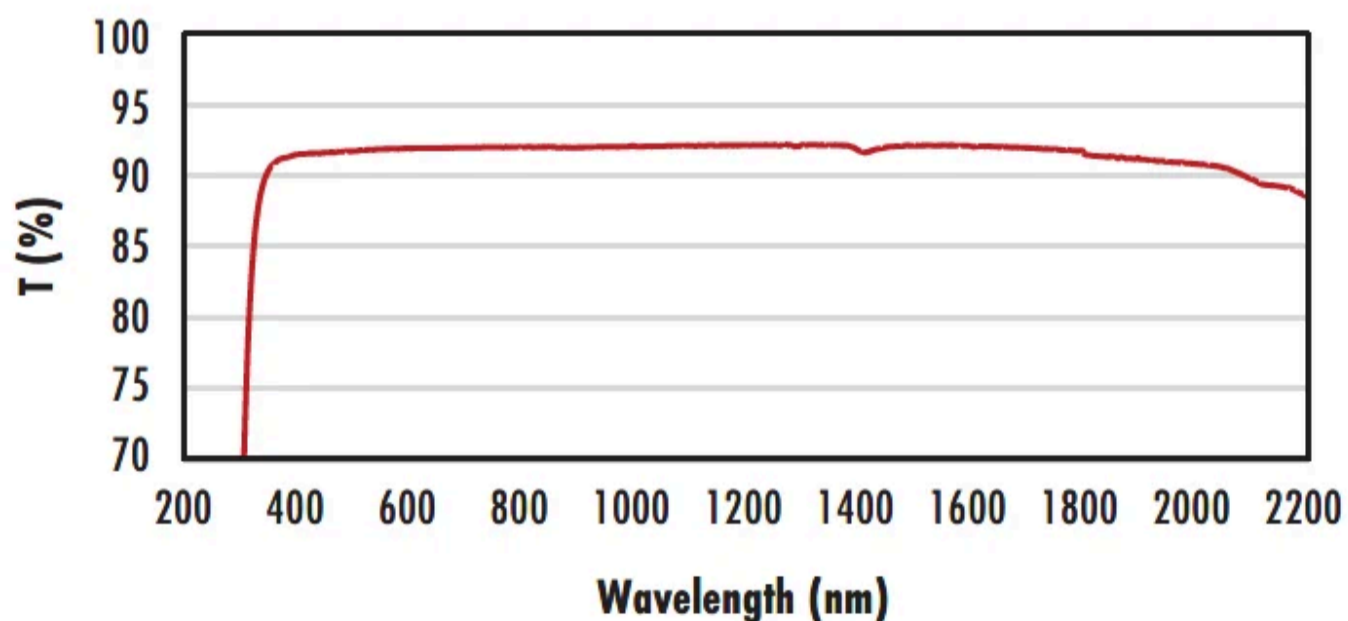
## Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: **Uncoated, MgF<sub>2</sub>, VIS 0°, VIS-NIR, NIR II, VIS-EXT,** and **YAG-BBAR**

TECHSPEC® NIR I 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. TECHSPEC® NIR I 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 **MgF<sub>2</sub>, VIS 0°, VIS-NIR, NIR II, VIS-EXT,** and **YAG-BBAR**.

## Technical Information

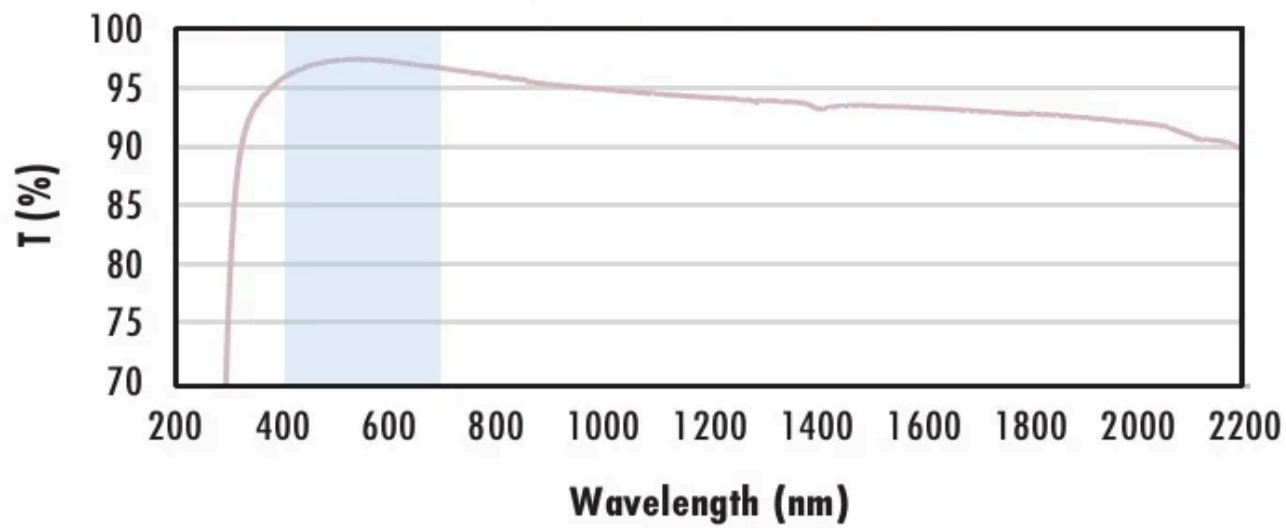
### Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

### N-BK7 with MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window w MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

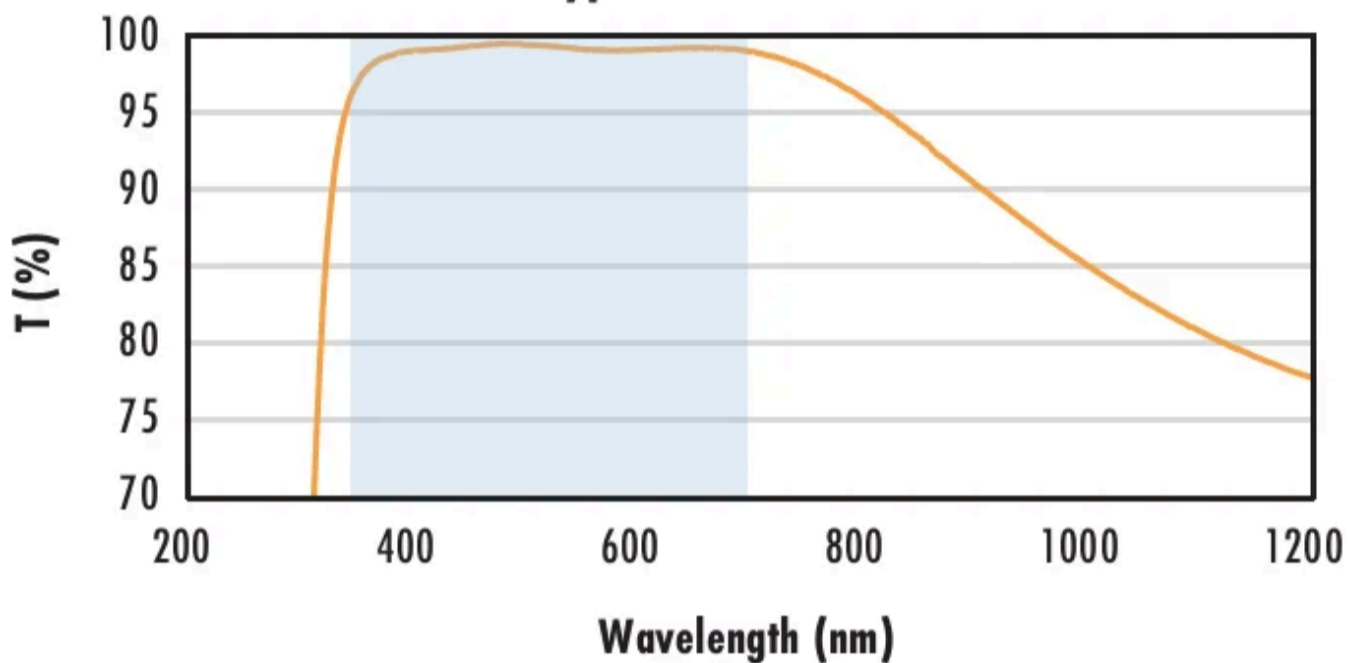
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

### N-BK7 with VIS-EXT Coating Typical Transmission



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 design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

### N-BK7 with VIS-NIR Coating Typical Transmission



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 design wavelength range, with the following specification:

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

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

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

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

[Click Here to Download Data](#)

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



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

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

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

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:

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

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

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

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 I (600 – 1050nm) coating at 0° AOI.

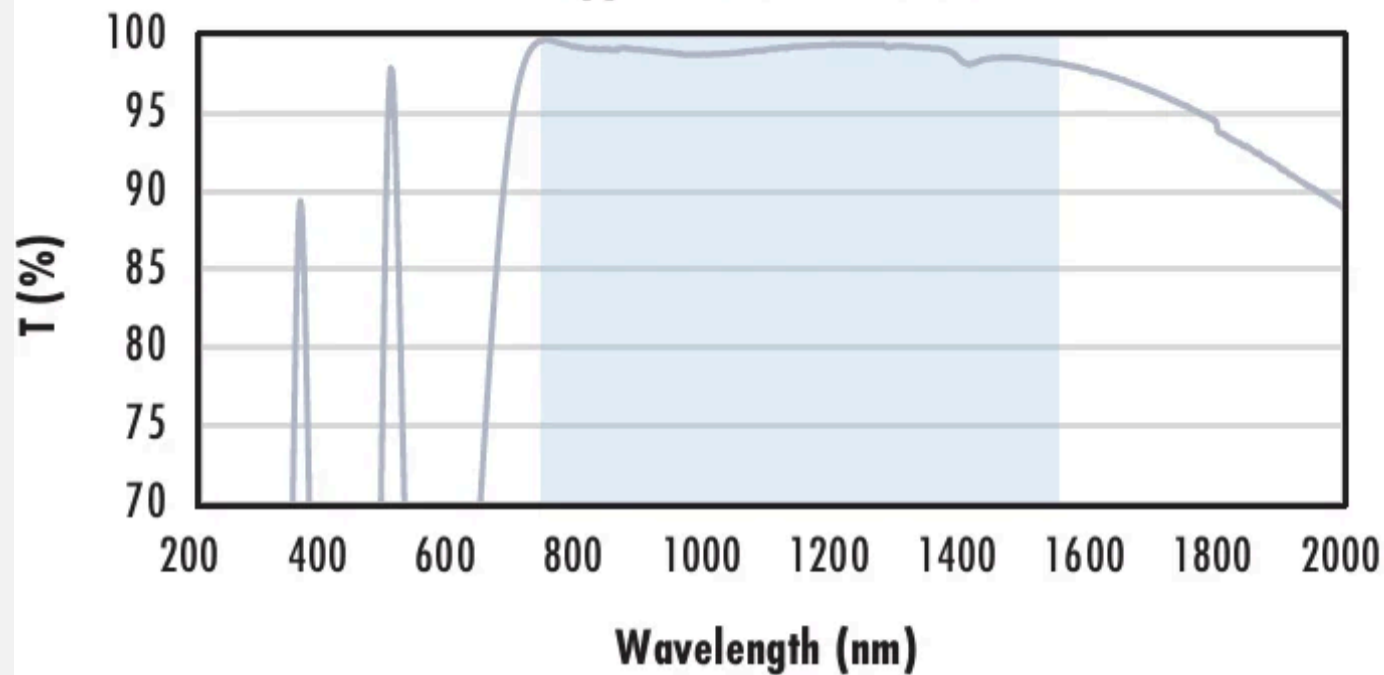
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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 II (750 - 1550nm) coating at 0° AOI.

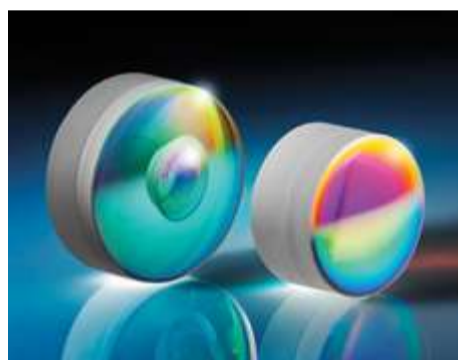
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 1.5\%$  @ 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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## Related Products



Near-IR (NIR) Achromatic Lenses



Optical Cleaning



Plano-Convex (PCX) Lenses



Optical Lens and Filter Mounts

## Frequently Purchased Together



#32-623 - 8mm Max. Aperture, Iris Diaphragm  
C\$74.90

Qty



#43-729 - 10mm Dia Protected Gold, 4-6λ Mirror  
C\$60.20

Qty



#43-955 - 25mm Diameter, 45° AOI, Hot Mirror  
C\$74.20

Qty

































#02-105 - 12.5mm Diameter Float Glass Window  
C\$21.00

Qty

## Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	12.5/12.7mm Optic Dia., SM05 Thin Mount, M4	Fixed		#13-789	C\$27.30 <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., SM05 Thin Mount, 8-32	Fixed		#13-790	C\$27.30 <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>

	Title	Type	Compare	Stock Number	Price	Buy
 	12.7mm Optic Dia., Optic Mount	Fixed		#64-556	C\$45.85 Request Quote	11 In Stock <input type="text" value="1"/> 
 	12.7mm Thin Inner Single Optic Mount	Fixed		#38-751	C\$57.40 Request Quote	7 In Stock <input type="text" value="1"/> 
 	12.7mm Thick Inner Single Optic Mount	Fixed		#38-757	C\$57.40 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., L-Slot Direct Mount	Fixed		#36-416	C\$82.60 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., Side Flange Direct Mount	Fixed		#36-418	C\$82.60 Request Quote	11 In Stock <input type="text" value="1"/> 
 	12.7mm Thin Inner Pair Optic Mounts	Fixed		#11-051	C\$112.70 Request Quote	14 In Stock <input type="text" value="1"/> 
 	12.7mm Thick Inner Pair Optic Mounts	Fixed		#11-053	C\$112.70 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., L-Slot and Rotation Direct Mount	Adjustable - Rotary		#36-417	C\$135.10 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-955	C\$365.40 Request Quote	5 In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-958	C\$600.60 Request Quote	5 In Stock <input type="text" value="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



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