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TECHSPEC®

18.0mm Dia. x 50.0mm FL, VIS 0°, Inked, Plano-Convex Lens


 Stock #38-316-INK [CONTACT US](#) [Other Coating Options](#)

 - 1 + £46.⁰⁰
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| Volume Pricing | |
|----------------|-------------------------------|
| Qty 1-9 | £46.00 each |
| Qty 10-24 | £41.60 each |
| Qty 25-49 | £36.80 each |
| Need More? | Request Quote |

Prices shown are exclusive of VAT/local taxes

| Product Downloads | |
|-------------------|-----------------|
| STEP:step | PDF Drawing:pdf |
| ISO 10110 Drawing | |
| IGES:igs | Zemax:zar |
| Zemax:zmx | eDrawing:eprt |
| Code V:seq | EO Spec Sheet |

| General | | | |
|---|-----------------------|--------------------------------------|--------------------------------------|
| Type: | Plano-Convex Lens | | |
| Physical & Mechanical Properties | | | |
| Diameter (mm): | 18.00 ±0.025 | Centering (arcmin): | <1 |
| Center Thickness CT (mm): | 2.90 ±0.10 | Edge Thickness ET (mm): | 1.28 |
| Clear Aperture CA (mm): | 17 | Bevel: | Protective as needed |
| Optical Properties | | | |
| Effective Focal Length EFL (mm): | 50.00 @ 587.6nm | Back Focal Length BFL (mm): | 48.09 |
| Coating: | VIS 0° (425-675nm) | Coating Specification: | R _{avg} ≤0.4% @ 425 - 675nm |
| 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): | 25.84 |
| f/#: | 2.78 | Numerical Aperture NA: | 0.18 |

Wavelength Range (nm): 425 - 675

Damage Threshold, By Design: 5 J/cm² @ 532nm, 10ns

Regulatory Compliance

Certificate of Conformance: [View](#)

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

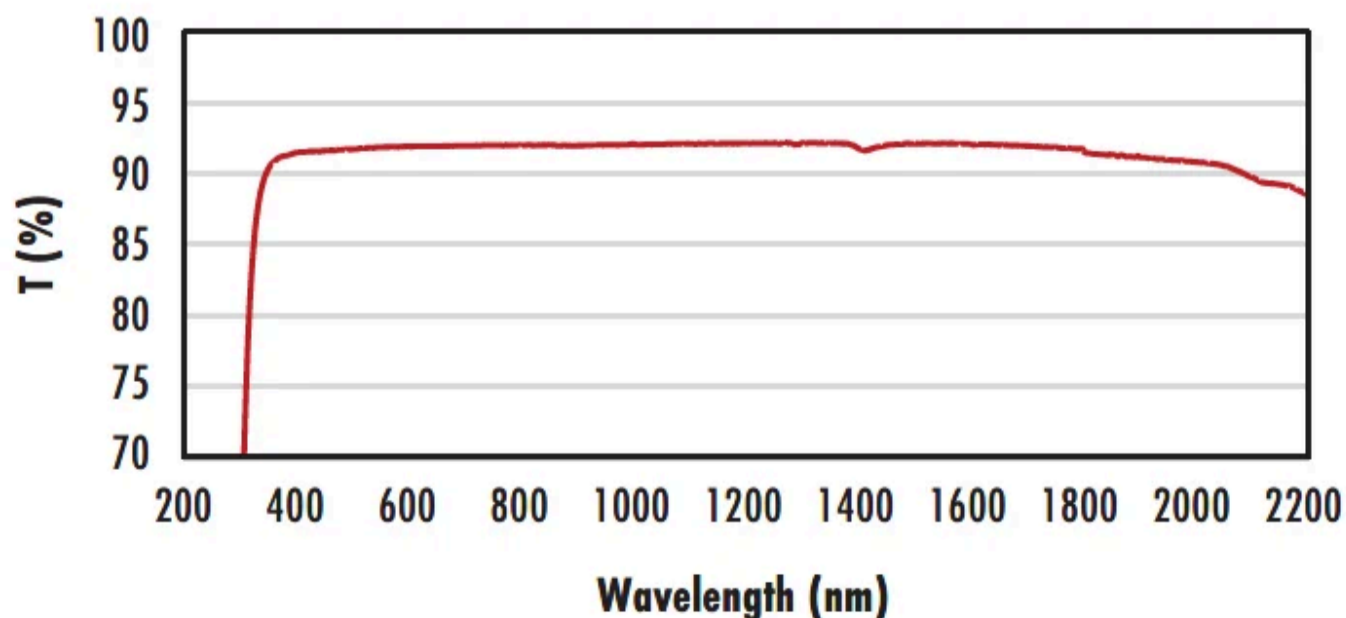
- AR Coated to Provide <0.4% Reflectance per Surface for 425 - 675nm
- Designed for 0° Angle of Incidence
- Various PCX Coating Options: [Uncoated](#), [MgF₂](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

TECHSPEC® VIS 0° 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. Plano-Convex lenses are ideal for a multitude of optics and photonics applications, including biotech instruments such as DNA sequencers and polymerase chain reaction (PCR) testing platforms. TECHSPEC® VIS 0° 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-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#).

These coated lenses can be utilized in a host of optics and photonics applications, including biotech instruments such as DNA sequencers and polymerase chain reaction (PCR) testing platforms.

Technical Information

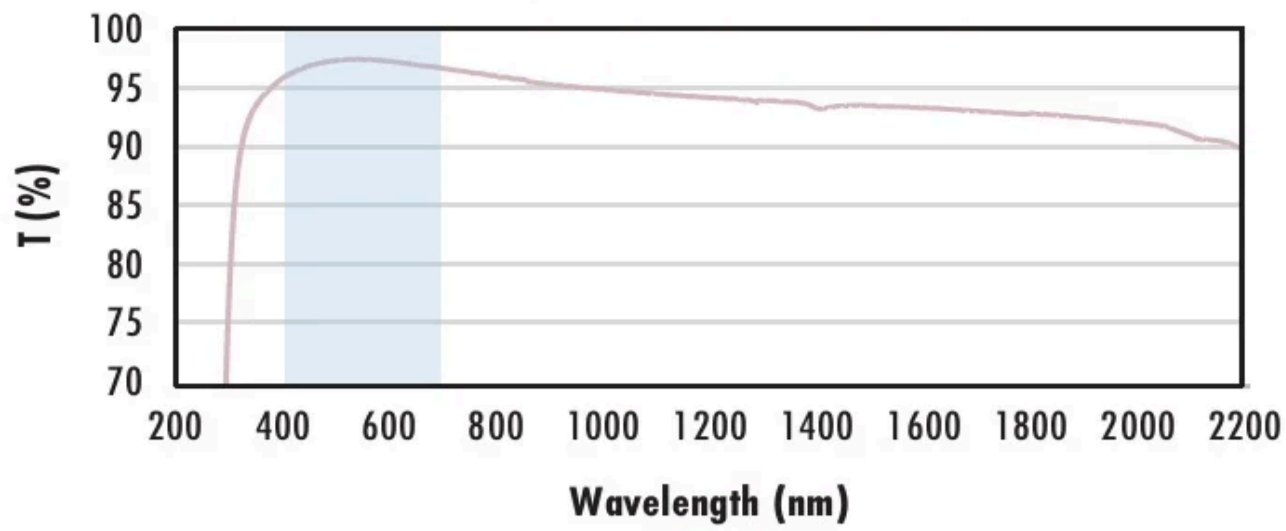
Uncoated N-BK7 Typical Transmission



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 with MgF₂ (400-700nm) coating at 0° AOI.

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

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

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 with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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 with VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

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

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

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.

[Click Here to Download Data](#)

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.

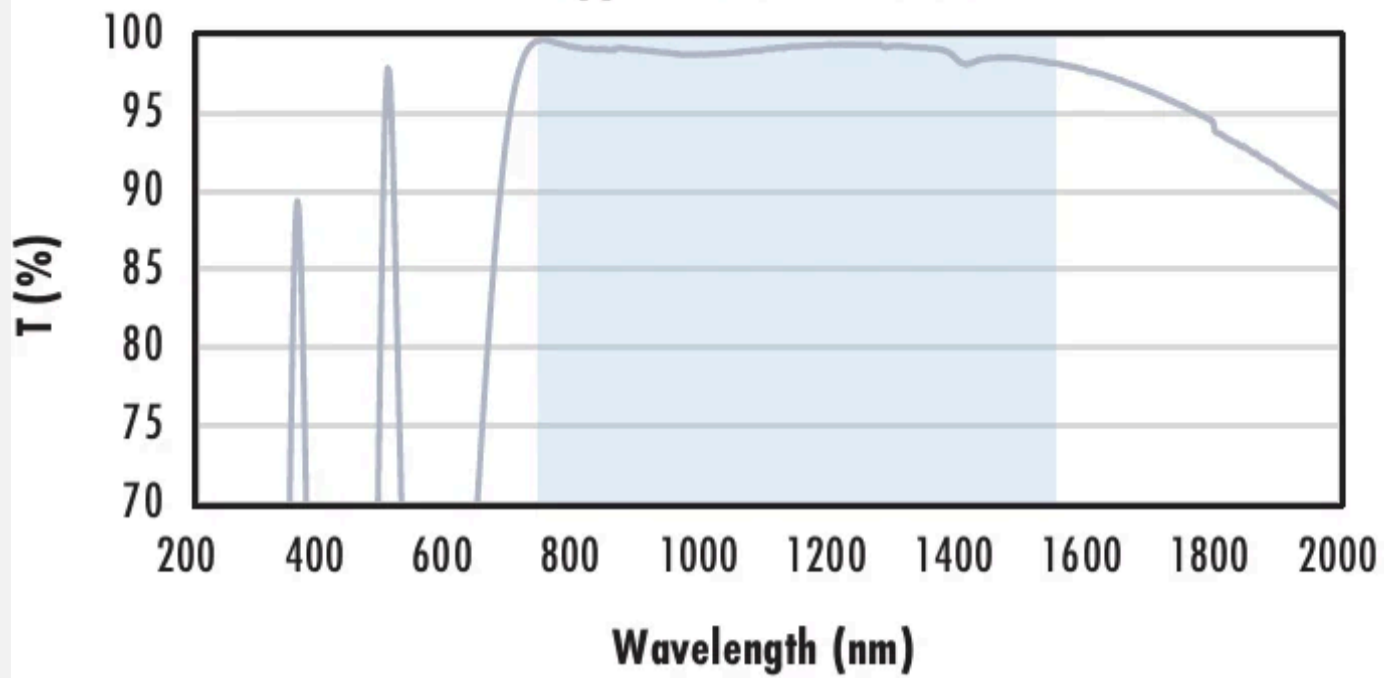
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

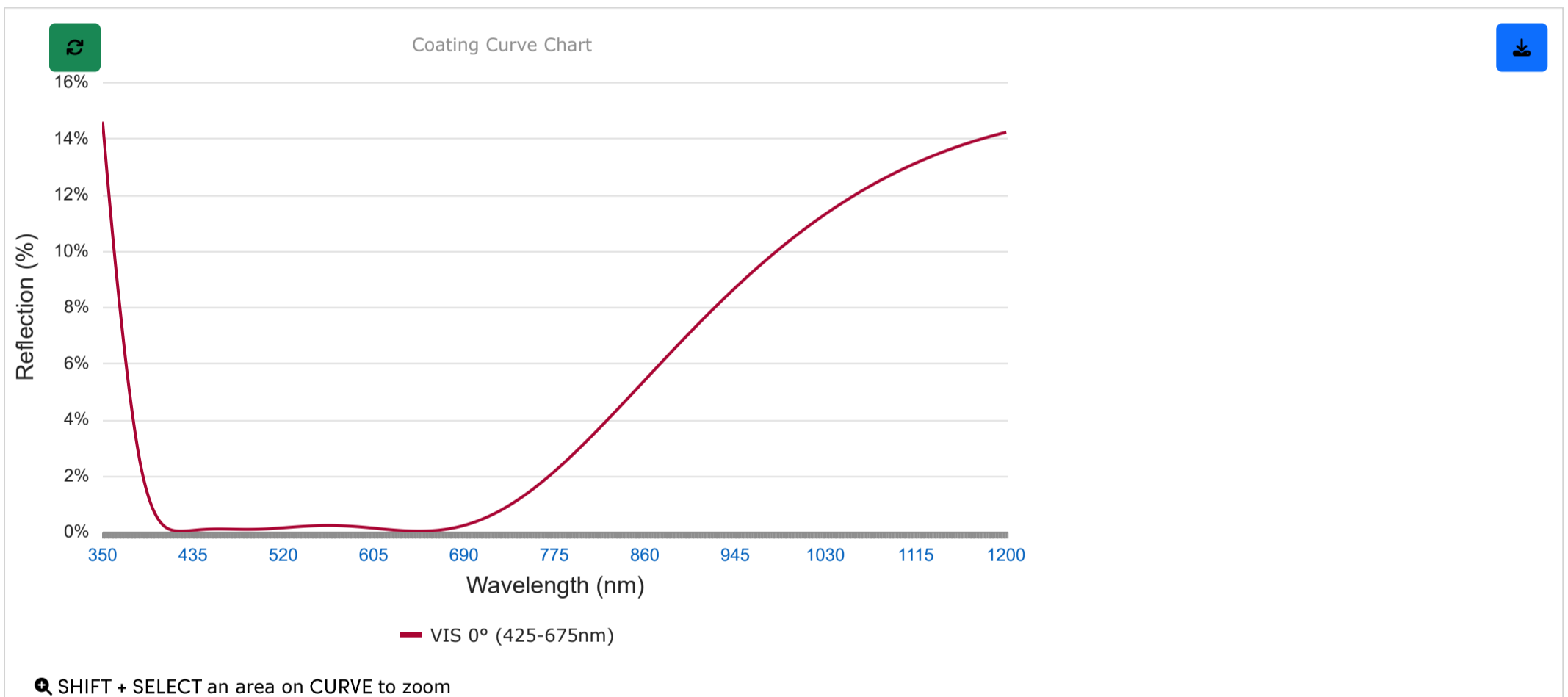
$R_{abs} \leq 1.5\%$ @ 750 - 800nm
 $R_{abs} \leq 1.0\%$ @ 800 - 1550nm
 $R_{avg} \leq 0.7\%$ @ 750 - 1550nm

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

[Click Here to Download Data](#)

Coating Curves

VIS 0° (425-675nm)



Please note that coating performance outside each product's specified design range is theoretical and may vary.

Related Products



C, S, and T-Mount Circular Optic Mounts



Optic Component Mounts



VIS 0° Coated Achromatic Lenses



VIS 0° Coated Double-Convex (DCX) Lenses

Frequently Purchased Together



#30-263 - 12mm Max. Aperture, Iris Diaphragm
£39.00

Qty



#47-344-INK - 25.0mm Dia. x 35.0mm FL, VIS 0°, Inked, Plano-Convex Lens
£48.40

Qty



#47-346-INK - 25.0mm Dia. x 50.0mm FL, VIS 0°, Inked, Plano-Convex Lens
£46.80



Qty



#47-902-INK - 18mm Dia. x 36mm FL, VIS 0° Inked, Double-Convex Lens
£48.40

Qty

Compatible Mounts

| | Title | Type | Compare | Stock Number | Price | Buy |
|---|--------------------------------|-------|---------|--------------|--|--------------------------------|
|   | 18.0mm Optic Dia., Optic Mount | Fixed | | #64-558 | £26.20 Request Quote | <input type="text" value="1"/> |

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

Resources

Media Type

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

APPLICATION NOTE

Anti-Reflection (AR) Coatings

APPLICATION NOTE

An Introduction to Optical Coatings

APPLICATION NOTE

Understanding Optical Specifications

APPLICATION NOTE

Lens Geometry Performance Comparison

TECHNICAL TOOL

SAG Calculator

TRENDING IN OPTICS

Future of Spherical Lenses

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