

TECHSPEC®

12mm Dia. x 72mm FL, VIS-NIR, Inked, Double-Convex Lens



Stock #45-878-INK **10 In Stock**

1 MRP ₹6,584

Price inclusive of all taxes

ADD TO CART



Volume Pricing	
Qty 1-9	₹6,584 each
Qty 10-24	₹5,947 each
Qty 25-99	₹5,284 each
Need More?	Request Quote

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

General

Type: Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm): 12.00	Centering (arcmin): <1
Bevel: Protective as needed	Center Thickness CT (mm): 2.80
Center Thickness Tolerance (mm): ±0.05	Edge Thickness ET (mm): 2.31
Clear Aperture CA (mm): 11.00	

Optical Properties

Back Focal Length BFL (mm): 71.07	Effective Focal Length EFL (mm): 72.00
Coating: VIS-NIR (400-1000nm)	Coating Specification: R _{abs} ≤ 0.25% @ 880nm R _{avg} ≤ 1.25% @ 400 - 870 nm R _{avg} ≤ 1.25% @ 890 - 1000nm
Substrate: N-BK7	Surface Quality: 40-20
Radius R₁=-R₂ (mm): 73.97	f/#: 6.00
Focal Length Tolerance (%): ±1	Numerical Aperture NA: 0.08

Wavelength Range (nm): 400 - 1000

Regulatory Compliance

Certificate of Conformance: [View](#)

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

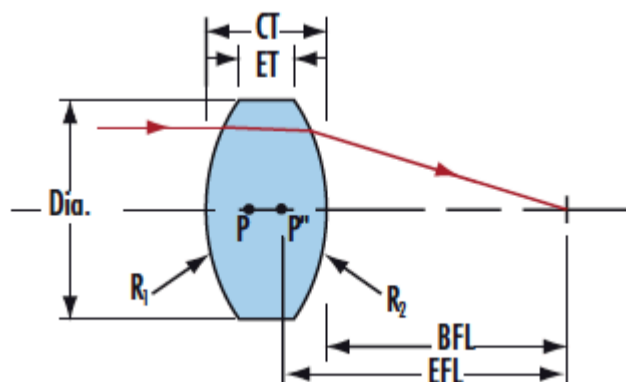
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

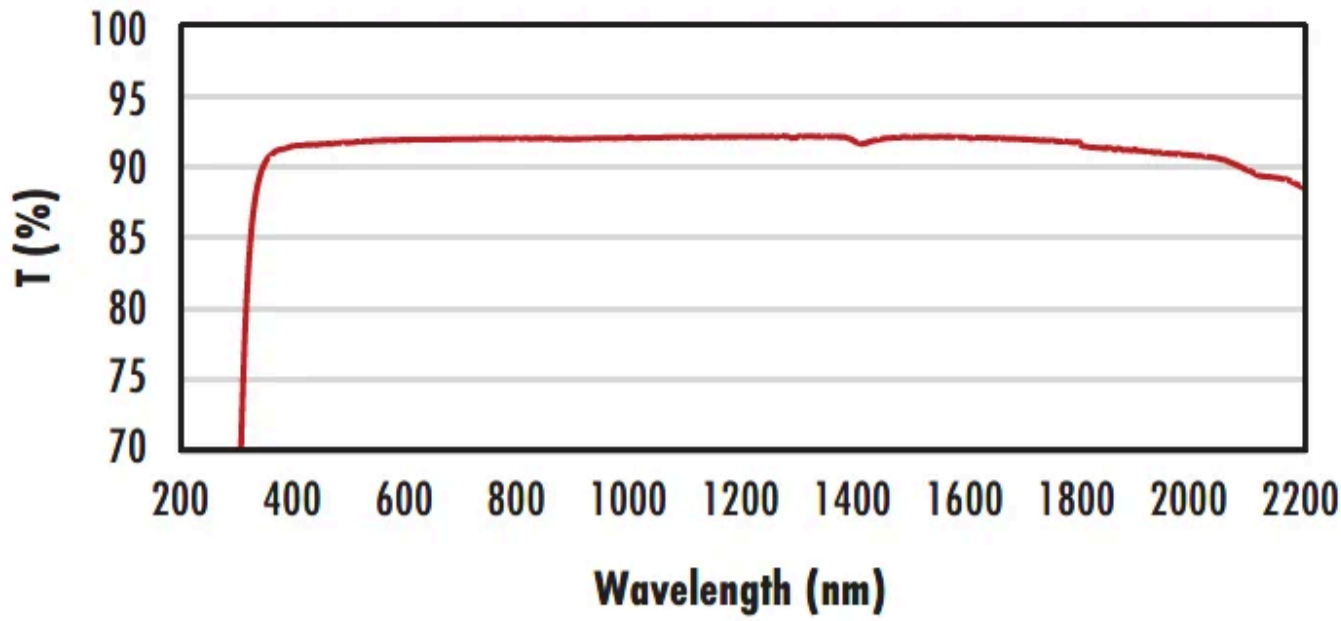
- AR Coated to Provide <math><1.25\%</math> Reflectance per Surface for 400 - 1000nm
- Minimize Aberrations Including Spherical and Coma
- **UV Fused Silica DCX Lenses** Available
- Other Coating Options Available: **Uncoated**, **MgF₂**, **VIS 0°**, **NIR I**, **NIR II**, **VIS-EXT**, and **YAG-BBAR**

TECHSPEC® VIS-NIR 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® VIS-NIR Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

Technical Information



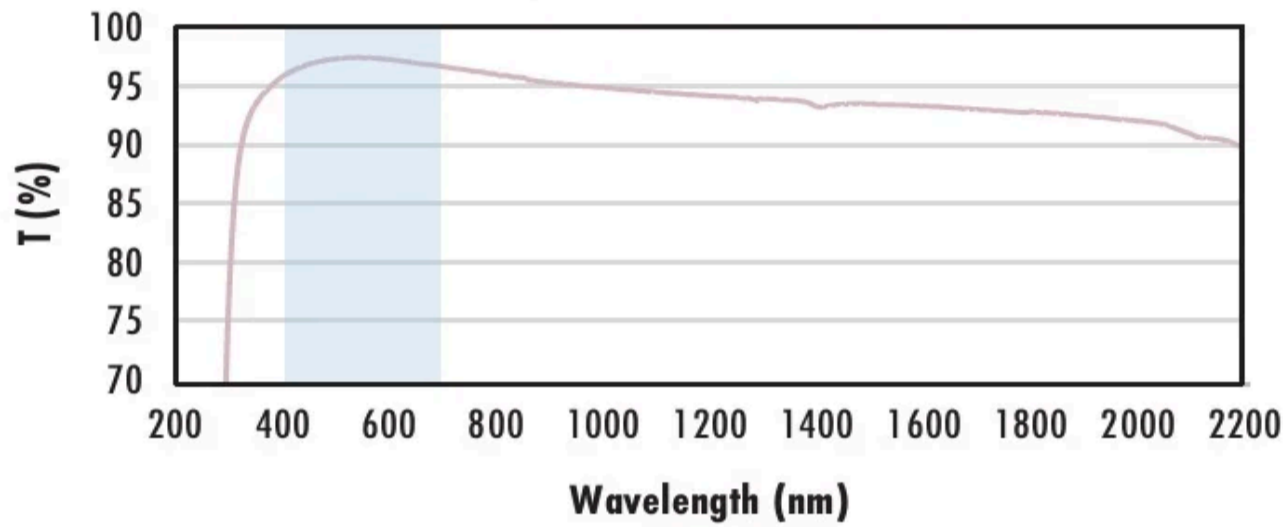
Uncoated N-BK7 Typical Transmission



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.

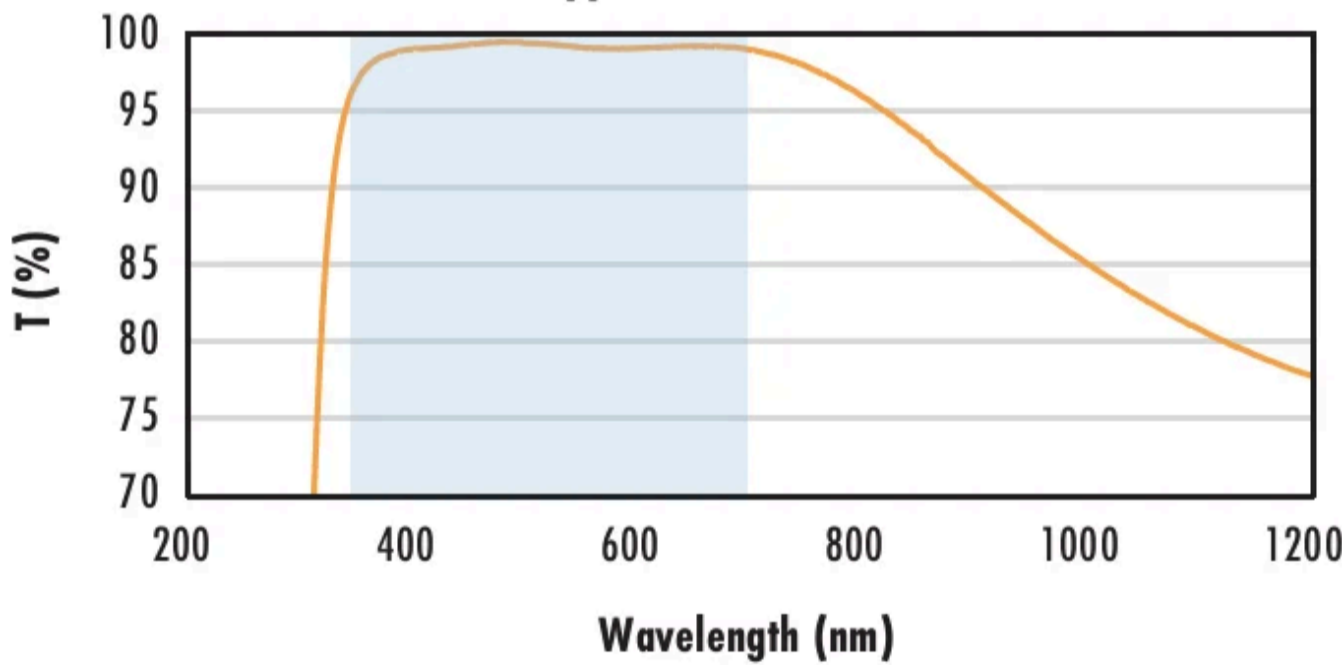
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

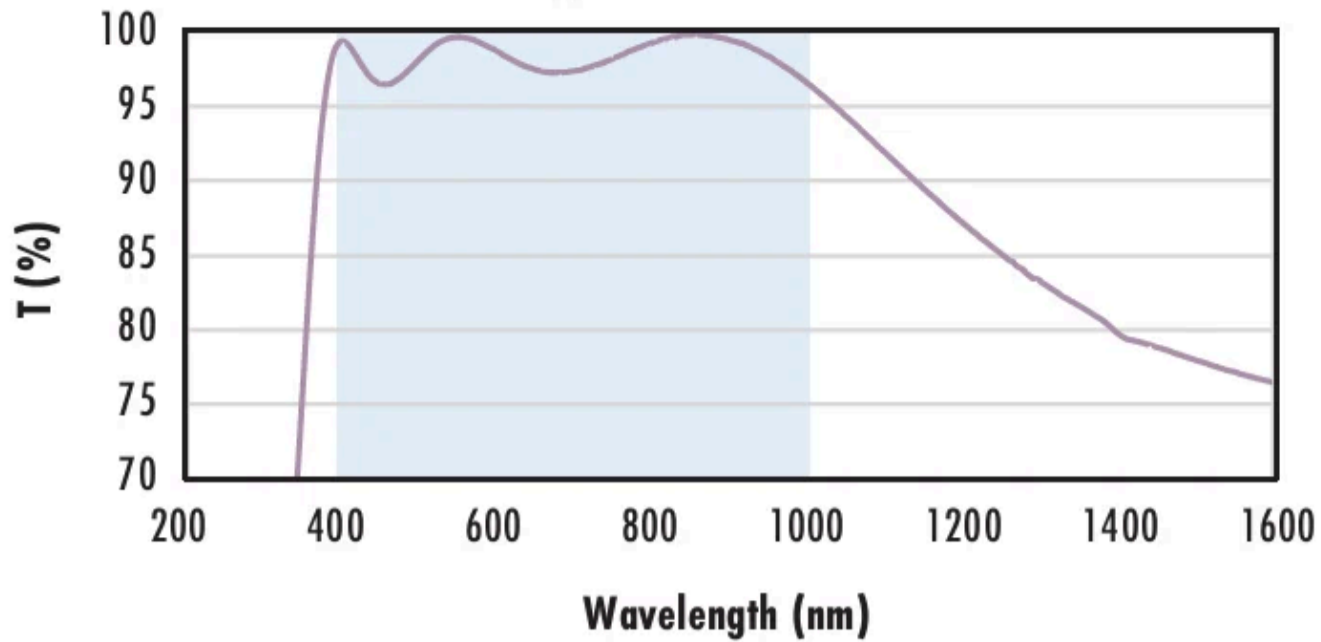
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

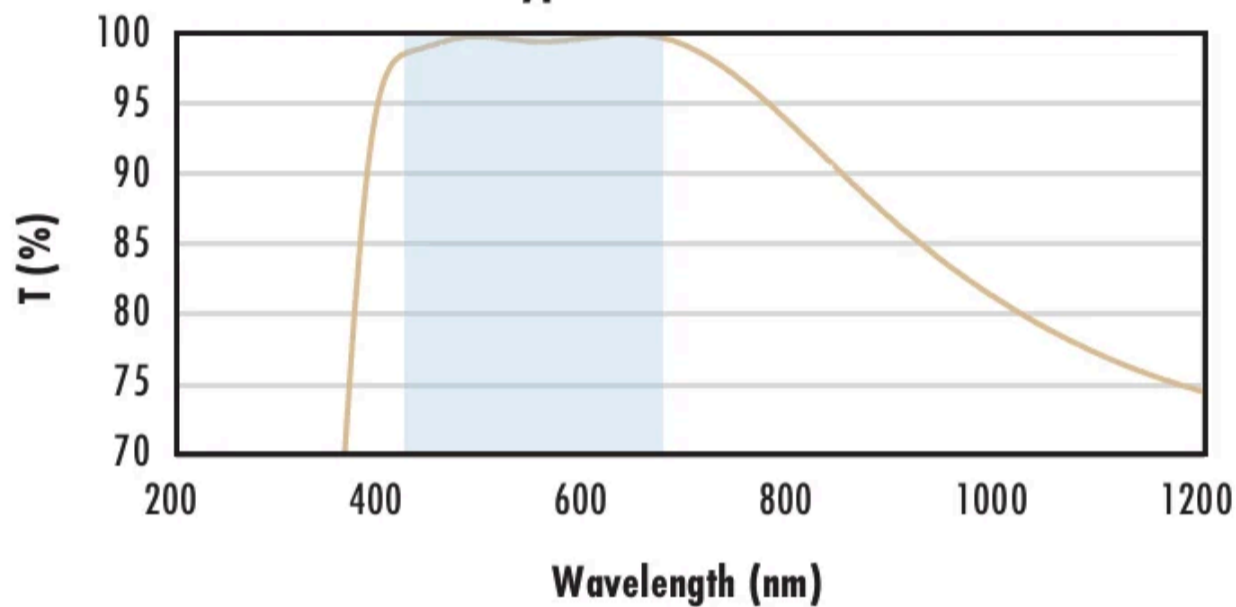
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 0.25\% @ 880nm$
- $R_{avg} \leq 1.25\% @ 400 - 870nm$
- $R_{avg} \leq 1.25\% @ 890 - 1000nm$

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.

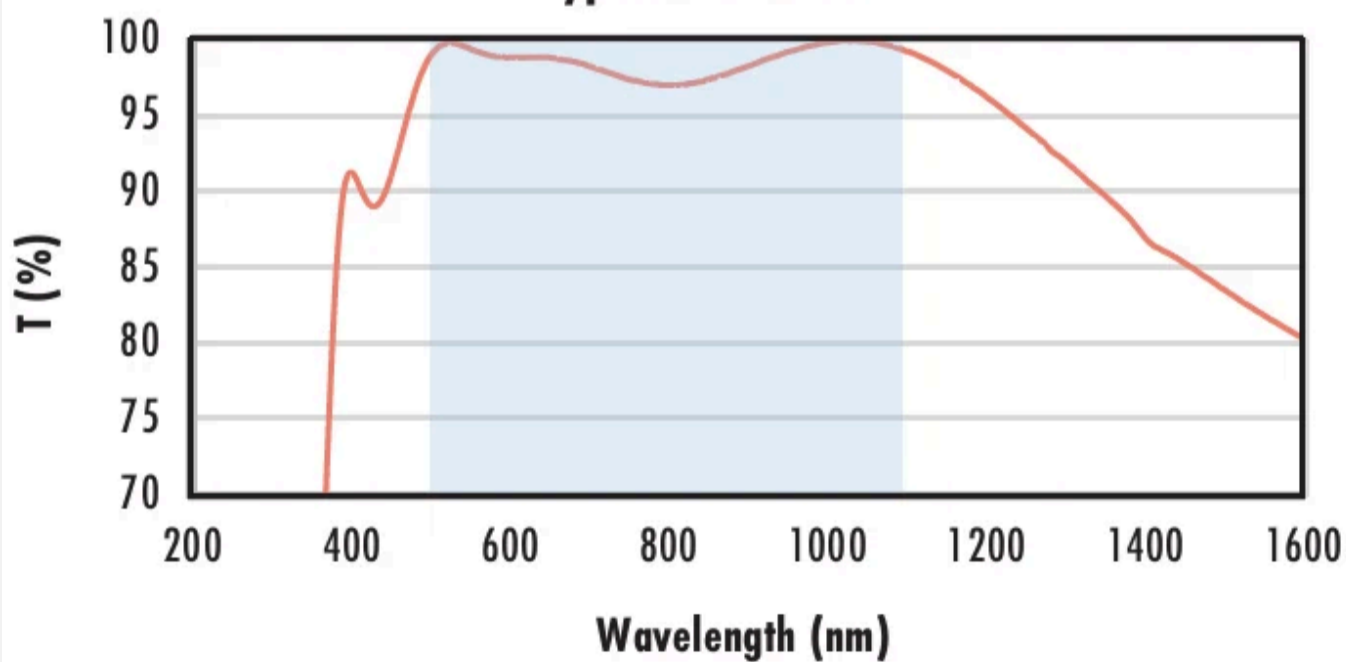
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

[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:

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

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 II (750 - 1550nm) coating at 0° AOI.

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

$$R_{abs} \leq 1.5\% @ 750 - 800nm$$

$$R_{abs} \leq 1.0\% @ 800 - 1550nm$$

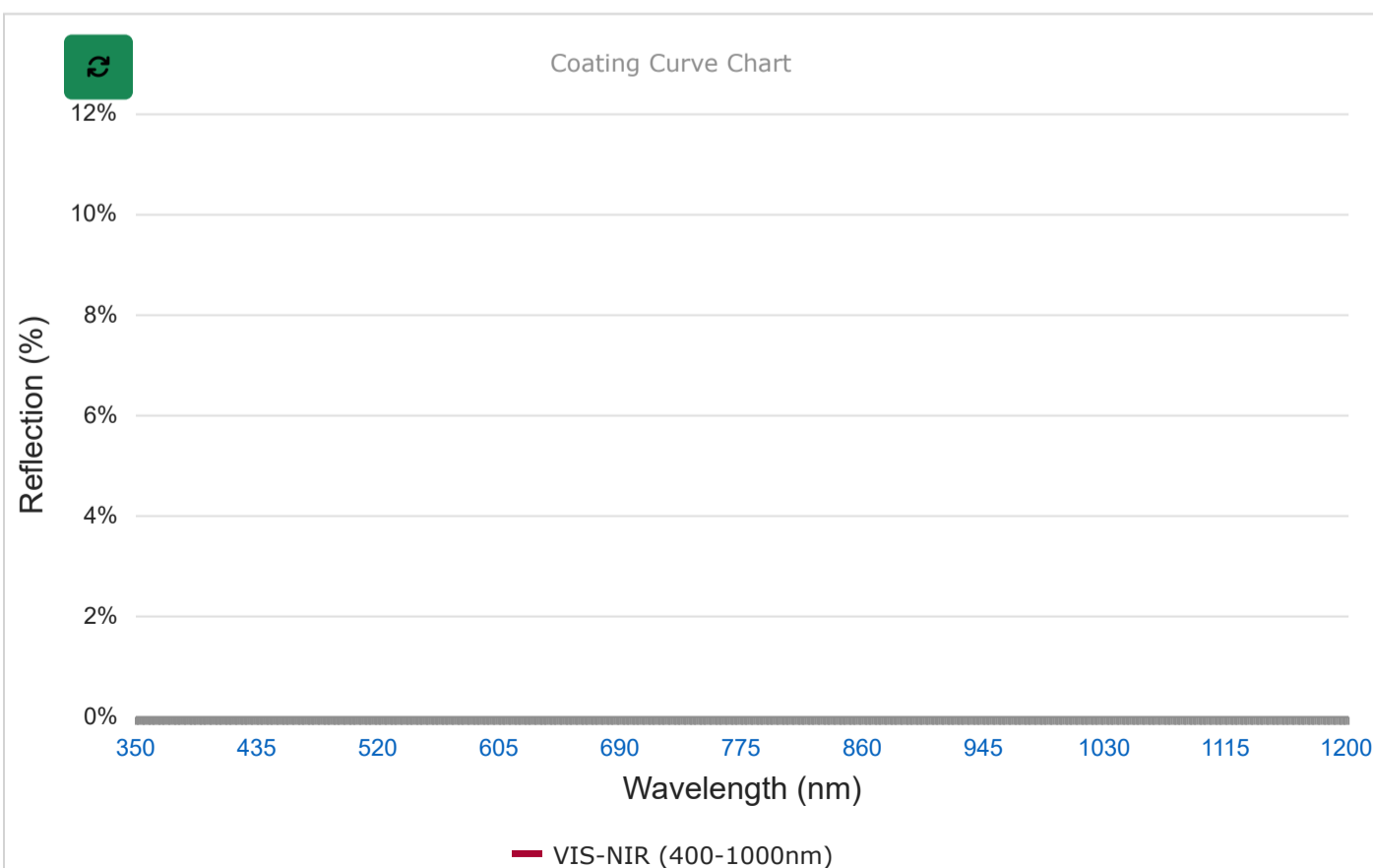
$$R_{avg} \leq 0.7\% @ 750 - 1550nm$$

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

[Click Here to Download Data](#)

Coating Curves

VIS-NIR (400-1000nm)



SHIFT + SELECT an area on CURVE to zoom

Related Products



UV Fused Silica Double-Convex (DCX) Lenses



Uncoated Double-Convex (DCX) Lenses



Plano-Convex (PCX) and Simple Lens Kits



Optical Cleaning

Frequently Purchased Together



#32-962 - 20.0mm Dia. x 60.0mm FL, Uncoated, Plano-Convex Lens
₹3,305

Qty



#45-125 - 12.0mm Dia. x 72.0mm FL, Uncoated, Plano-Convex Lens
₹3,305

Qty



#45-490 - 12.0mm Dia. x 100.0mm FL, VIS-NIR Coated, Plano-Convex Lens
₹5,045

Qty



#45-513-INK - 25.0mm Dia. x 125.0mm FL, VIS-NIR, Inked, Plano-Convex Lens
₹6,903

Qty

Compatible Mounts

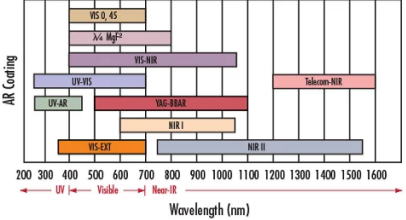
	Title	Type	Compare	Stock Number	Price	Buy
	12.0mm Optic Dia., Optic Mount	Fixed		#64-555	₹3,305 Request Quote	10 In Stock <input type="text" value="1"/>
	12mm Inner Single Optic Mount	Fixed		#38-749	₹4,137 Request Quote	20+ In Stock <input type="text" value="1"/>
	25mm Cage 12mm Diameter Lens Mount	Fixed		#85-550	₹4,616 Request Quote	CONTACT US <input type="text" value="1"/>
	12mm Inner Pair Optic Mounts	Fixed		#11-405	₹8,122 Request Quote	8 In Stock <input type="text" value="1"/>

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

Resources

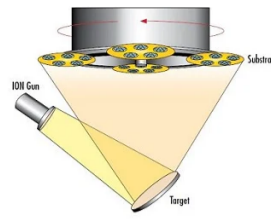
Media Type

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



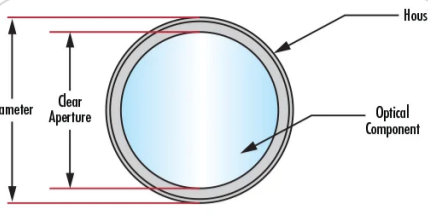
The graph plots AR Coating performance against Wavelength (nm) from 200 to 1600. It shows various coating types: VIS-Q, VIS-NIR, VIS-IR, VIS-EXT, NIR-I, NIR-II, and Telecom-NIR. The x-axis is labeled 'Wavelength (nm)' and the y-axis is 'AR Coating'. A legend at the bottom indicates 'UV', 'Visible', and 'Near-IR' regions.

APPLICATION NOTE
Anti-Reflection (AR) Coatings




The diagram shows a sputtering process where a target is bombarded by an ion gun, creating a plasma that deposits material onto a substrate. Labels include 'Ion Gun', 'Substrates', and 'Target'.

APPLICATION NOTE
An Introduction to Optical Coatings



The diagram shows a cross-section of an optical component. Labels include 'Diameter', 'Clear Aperture', 'Housing', and 'Optical Component'.

APPLICATION NOTE
Understanding Optical Specifications



The image shows three different lens geometries: a plano-convex lens, a biconvex lens, and a meniscus lens, all reflecting light.

APPLICATION NOTE
Lens Geometry Performance Comparison



The icon represents a glossary or search function.

GLOSSARY
NIR (Near Infrared)



The icon represents a glossary or search function.

GLOSSARY
VIS/NIR Coating

[View More](#)