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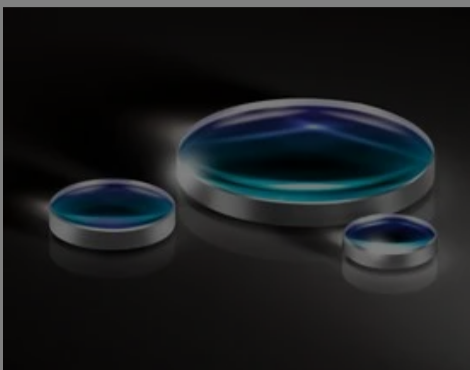
TECHSPEC®

12mm Dia. x 20mm

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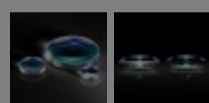
Stock #48-035 **20+ In Stock** [Other Coating Options](#)

1

€129⁰⁰

ADD TO CART

UV Fused Silica Double-Convex (DCX) Lenses



Volume Pricing

Qty 1-5 €129,00 each

Qty 6-25 €103,00 each

Qty 26-49 €97,00 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
- [Download All](#)

General

Type: Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm): 12.00 +0.0/-0.025

Centering (arcmin): <1

Bevel: Protective as needed

Center Thickness CT (mm): 4.37 ±0.05

Edge Thickness ET (mm): 2.27

Clear Aperture CA (mm): 11.00

Optical Properties

Back Focal Length BFL (mm): 18.44

Effective Focal Length EFL (mm): 20.00

Coating: Uncoated

Coating Specification: Uncoated

Substrate: [Fused Silica](#) (Corning 7980)

Surface Quality: 40-20

Power (P-V) @ 632.8nm: 1.5λ

Irregularity (P-V) @ 632.8nm: λ/4

Radius R₁=-R₂ (mm): 17.63

f/#: 1.67

Focal Length Specification Wavelength (nm): 587.6

Focal Length Tolerance (%): ±1

Numerical Aperture NA: 0.30

Wavelength Range (nm): 200 - 2200

Regulatory Compliance

RoHS 2015: **Compliant**

Reach 251: **Compliant**

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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

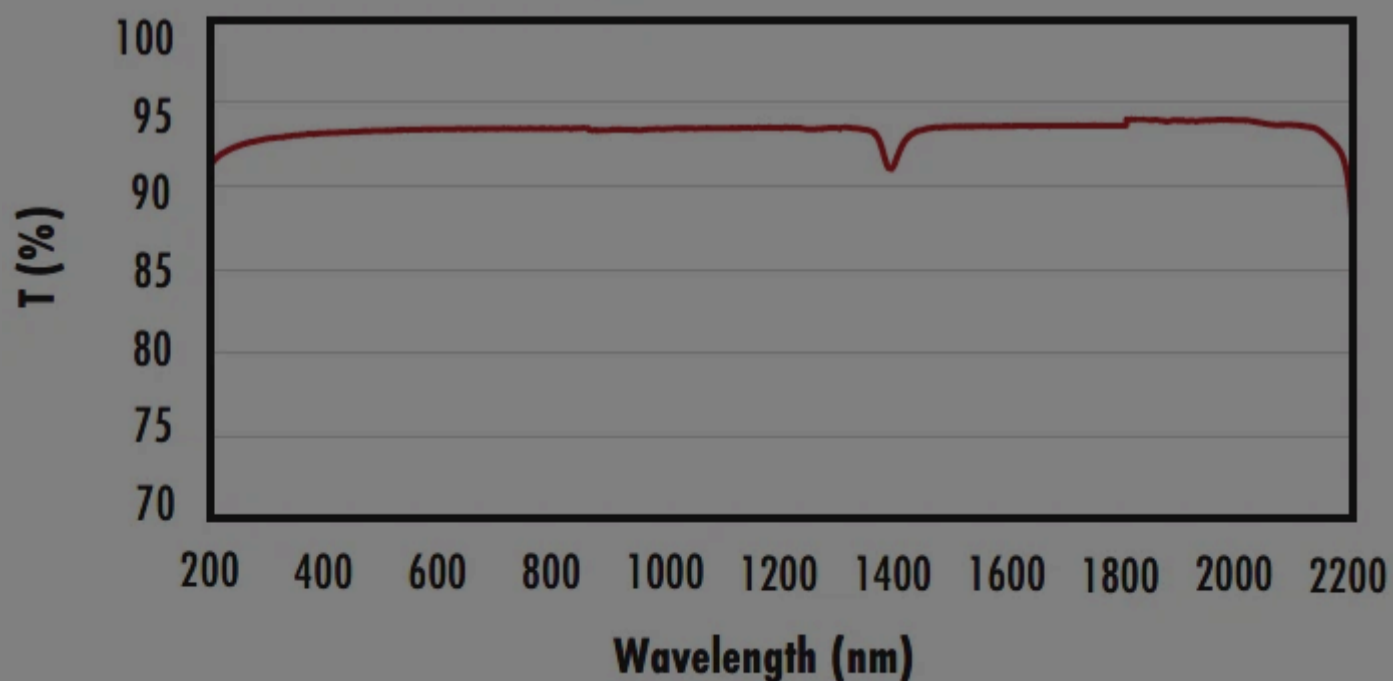
- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- Precision Fused Silica Substrate

TECHSPEC® UV Fused Silica 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 canceled due to the symmetric lens design. TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses have a precision fused silica substrate. These lenses are available uncoated or with UV-AR, UV-VIS, VIS-EXT, VIS-NIR, VIS 0°, NIR I, or NIR II coatings.

Technical Information

UV FS Transmission Curve

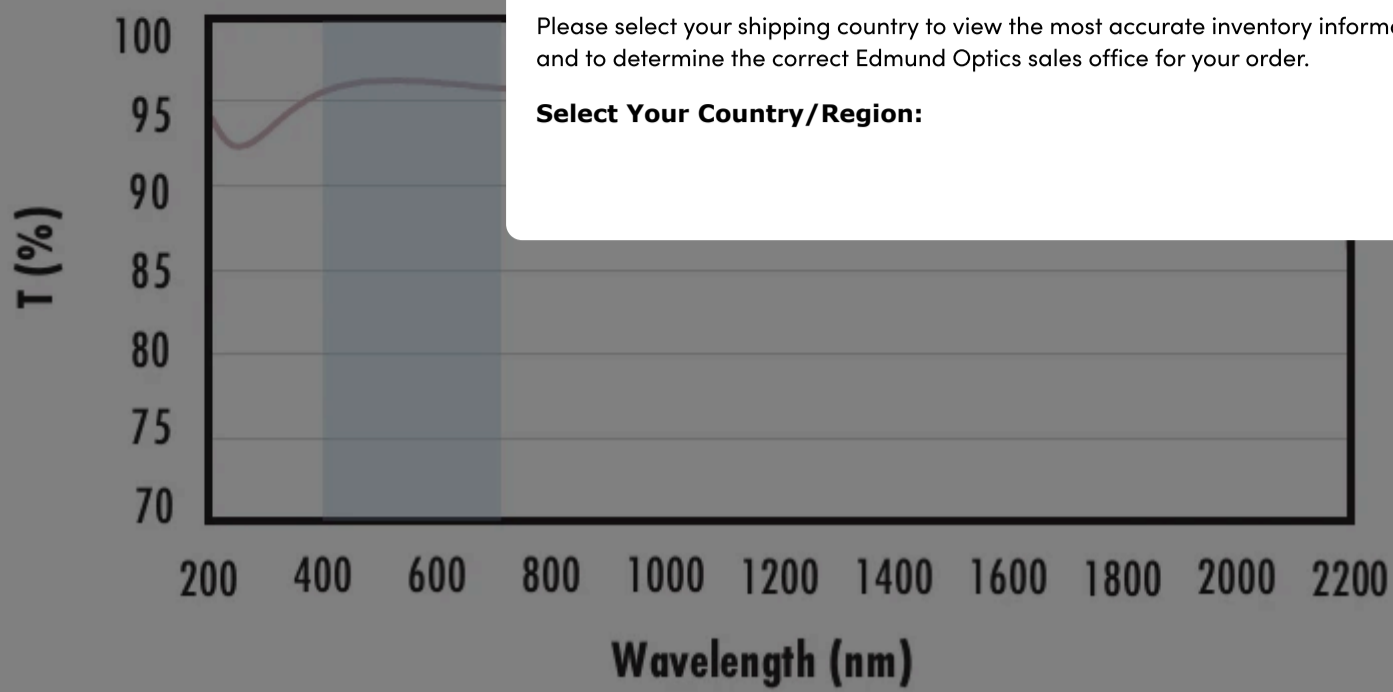
Uncoated Fused Silica Typical Transmission



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

[Click Here to Download Data](#)

Fused Silica with MgF₂ Coating Typical Transmission



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

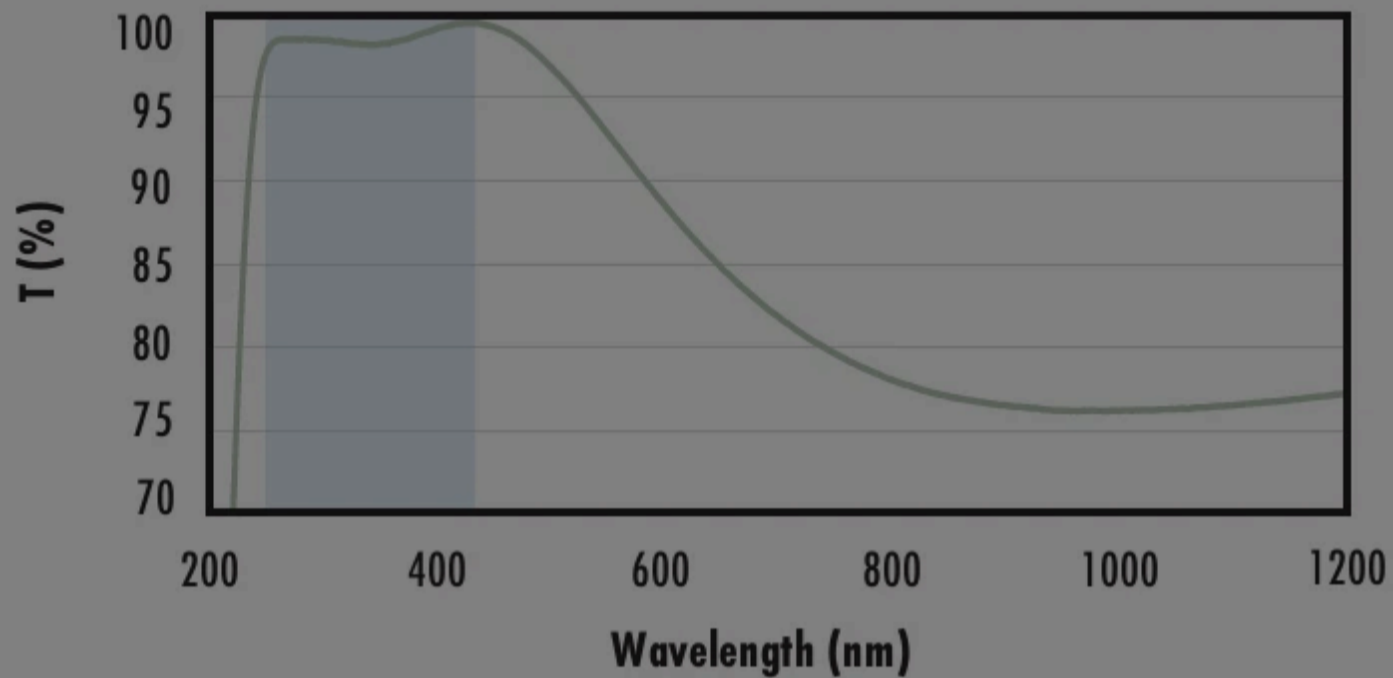
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with UV-AR Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.

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

$$R_{abs} \leq 1.0\% \text{ @ } 250 - 425\text{nm}$$

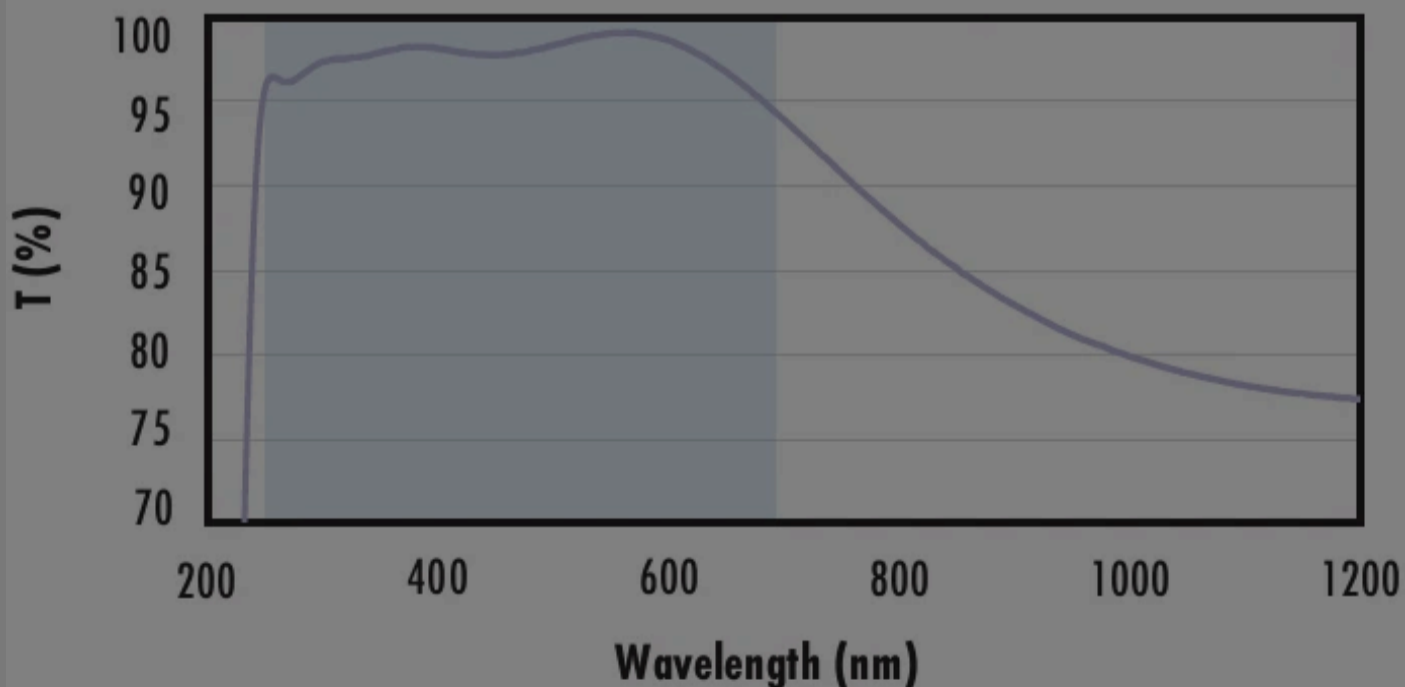
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

$$R_{avg} \leq 0.5\% \text{ @ } 370 - 420\text{nm}$$

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

[Click Here to Download Data](#)

Fused Silica with UV-VIS Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

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

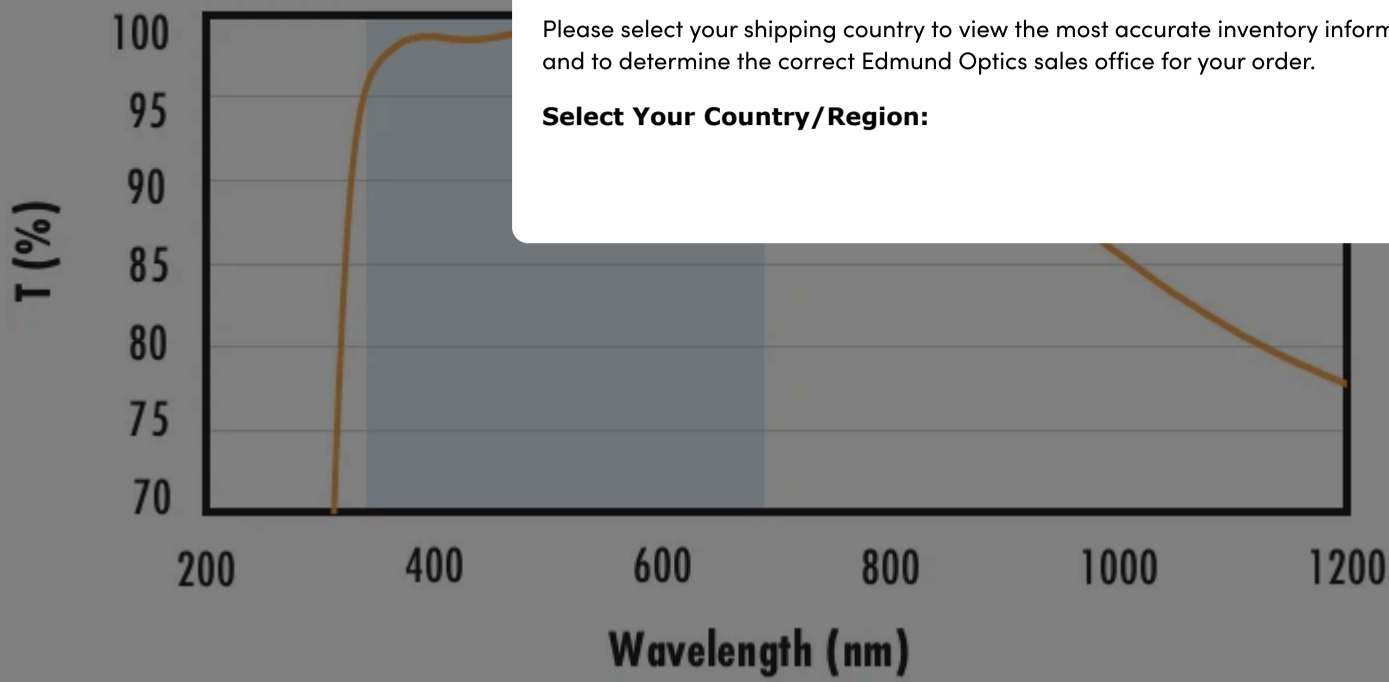
$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

$$R_{avg} \leq 1.5\% \text{ @ } 250 - 700\text{nm}$$

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

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Fused Silica with VIS-EXT Coating Typical Transmission



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

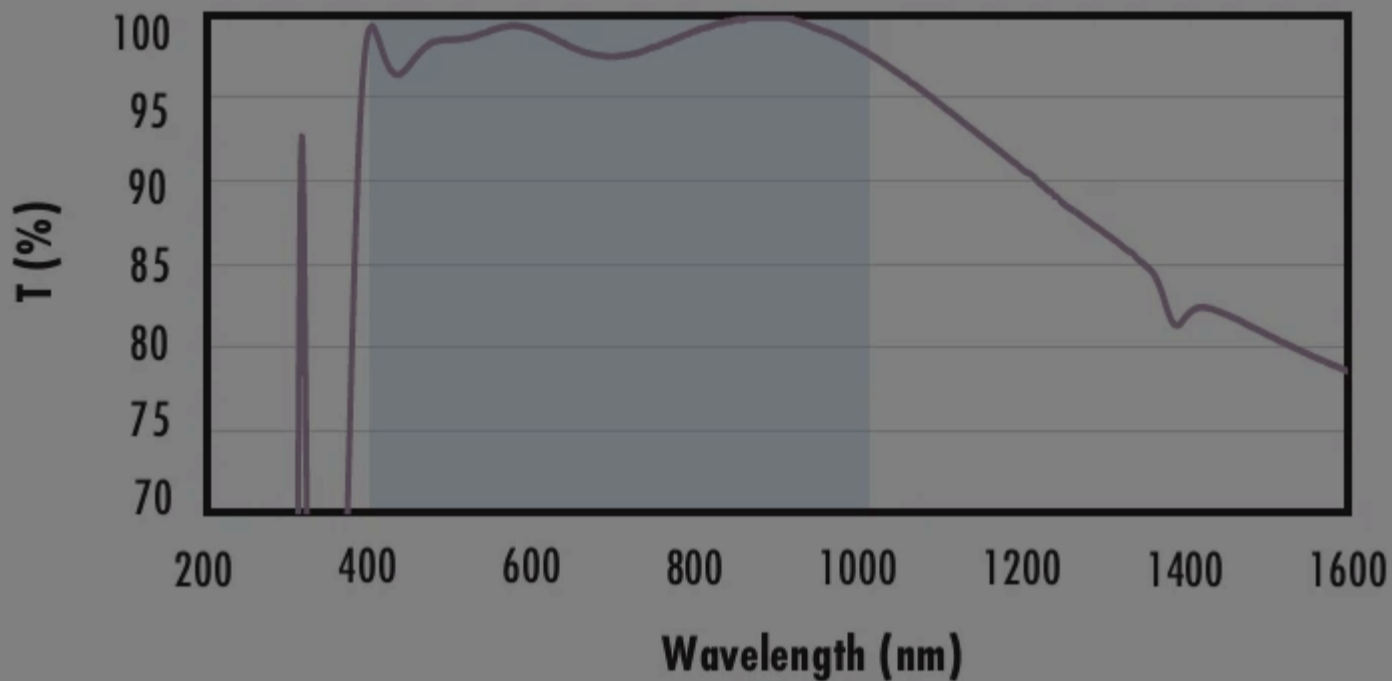
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with VIS-NIR Coating Typical Transmission



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

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

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

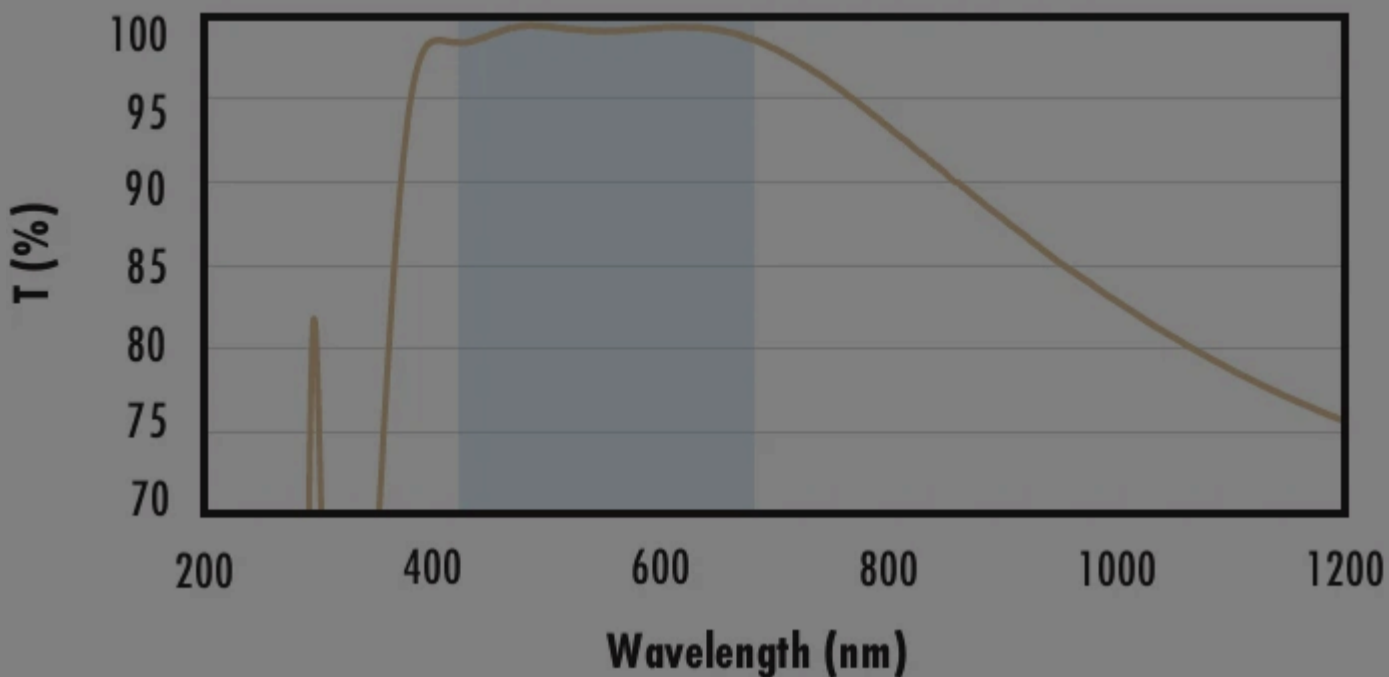
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

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

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

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Fused Silica with VIS 0° Coating Typical Transmission



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

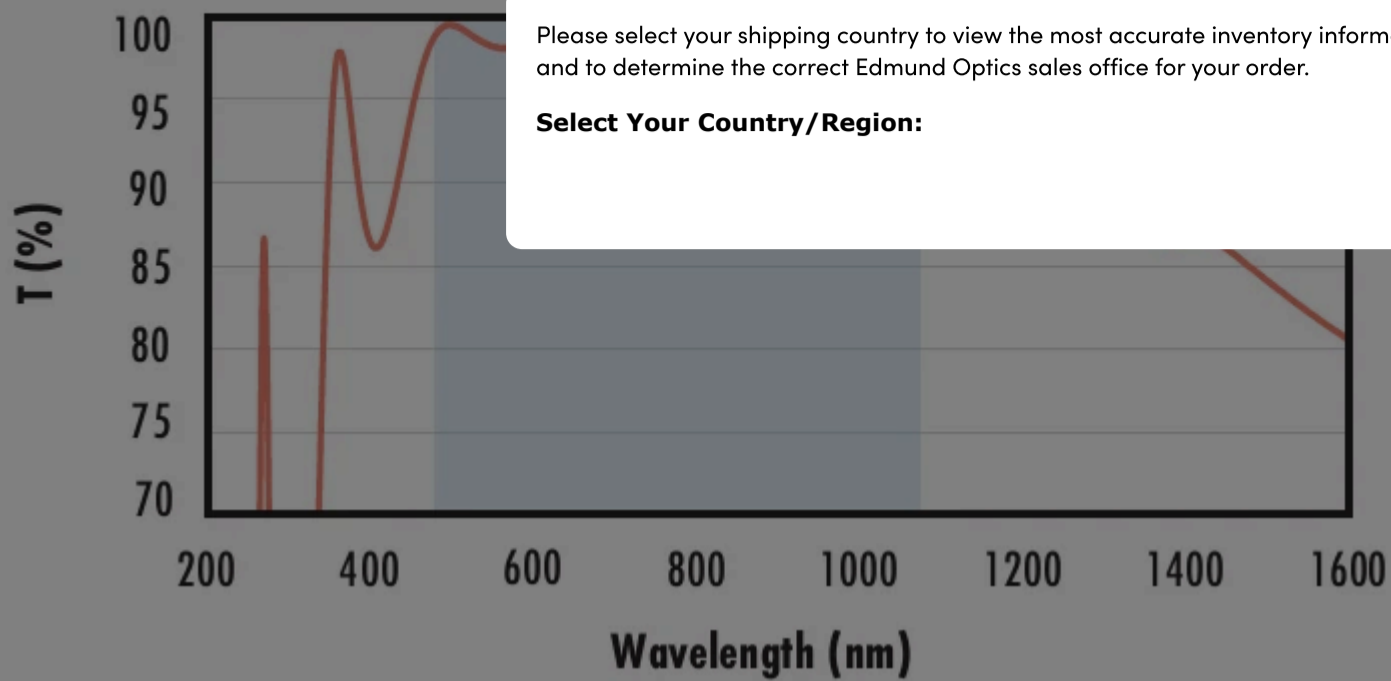
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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Fused Silica with YAG-BBAR Coating Typical Transmission



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Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

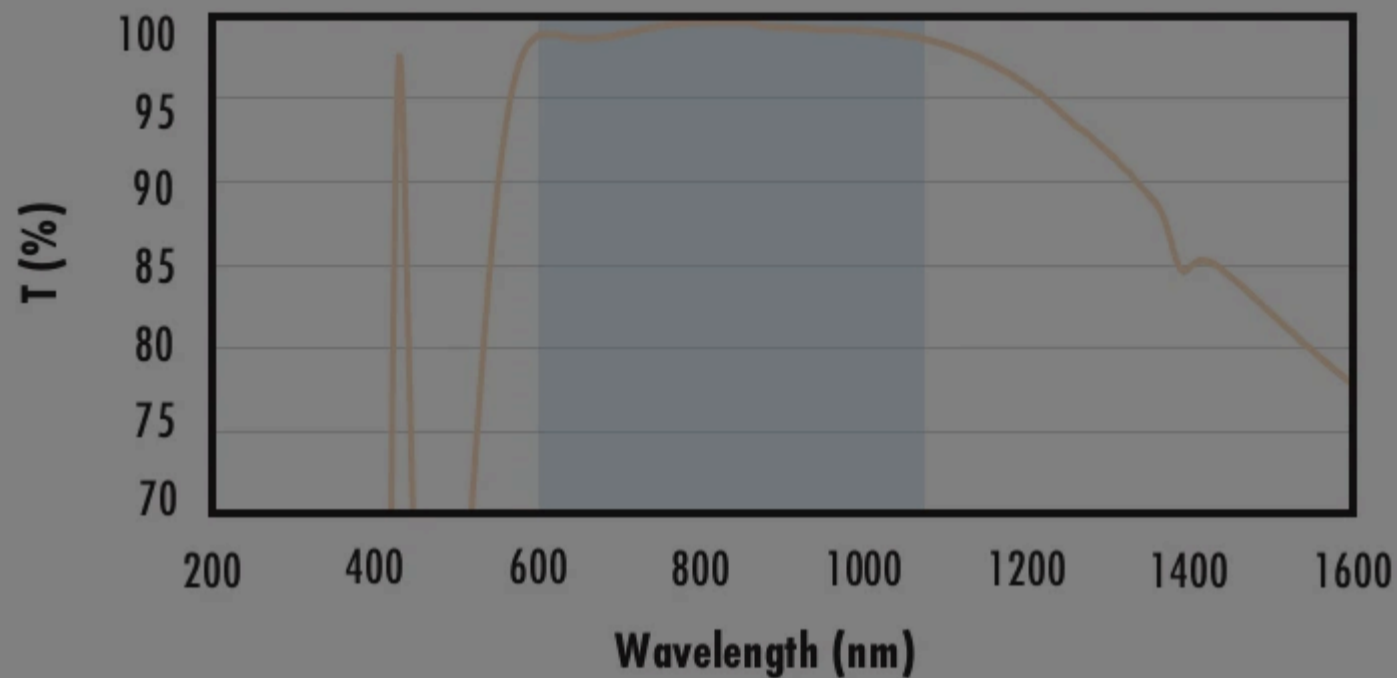
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 0.25\%$ @ 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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Fused Silica with NIR I Coating Typical Transmission



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

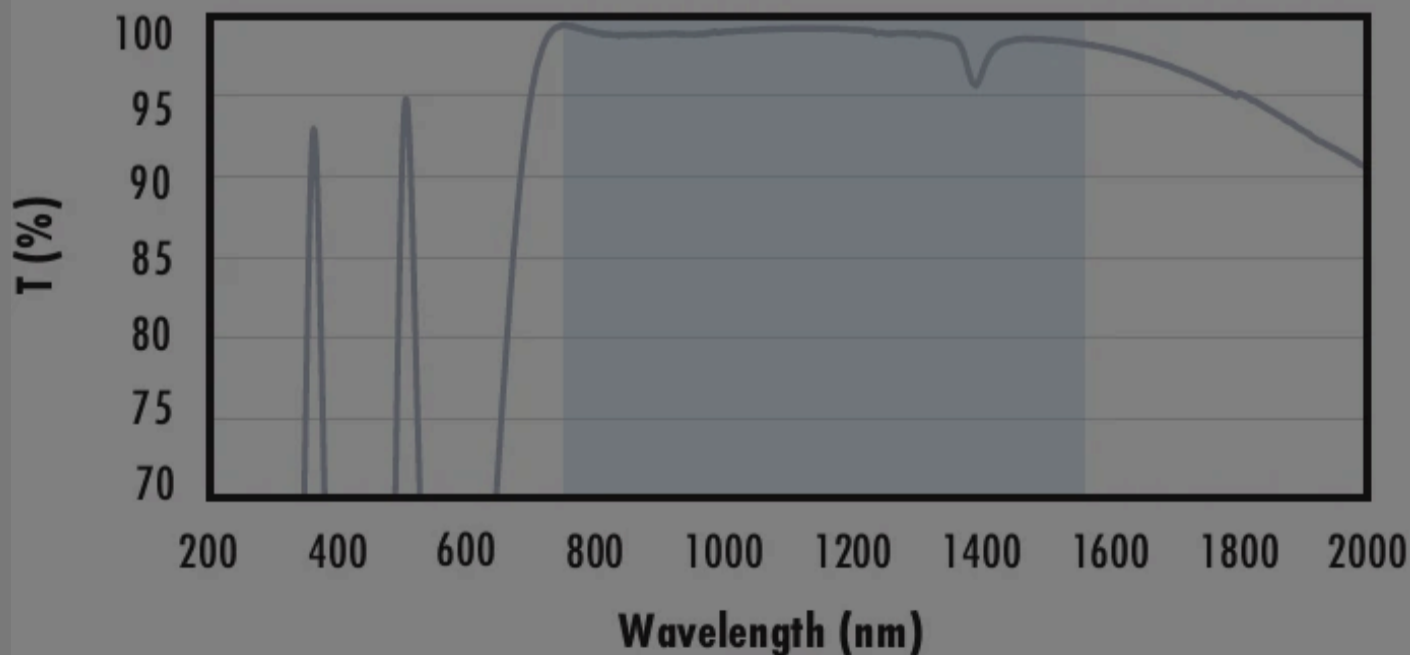
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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Fused Silica with NIR II Coating Typical Transmission



Typical transmission of a 3mm thick fused silica 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

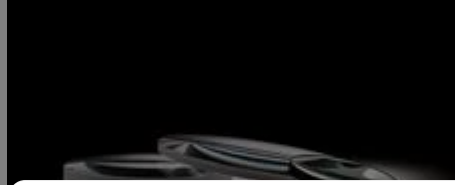
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Related Products

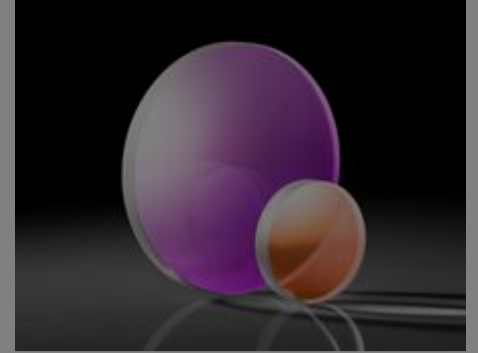


UV Fused Silica Aspheric Lenses



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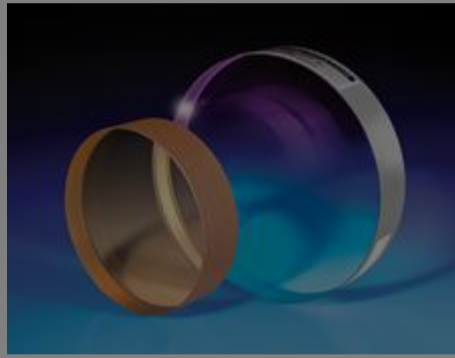
Laser Grade Plano-Convex (PCX) Lenses

Frequently Purchased Together



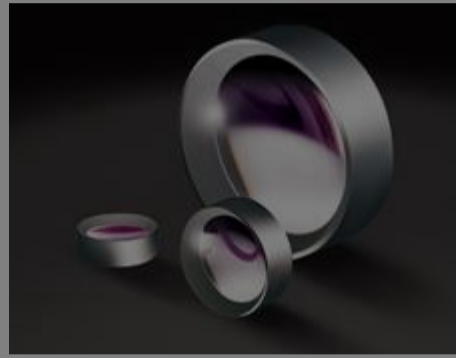
#39-944 - 6" Length Box (10 Bags), Cotton-Tipped Swabs
€28,25

Qty



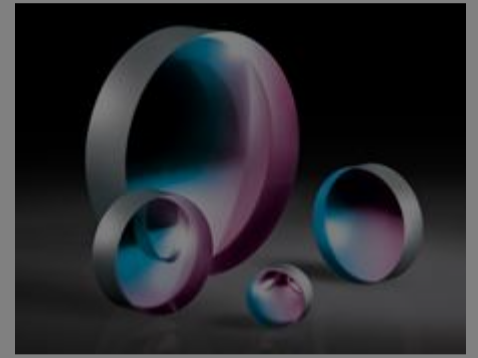
#43-408-000 - 25.4mm Dia. $\lambda/20$ Fused Silica Optical Flat
€210,00

Qty



#45-375 - 3.0mm Diameter x -9 FL, MgF₂ Coated, Plano-Concave Lens
€62,50

Qty



#45-699 - 6.0mm Dia. x -18 FL, Uncoated, UV Plano-Concave Lens
€121,00

Qty

Compatible Mounts

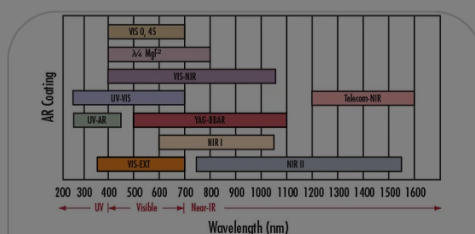
	Title	Type	Compare	Stock Number	Price	Buy
	12.0mm Optic Dia., Optic Mount	Fixed		#64-555	€32,75 Request Quote	10 In Stock <input type="text" value="1"/>
	12mm Inner Single Optic Mount	Fixed		#38-749	€41,00 Request Quote	9 In Stock <input type="text" value="1"/>
	25mm Cage 12mm Diameter Lens Mount	Fixed		#85-550	€45,75 Request Quote	1 In Stock <input type="text" value="1"/>
	12mm Inner Pair Optic Mounts	Fixed		#11-405	€80,50 Request Quote	3 In Stock <input type="text" value="1"/>

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

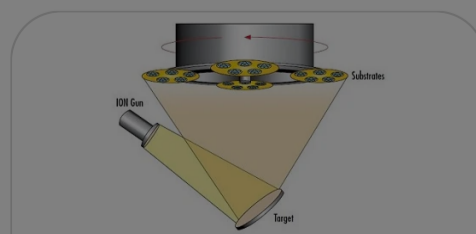
Resources

Media Type

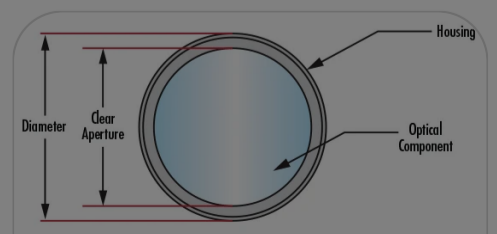
- Application Note
- Technical Tool



APPLICATION NOTE



APPLICATION NOTE



APPLICATION NOTE

- Trending in Optics
- FAQ
- Glossary
- Video

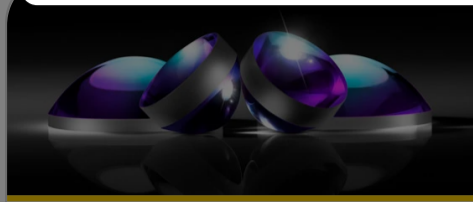
Anti-Reflection (AR) Coatings

An Introduction to Optical Coatings

Understanding Optical Specifications

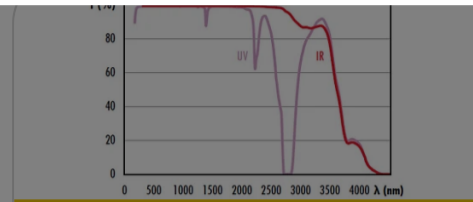
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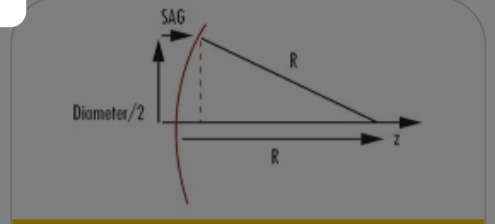
APPLICATION NOTE

Lens Geometry Performance Comparison



APPLICATION NOTE

UV vs. IR Grade Fused Silica



TECHNICAL TOOL

SAG Calculator

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