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TECHSPEC®

6.0mm Dia. x 18.0mm FL, NIR I Coated, Plano-Convex Lens



Stock #48-718 **20+ In Stock** [Other Coating Options](#)

- 1 +

MRP ₹4,288

Price inclusive of all taxes

ADD TO CART



Volume Pricing	
Qty 1-9	₹4,288 each
Qty 10-24	₹3,834 each
Qty 25-49	₹3,430 each
Need More?	Request Quote

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	Download All

General

Type: Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm): 6.00 +0.0/-0.025	Centering (arcmin): <1
Center Thickness CT (mm): 1.42 ±0.05	Edge Thickness ET (mm): 0.92
Clear Aperture CA (mm): 5.4	Bevel: Protective as needed

Optical Properties

Effective Focal Length EFL (mm): 18.00 @ 587.6nm	Back Focal Length BFL (mm): 17.07
Coating: NIR I (600-1050nm)	Coating Specification: R _{avg} ≤0.5% @ 600 - 1050nm
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 R₁ (mm): 9.30
f/#: 3	Numerical Aperture NA: 0.17
Wavelength Range (nm): 600 - 1050	Damage Threshold, By Design: 7 J/cm ² @ 1064nm, 10ns

Regulatory Compliance

RoHS 2015: Compliant	Certificate of Conformance: View
Reach 235: Compliant	
Country of Origin: Japan	Imported By: Edmund Optics India Private Limited 267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038 Phone: +91-80-6845 0000

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](#).

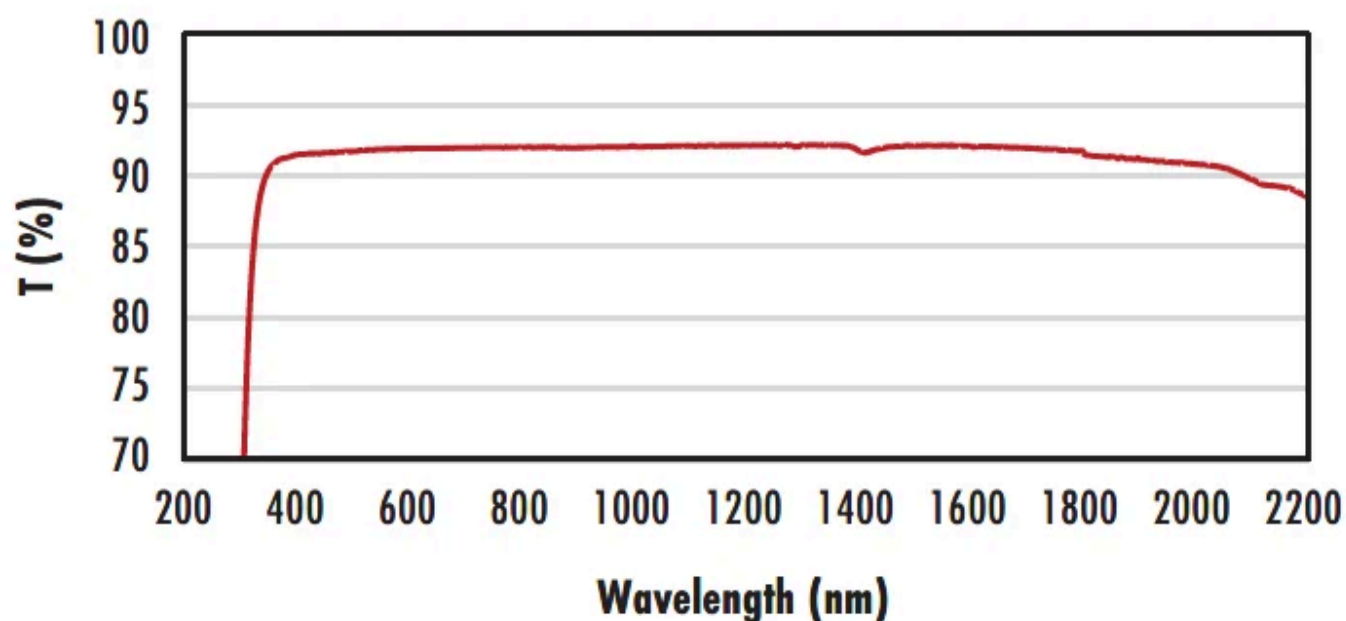
Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: **Uncoated**, **MgF₂**, **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 **MgF₂**, **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 MgF₂ Coating Typical Transmission



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

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

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

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.

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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:

$$\begin{aligned} R_{abs} &\leq 0.25\% \text{ @ } 880\text{nm} \\ R_{avg} &\leq 1.25\% \text{ @ } 400 - 870\text{nm} \\ R_{avg} &\leq 1.25\% \text{ @ } 890 - 1000\text{nm} \end{aligned}$$

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 0° (425–675nm) coating at 0° AOI.

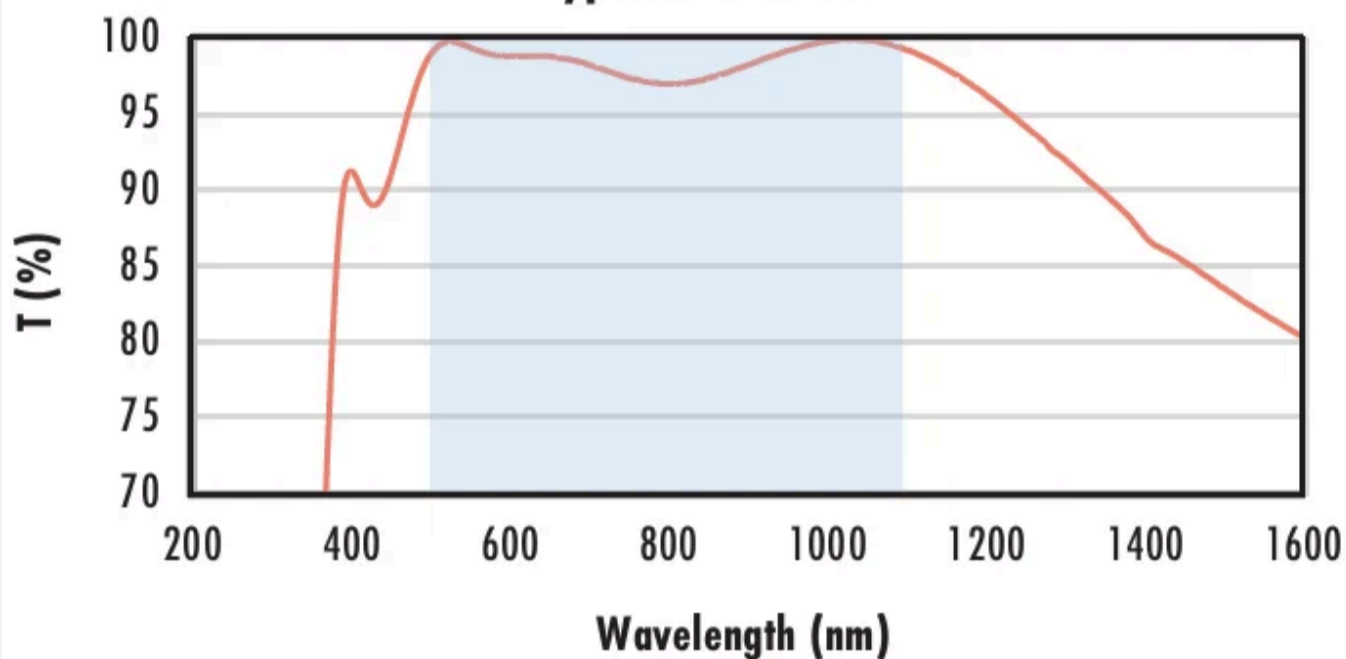
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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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:

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

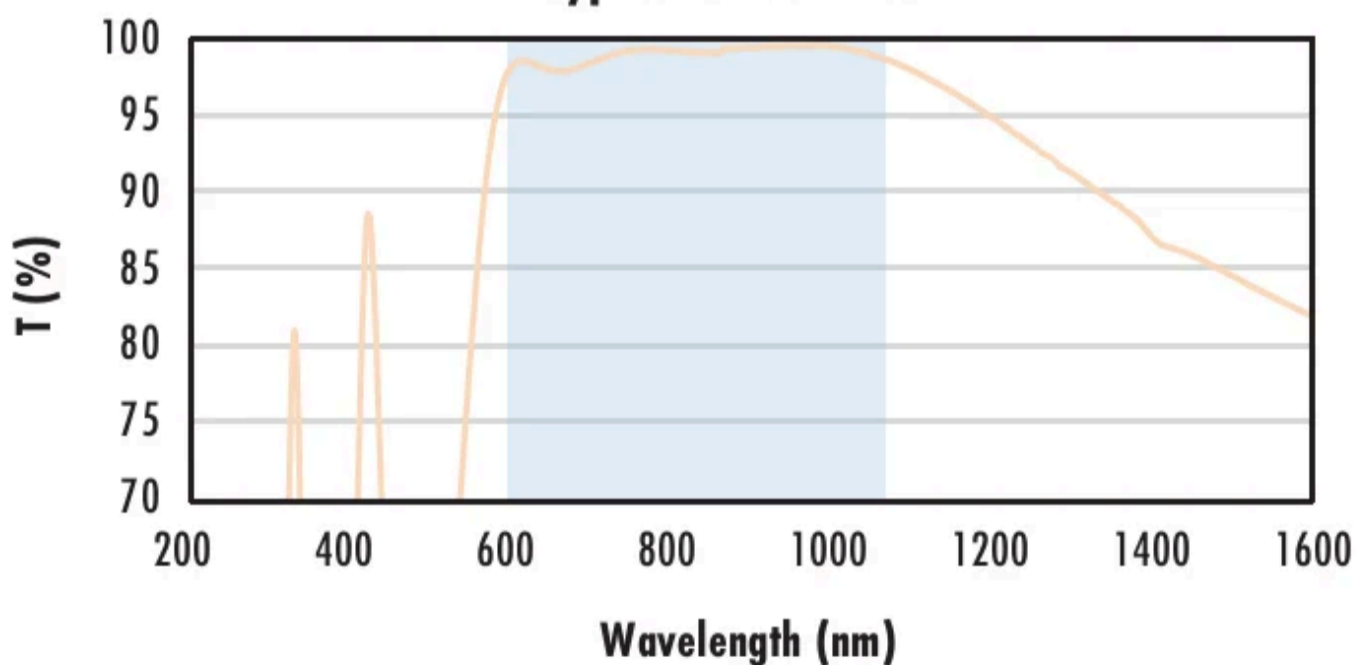
$$R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$$

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

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.

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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.

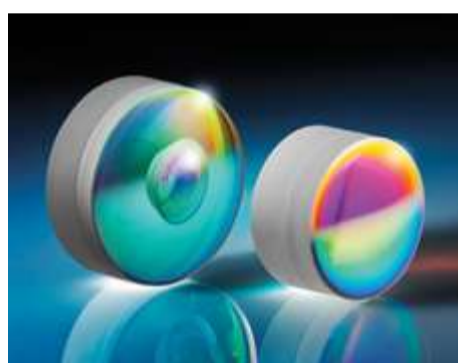
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 1.5\%$ @ 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



#32-471 - 6.0mm Dia. x 12.0mm FL Uncoated, Plano-Convex Lens
₹2,976

Qty



#32-331 - 10mm, Aluminum Coated, N-BK7 Right Angle Prism
₹7,012

Qty



#32-333 - 15mm, Aluminum Coated, N-BK7 Right Angle Prism
₹8,173



Qty



#32-469 - 6.0mm Dia. x 9.0mm FL Uncoated, Plano-Convex Lens
₹3,077

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
 	6.0mm Optic Dia., Optic Mount	Fixed		#64-552	₹3,305 Request Quote	2 In Stock <input type="text" value="1"/>

Check out our full selection of mounts [here](#).

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Media Type

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APPLICATION NOTE

Anti-Reflection
(AR) Coatings

APPLICATION NOTE

An
Introduction to
Optical
Coatings

APPLICATION NOTE

Understanding
Optical
Specifications

APPLICATION NOTE

Lens Geometry
Performance
Comparison

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NIR (Near
Infrared)

GLOSSARY

VIS/NIR
Coatings

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