

TECHSPEC®

18mm Dia. x 40mm, UV-VIS Coated, UV Double-Convex Lens



Stock #48-841 [CONTACT US](#) [Other Coating Options](#)

1

C\$226^{.80}

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UV Fused Silica Double-Convex (DCX) Lenses



Volume Pricing	
Qty 1-5	C\$226.80 each
Qty 6-25	C\$182.00 each
Qty 26-49	C\$169.40 each
Need More?	Request Quote

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): 18.00
+0.0/-0.025

Centering (arcmin): <1

Bevel: Protective as needed

Center Thickness CT (mm): 4.29 ±0.10

Edge Thickness ET (mm): 2.00

Clear Aperture CA (mm): 17.00

Optical Properties

Back Focal Length BFL (mm): 38.50

Effective Focal Length EFL (mm): 40.00

Coating: UV-VIS (250-700nm)

Coating Specification:
R_{abs} ≤ 1.0% @ 350 - 450nm
R_{avg} ≤ 1.5% @ 250 - 700nm

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): 35.99

f/#: 2.22

Focal Length Specification Wavelength (nm): 587.6

Focal Length Tolerance (%): ±1

Numerical Aperture NA:	0.23	Wavelength Range (nm):	250 - 700
Damage Threshold, Reference: ⓘ	3 J/cm ² @ 355nm, 10ns 5 J/cm ² @ 532nm, 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](#).

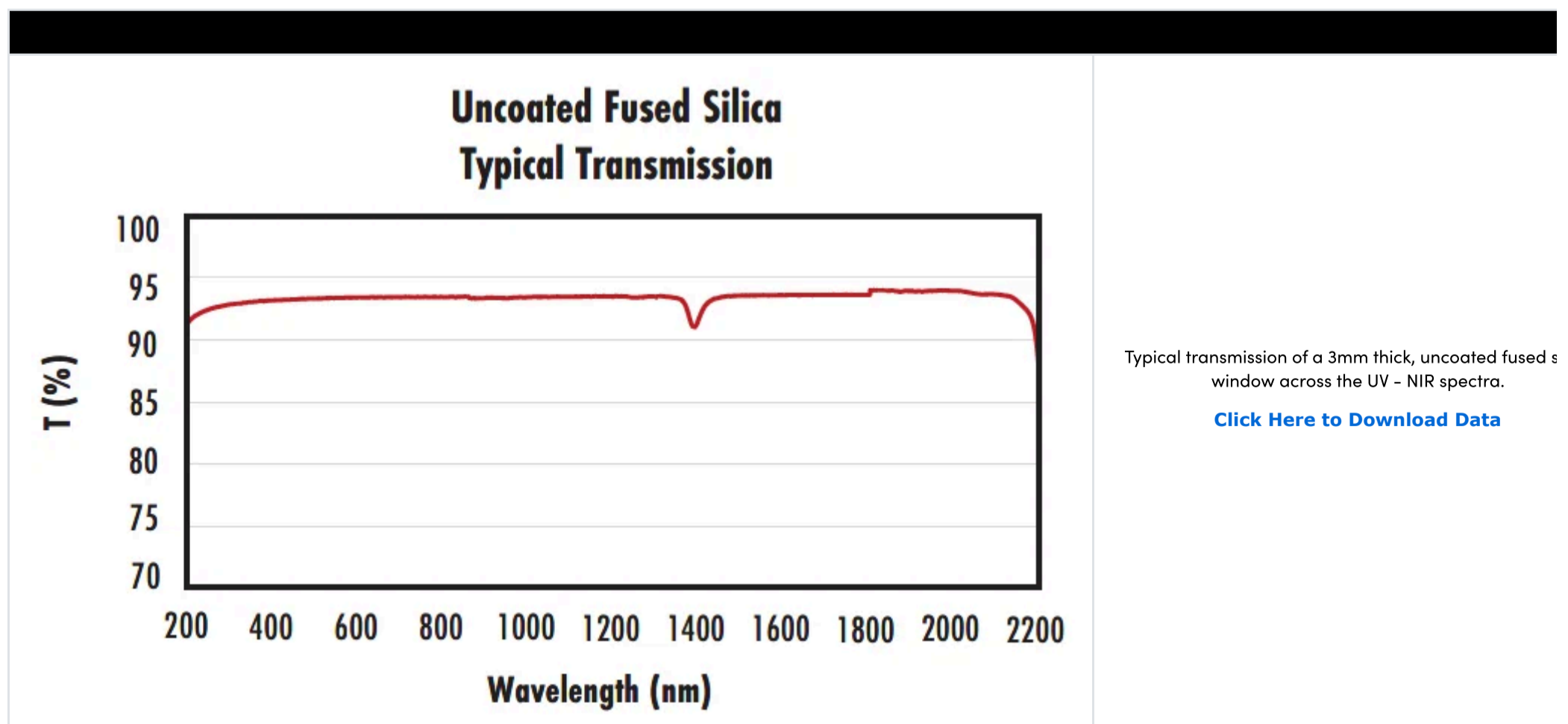
Product Details

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

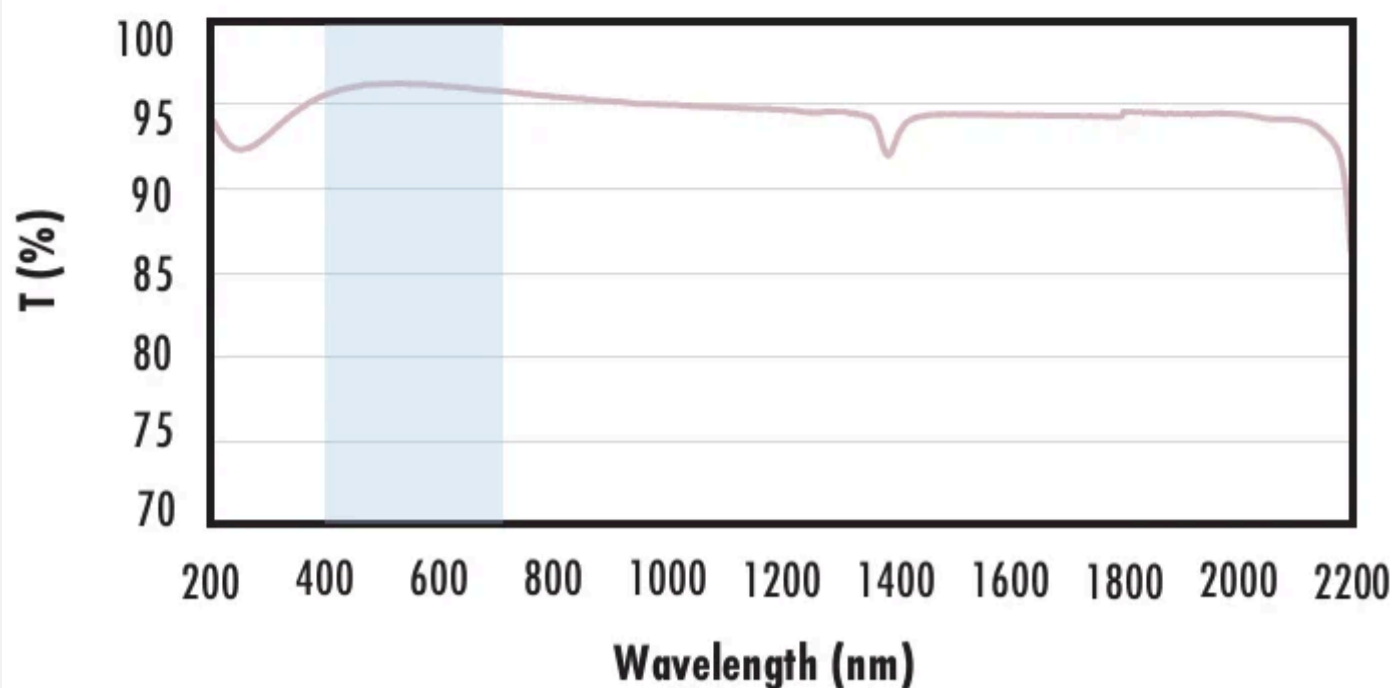
TECHSPEC® UV Fused Silica Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) 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



Fused Silica with MgF₂ Coating Typical Transmission



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

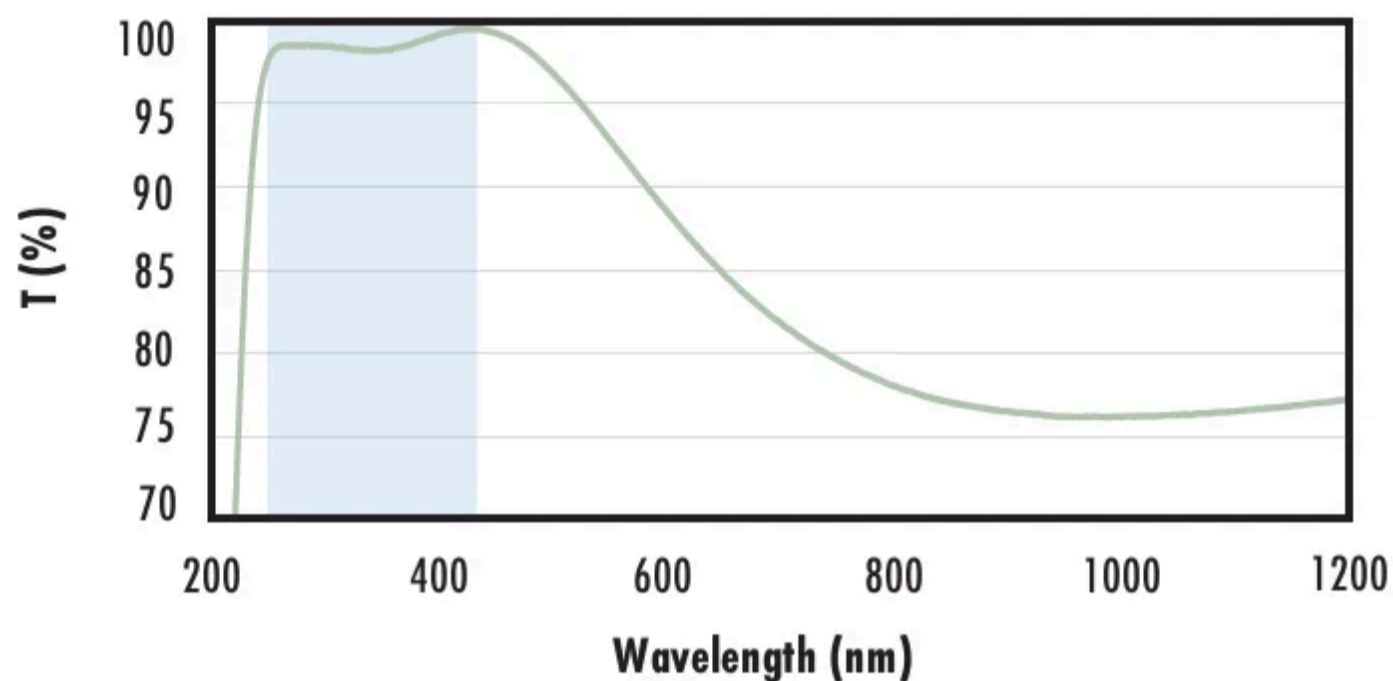
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

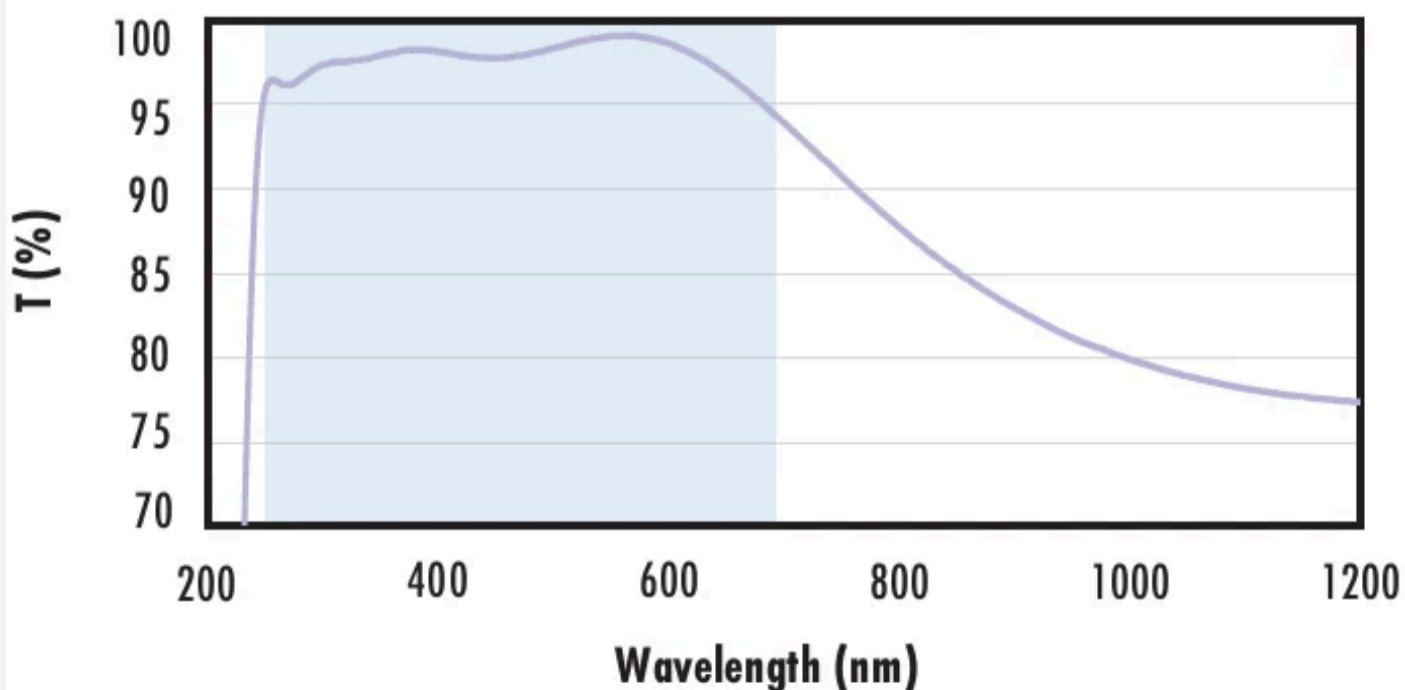
$$R_{avg} \leq 0.75\% \text{ @ } 250 - 425\text{nm}$$

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

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:

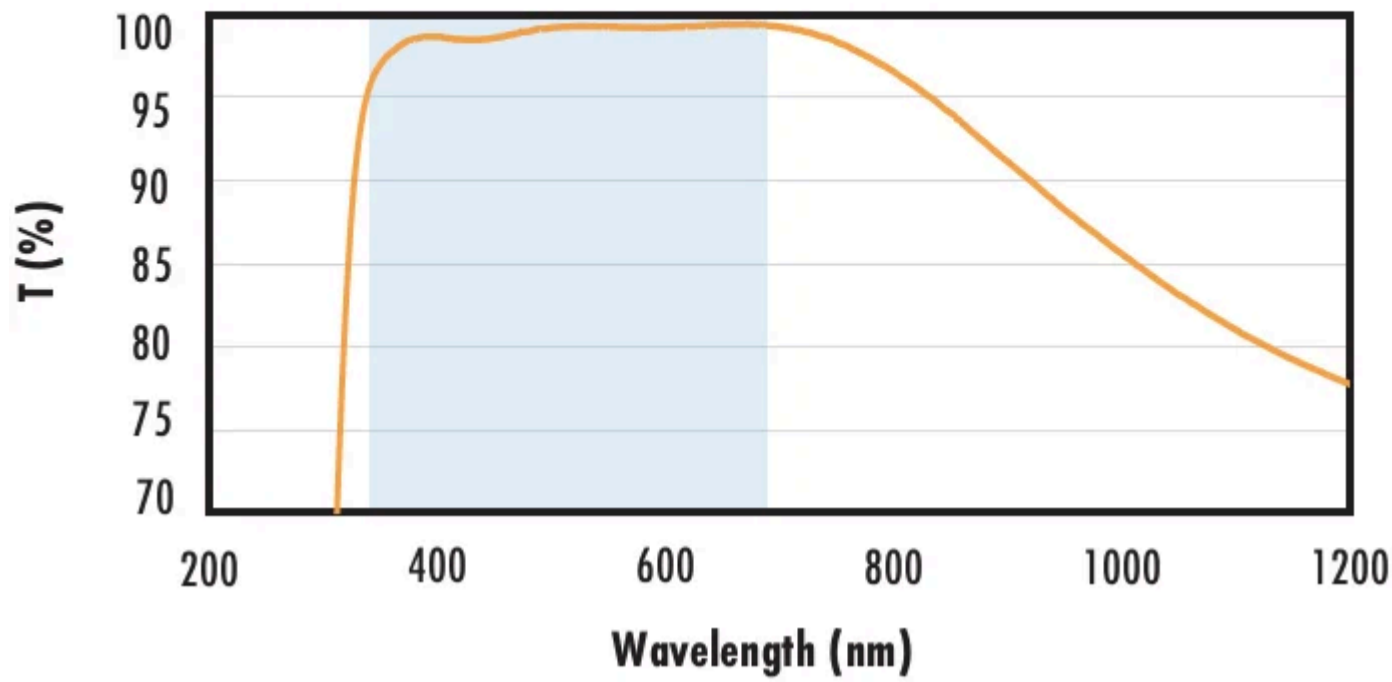
$$R_{abs} \leq 1.0\% \text{ @ } 350 - 450\text{nm}$$

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

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

[Click Here to Download Data](#)

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.

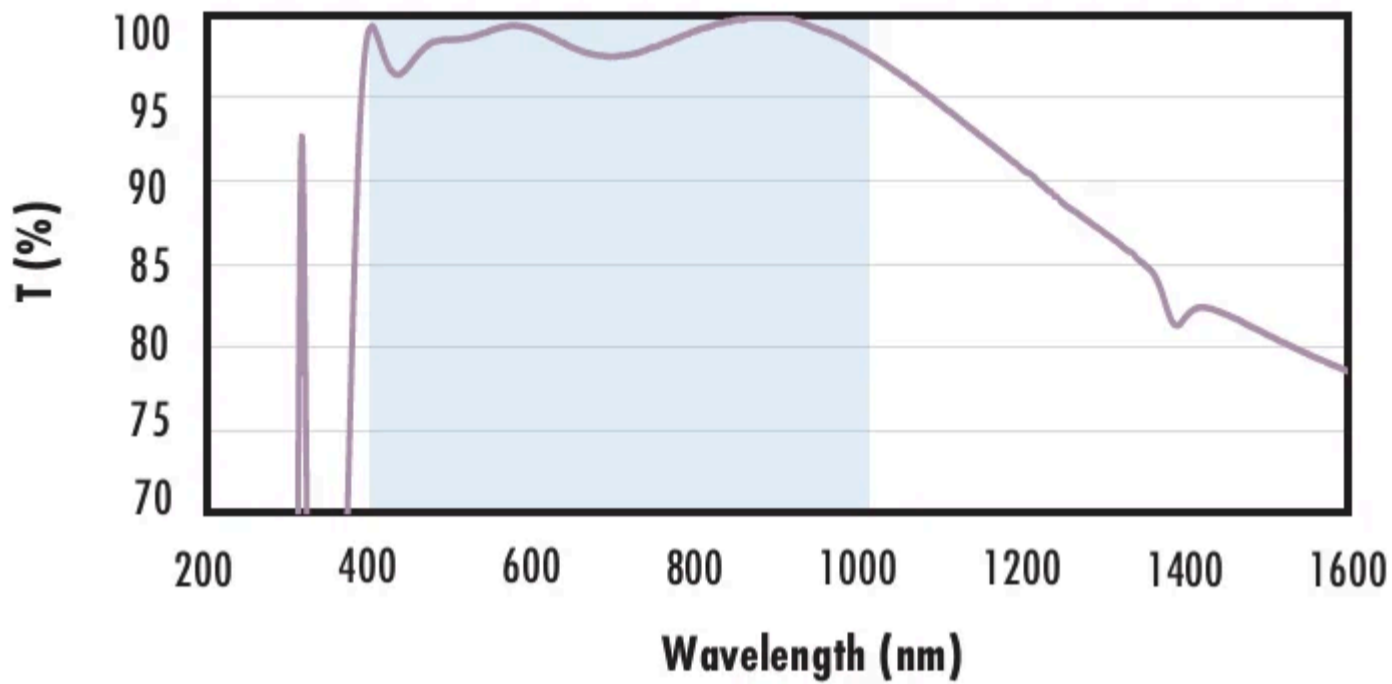
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

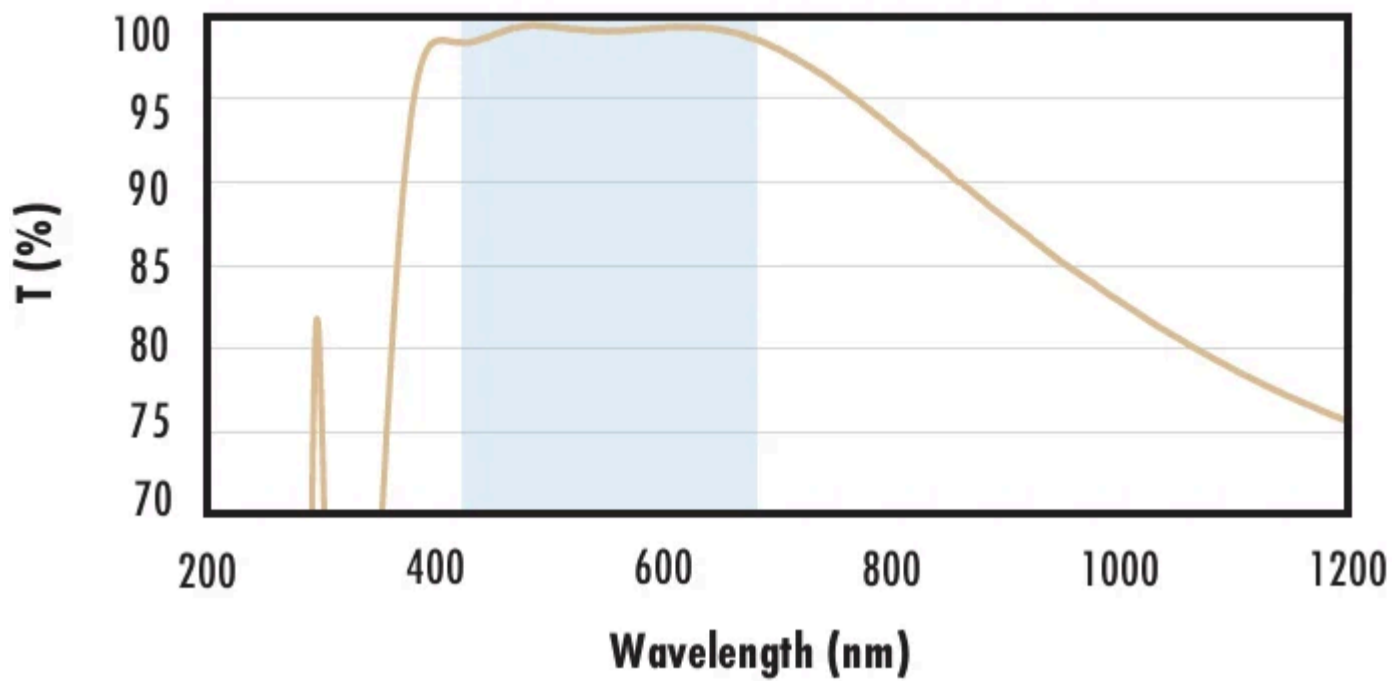
$$R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}$$

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

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

[Click Here to Download Data](#)

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.

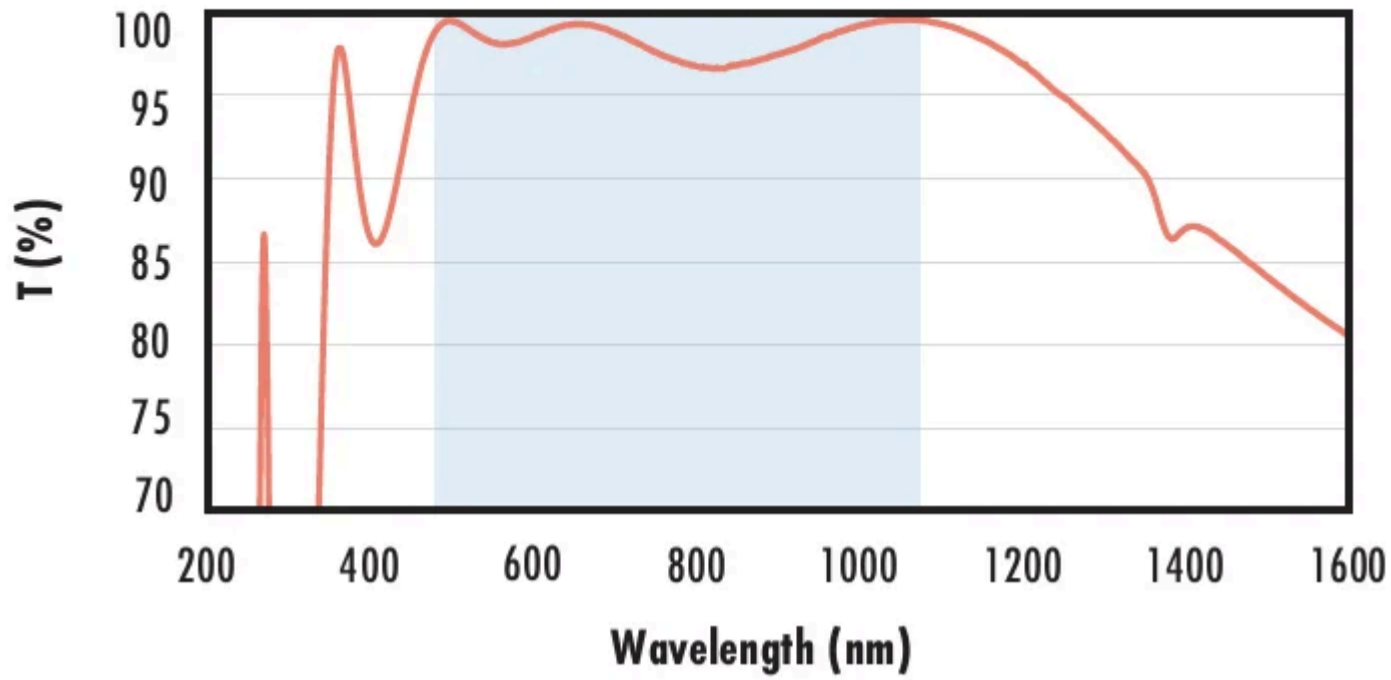
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

Fused Silica with YAG-BBAR Coating Typical Transmission



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

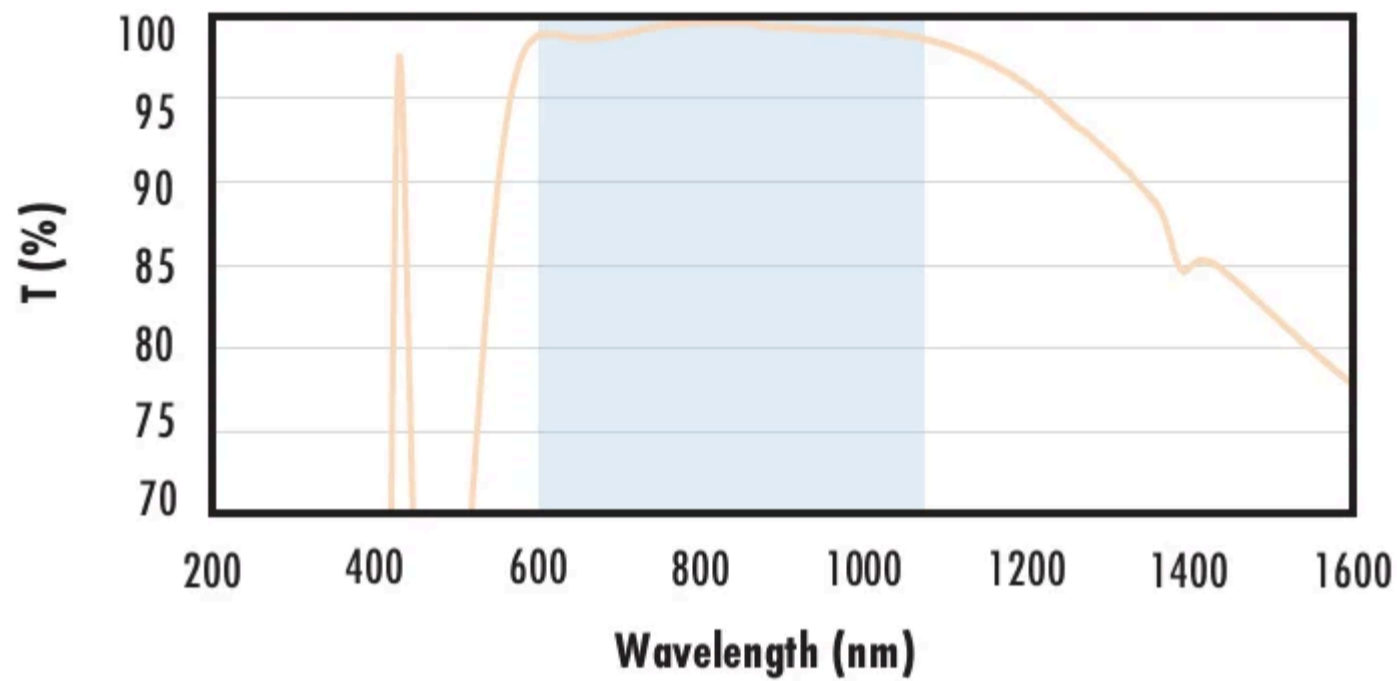
The blue shaded region indicates the coating design wavelength range, with the following specification:

- $R_{abs} \leq 0.25\%$ @ 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.

[Click Here to Download Data](#)

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.

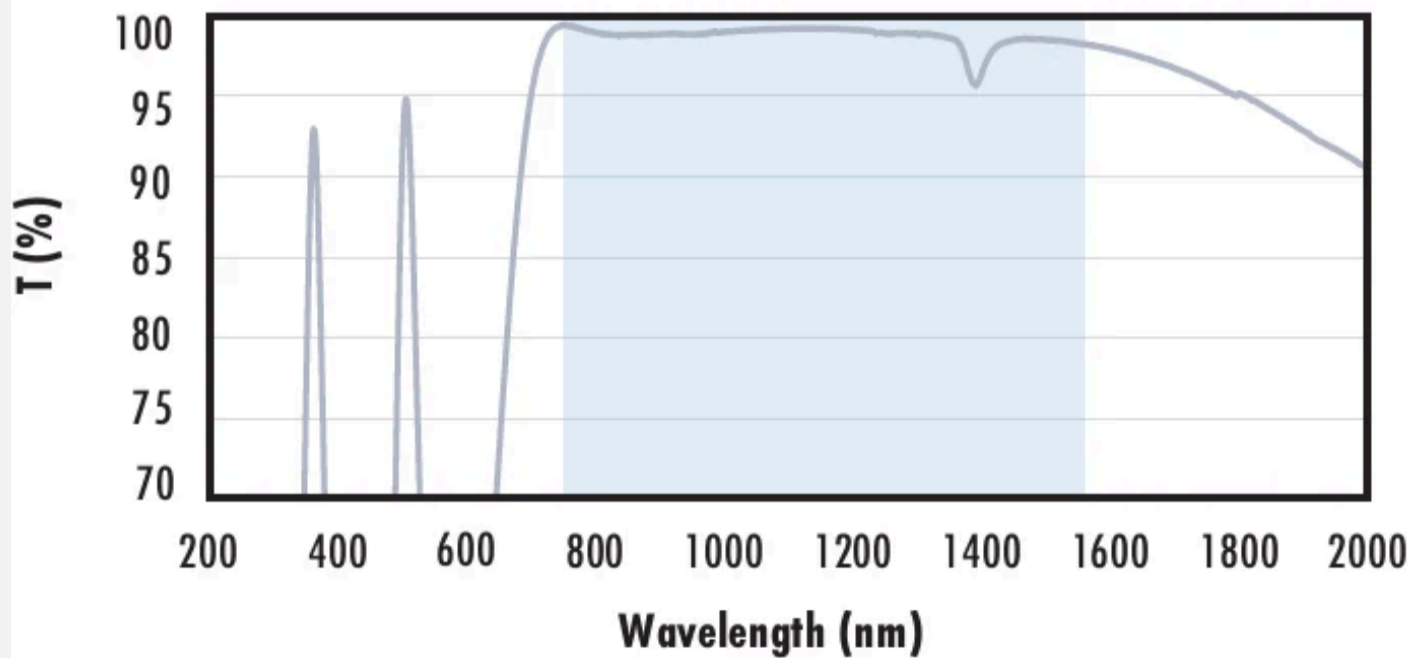
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

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

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

[Click Here to Download Data](#)

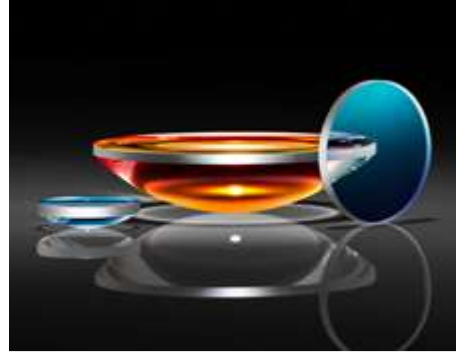
Related Products



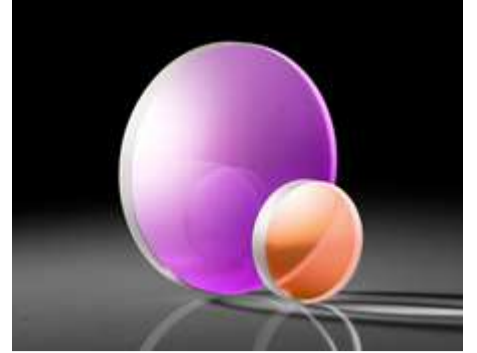
UV Fused Silica Aspheric Lenses



Uncoated Double-Convex (DCX) Lenses



UV Fused Silica Plano-Convex (PCX) Lenses - Uncoated



Laser Grade Plano-Convex (PCX) Lenses

Frequently Purchased Together



#48-034 - 12mm Dia. x 12mm FL, Uncoated, UV Double-Convex Lens
C\$180.60

Qty



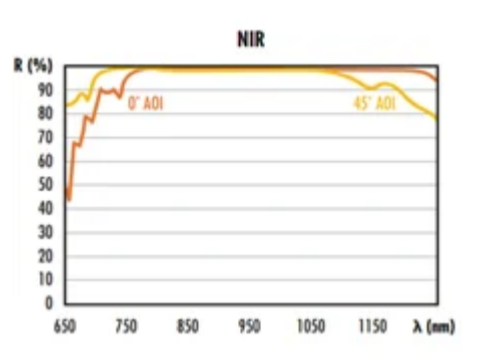
#39-024 - 12.7mm Dia, 340 - 560nm, $\lambda/4$ Achromatic Waveplate
C\$1,260.00

Qty



#39-025 - 12.7mm Dia, 340 - 560nm, $\lambda/2$ Achromatic Waveplate
C\$1,260.00

Qty



#39-390 - 25.4mm Dia. 320 - 450nm Broadband $\lambda/10$ Mirror
C\$203.00

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	18.0mm Optic Dia., Optic Mount	Fixed		#64-558	C\$45.85 Request Quote	CONTACT US <input type="text" value="1"/>
	18mm Inner Single Optic Mount	Fixed		#38-753	C\$57.40 Request Quote	20+ In Stock <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

APPLICATION NOTE

TECHNICAL TOOL

SAG Calculator

Lens Geometry
Performance
Comparison

UV vs. IR
Grade Fused
Silica

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