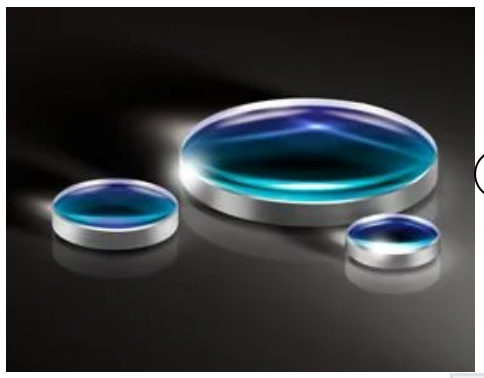
TECHSPEC®

12mm Dia. x 24mm FL, VIS-NIR Coated, UV Double-Convex Lens



UV Fused Silica Double-Convex (DCX) Lenses

Stock #63-830 20+ In Stock

Other Coating Options

- 1 +

C$217.00

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Volume Pricing	
Qty 1-5	C$217.00 each
Qty 6-25	C$173.60 each
Qty 26-49	C$162.40 each
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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):**	3.10 ±0.05
Edge Thickness ET (mm):	1.39	**Clear Aperture CA (mm):**	11.00

Optical Properties

Back Focal Length BFL (mm):	22.92	**Effective Focal Length EFL (mm):**	24.00
Coating:	VIS-NIR (400-1000nm)	**Coating Specification:**	R_{abs} ≤0.25% @ 880nm R_{avg} ≤1.25% @ 400 - 870nm R_{avg} ≤1.25% @ 890 - 1000nm
Substrate: ⓘ	Fused Silica (Corning 7980)	**Surface Quality:**	40-20
Power (P-V) @ 632.8nm:	1.5λ	**Irregularity (P-V) @ 632.8nm:**	λ/4
Radius R_1=-R_2 (mm):	21.51	**f/#:**	2.00

Focal Length Specification Wavelength (nm):	587.6	**Focal Length Tolerance (%):**	±1
Numerical Aperture NA:	0.25	**Wavelength Range (nm):**	400 - 1000
Damage Threshold, Reference: ⓘ	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.**

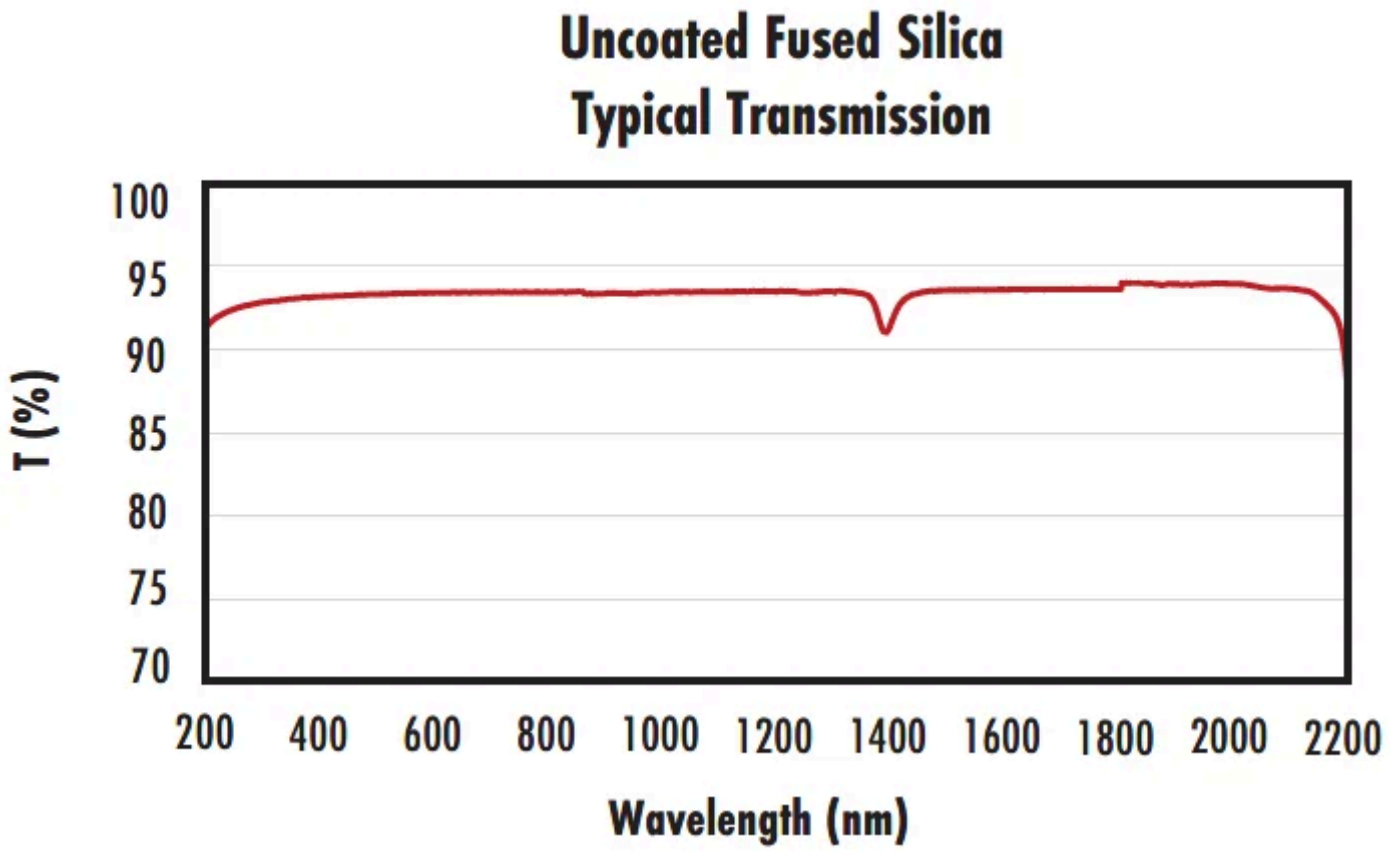
Product Details

- 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



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

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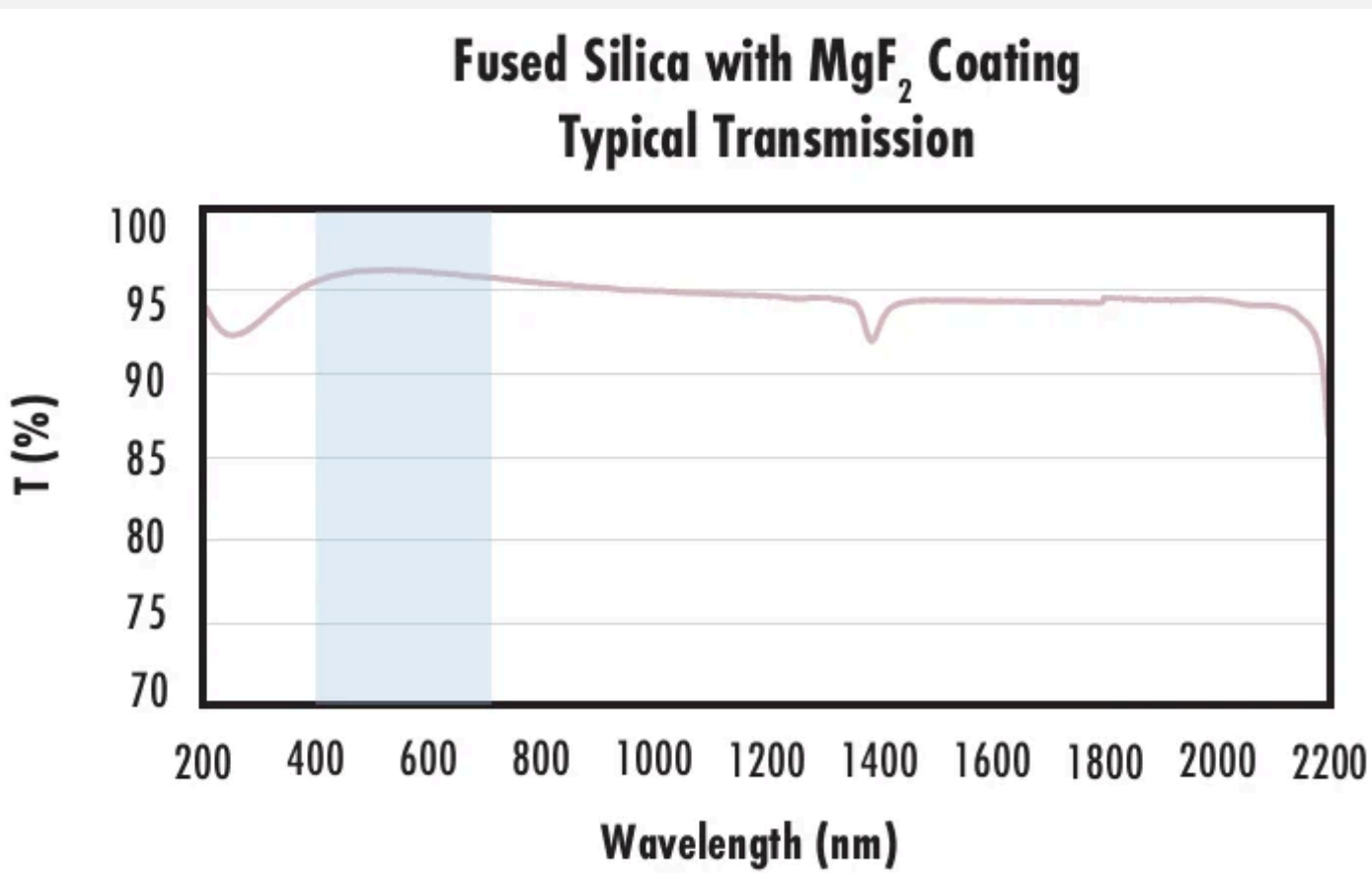

Typical transmission of a 3mm thick fused silica wind with MgF2 (400-700nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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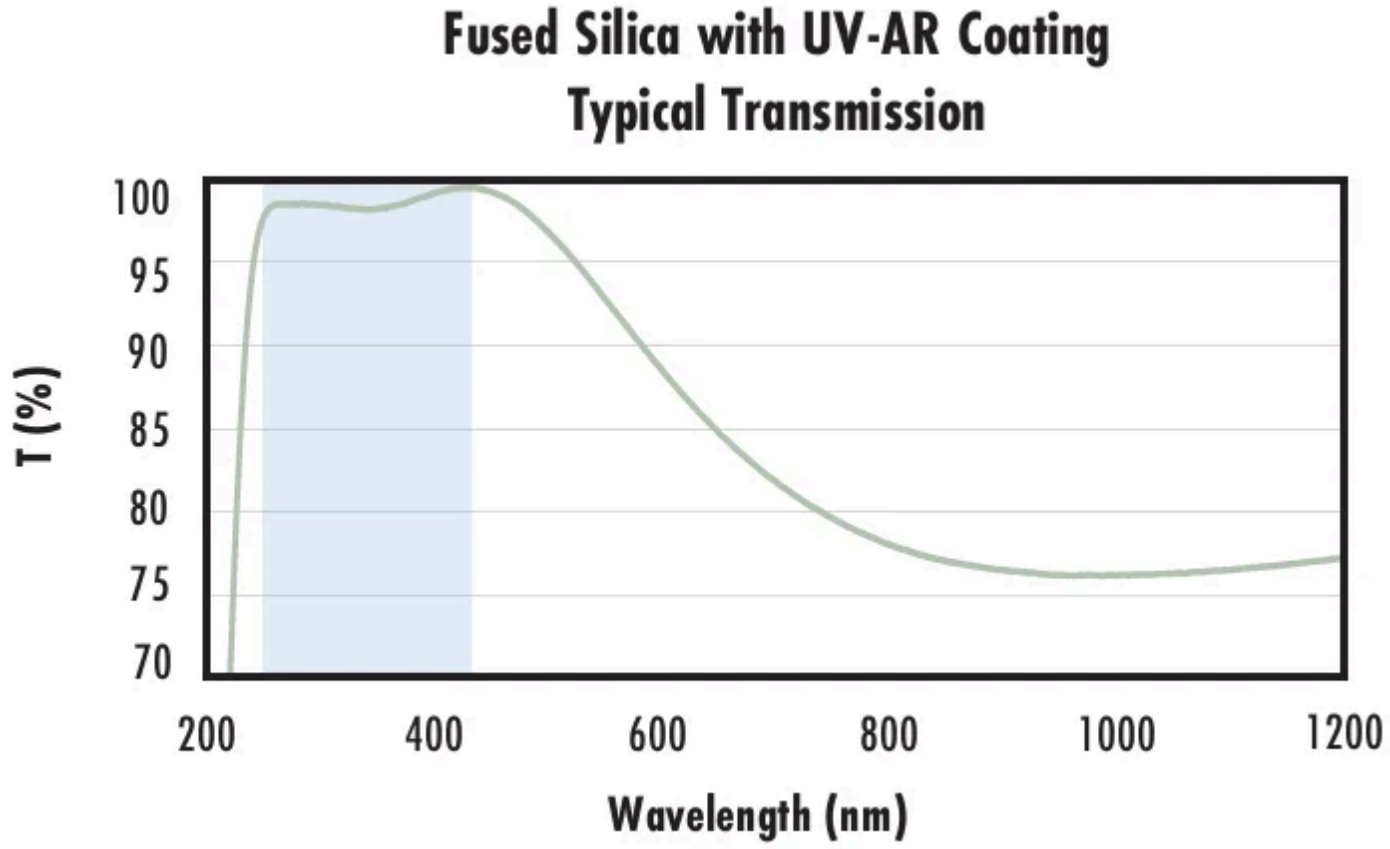

Typical transmission of a 3mm thick fused silica wind with UV-AR (250-425nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

$R_{abs} \leq 1.0\%$ @ 250 - 425nm
$R_{avg} \leq 0.75\%$ @ 250 - 425nm
$R_{avg} \leq 0.5\%$ @ 370 - 420nm

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

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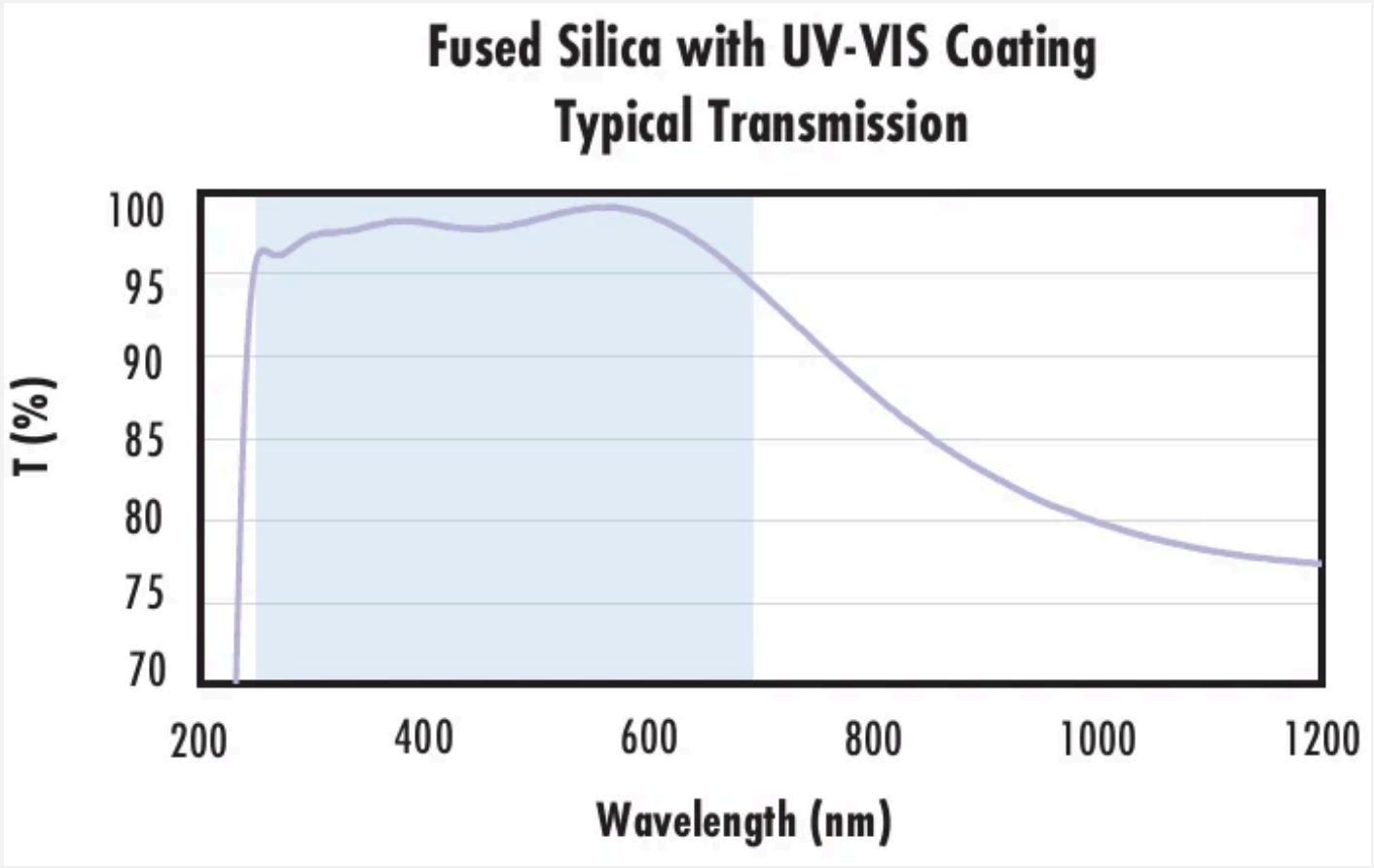

Typical transmission of a 3mm thick fused silica wind with UV-VIS (250-700nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

$R_{abs} \leq 1.0\%$ @ 350 - 450nm
$R_{avg} \leq 1.5\%$ @ 250 - 700nm

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

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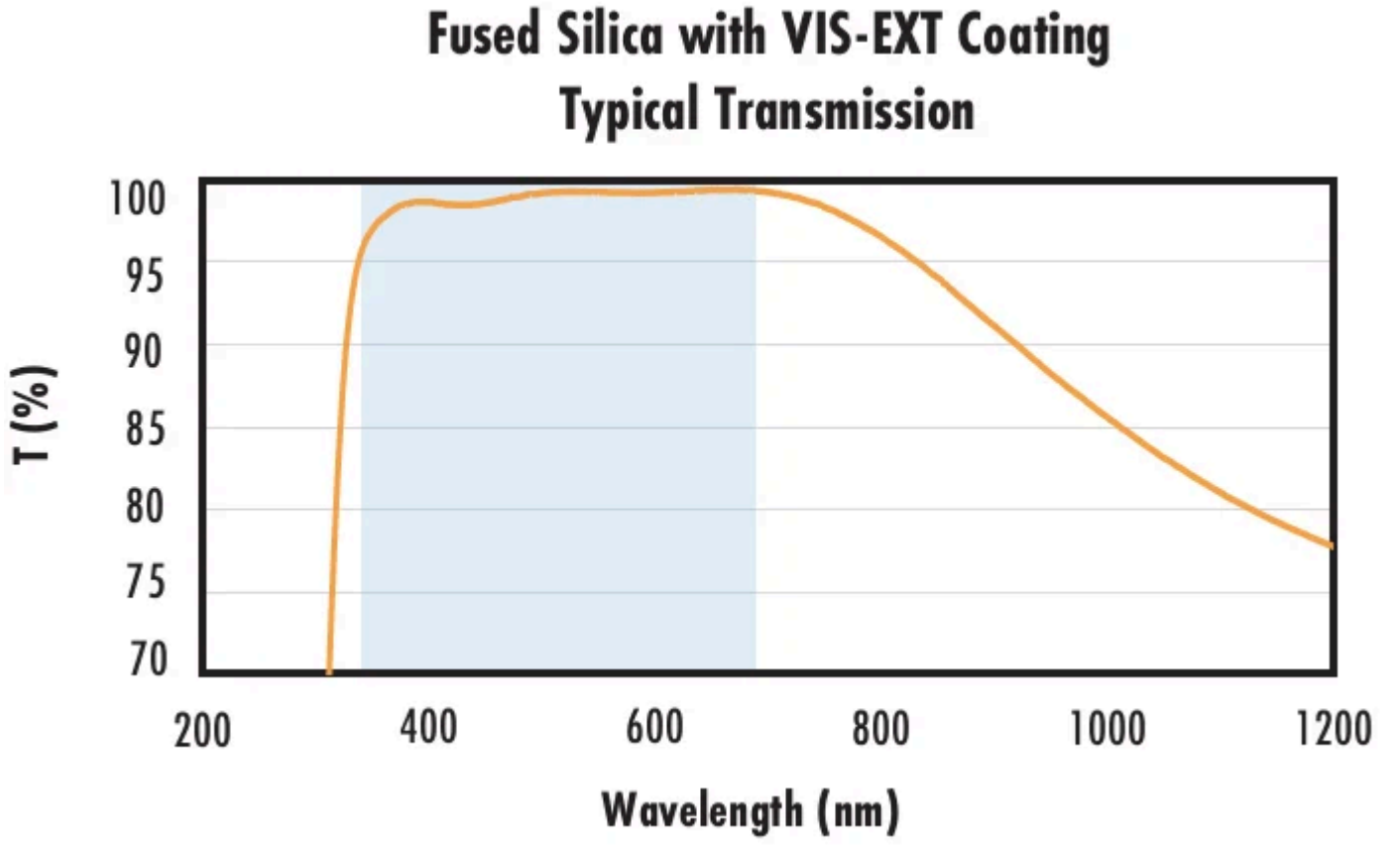

Typical transmission of a 3mm thick fused silica wind with VIS-EXT (350-700nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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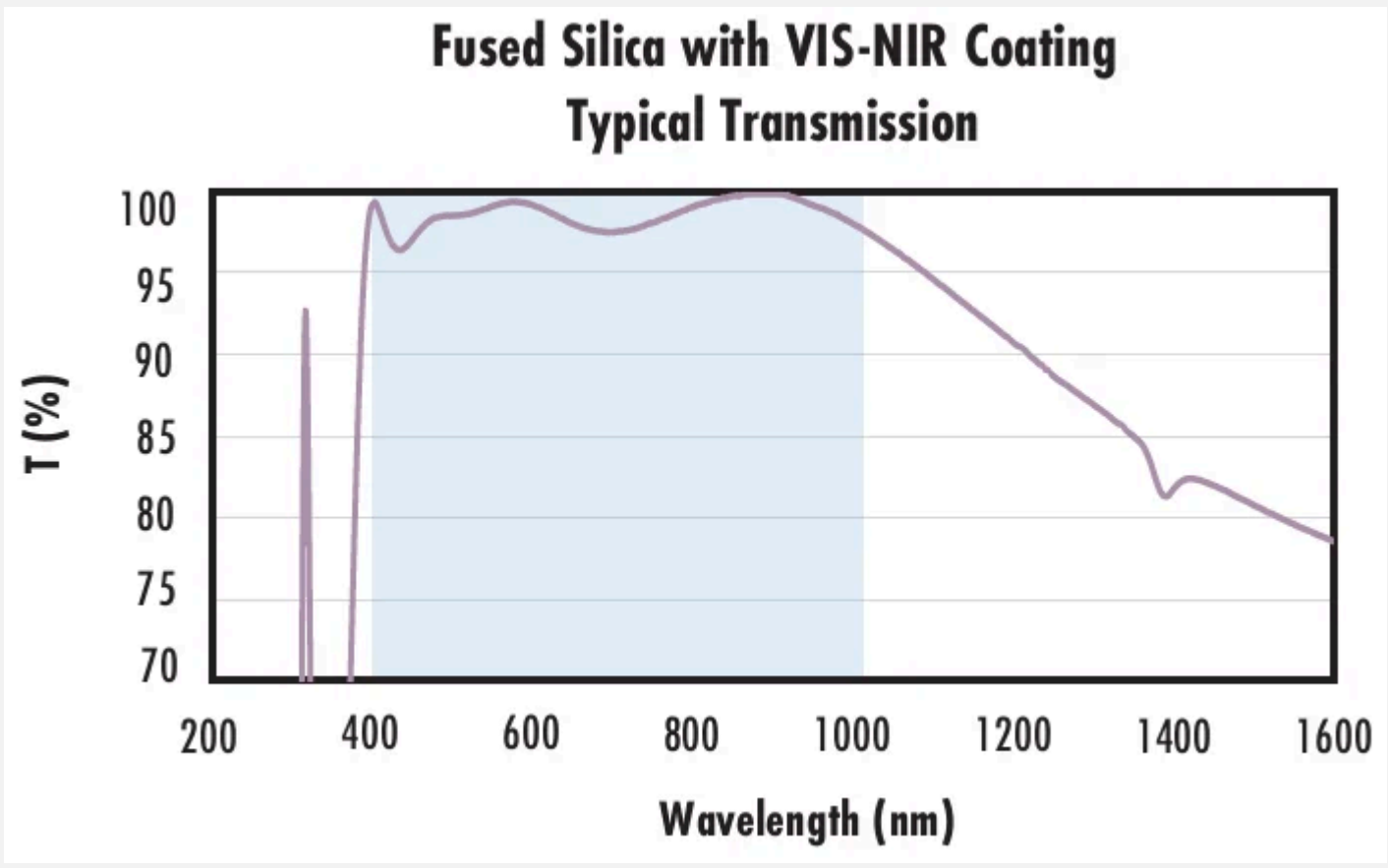

Typical transmission of a 3mm thick fused silica wind with VIS-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh 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 fo reference only.

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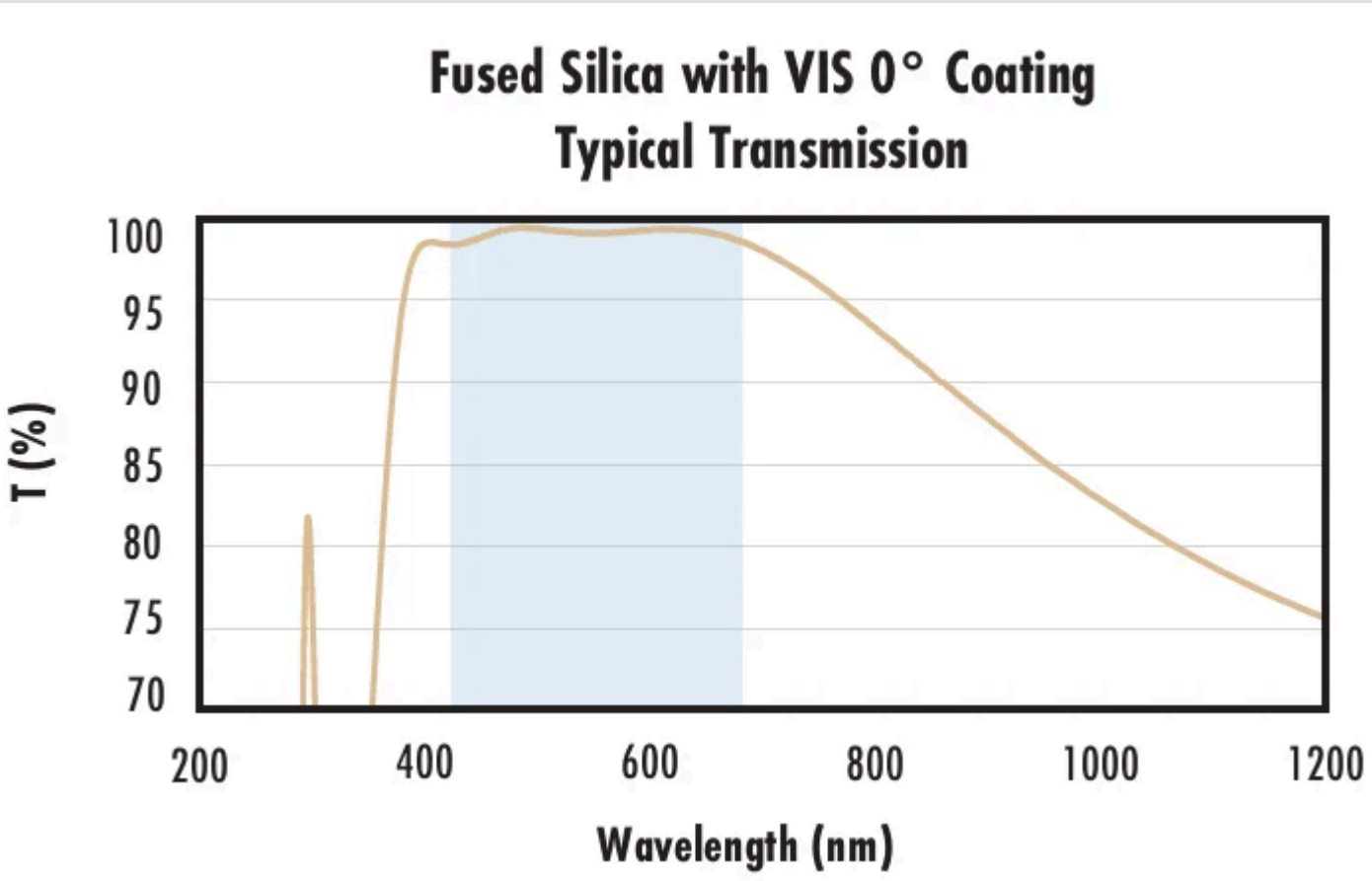

Typical transmission of a 3mm thick fused silica wind with VIS 0° (425-675nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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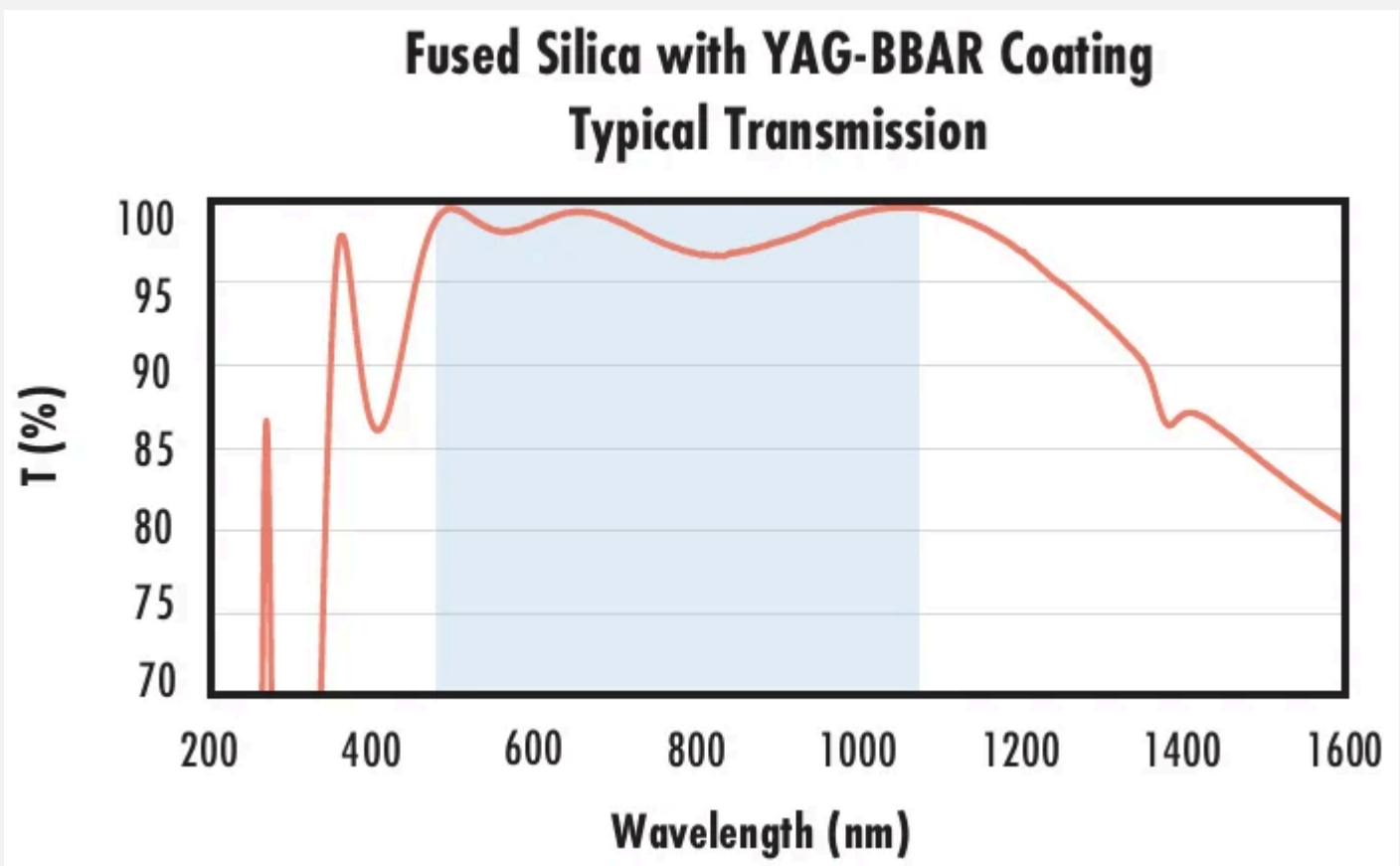

Typical transmission of a 3mm thick fused silica wind with YAG-BBAR (500-1100nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh 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 fo reference only.

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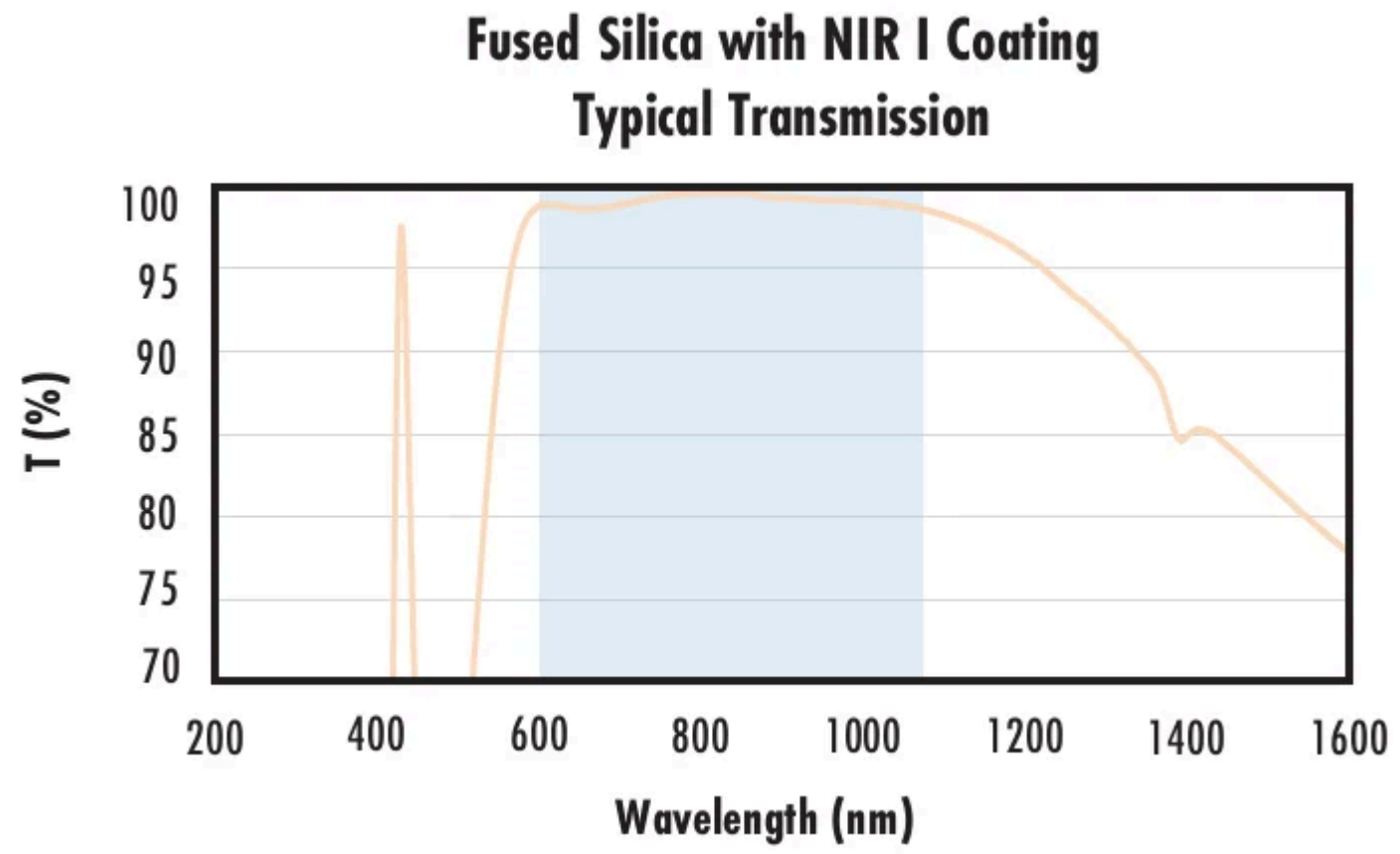

Typical transmission of a 3mm thick fused silica wind with NIR I (600 - 1050nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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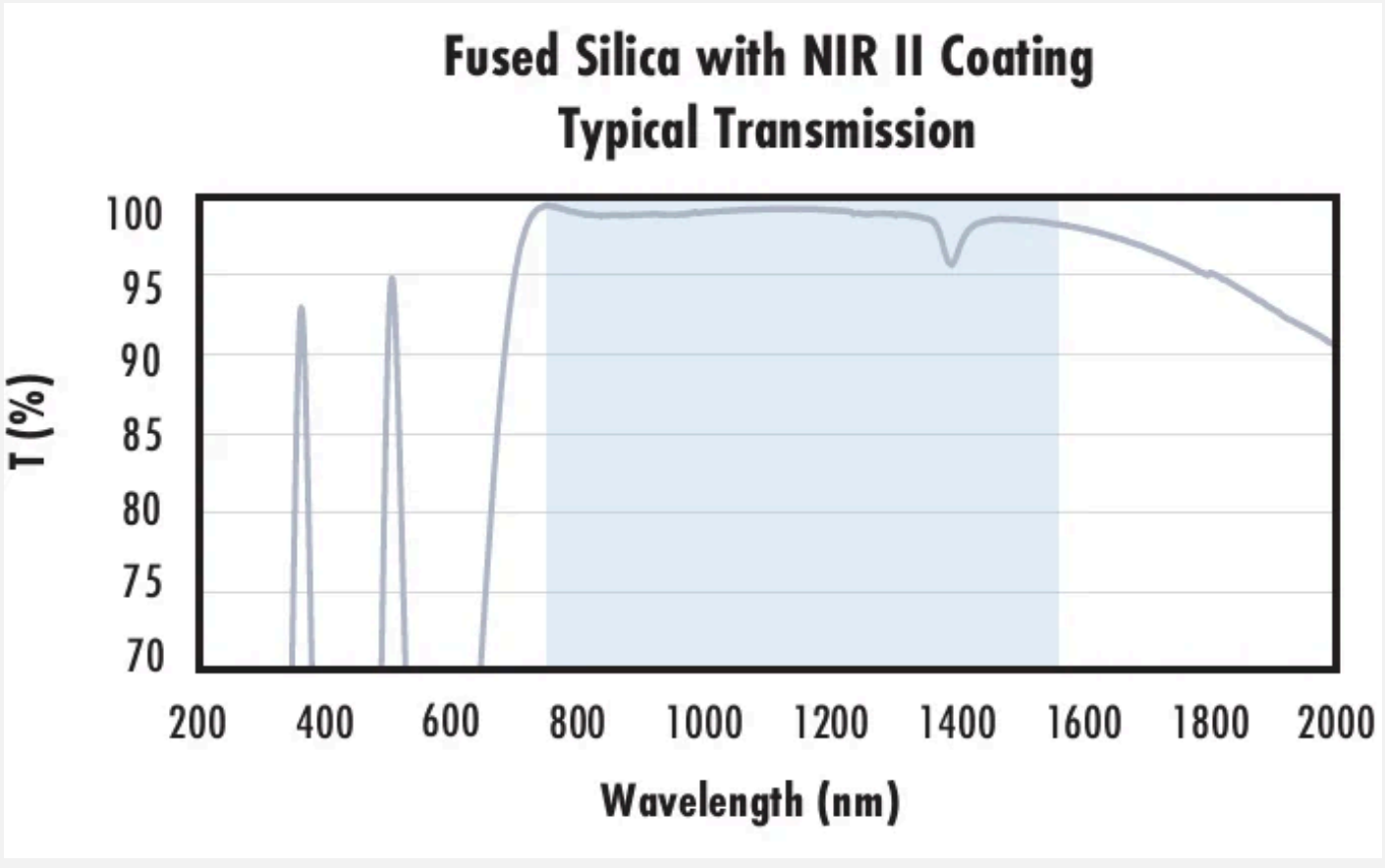

Typical transmission of a 3mm thick fused silica wind with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

R_{abs} ≤ 1.5% @ 750 - 800nm
R_{abs} ≤ 1.0% @ 800 - 1550nm
R_{avg} ≤ 0.7% @ 750 - 1550nm

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

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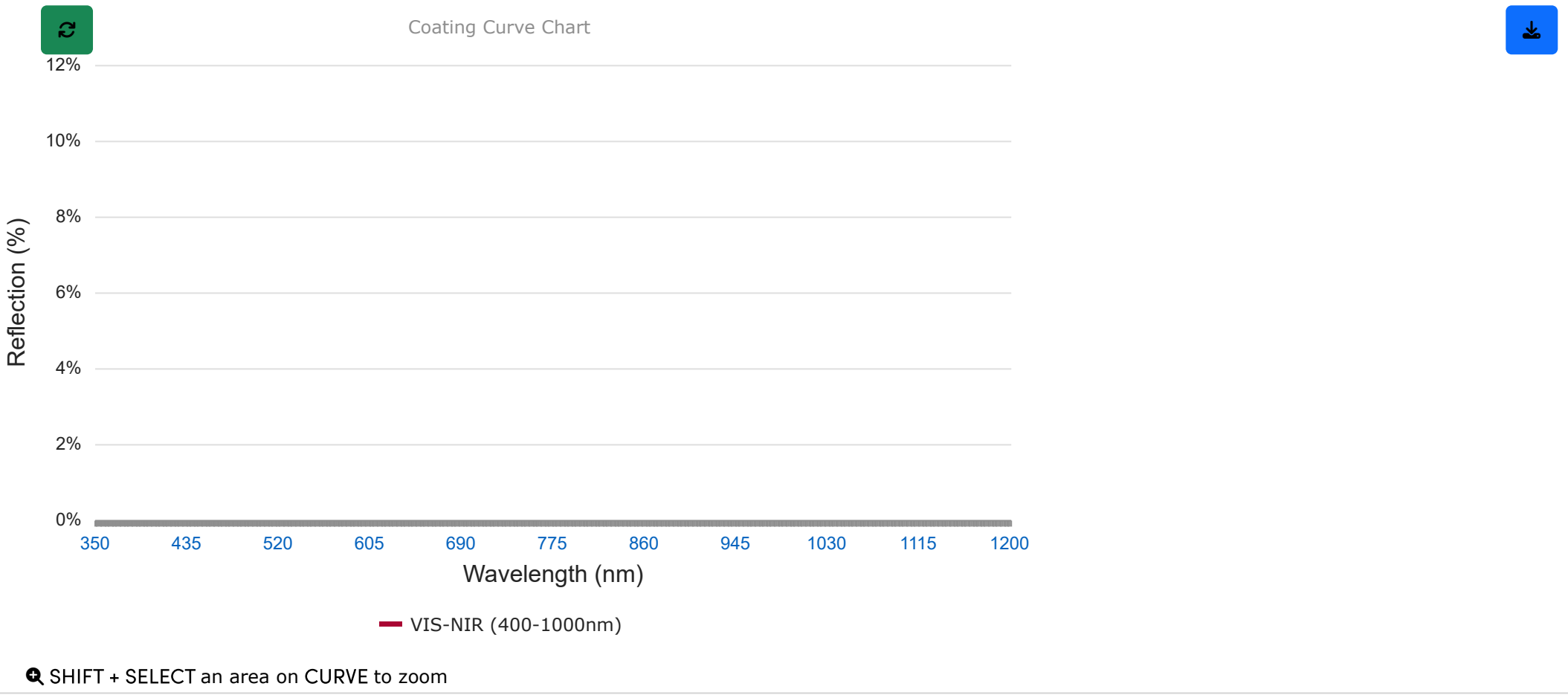
Coating Curves

VIS-NIR (400-1000nm)

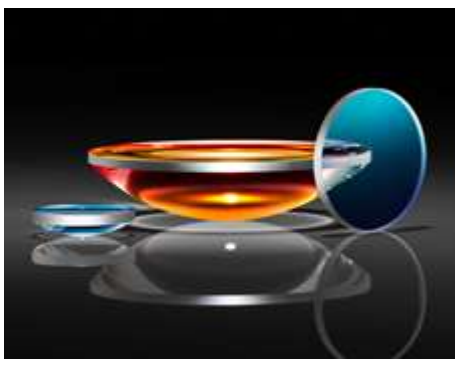


Please note that coating performance outside each product's specified design range is theoretical and may vary.

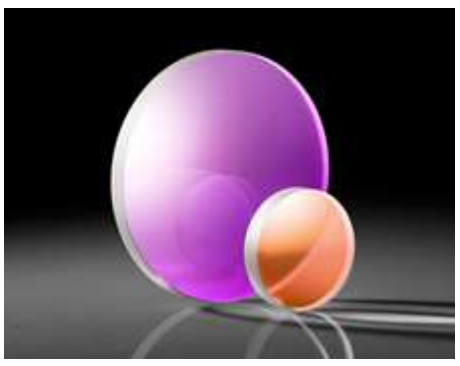
Related Products

UV Fused Silica Aspheric Lenses

Uncoated Double-Convex (DCX) Lenses



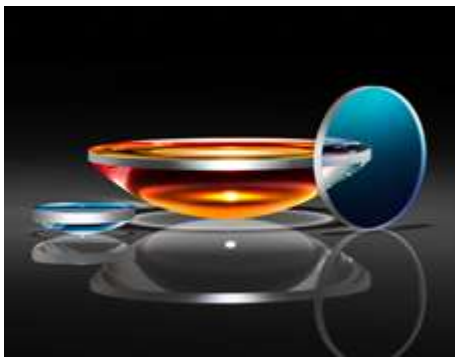
UV Fused Silica Plano-Convex (PCX) Lenses - Uncoated



Laser Grade Plano-Convex (PCX) Lenses

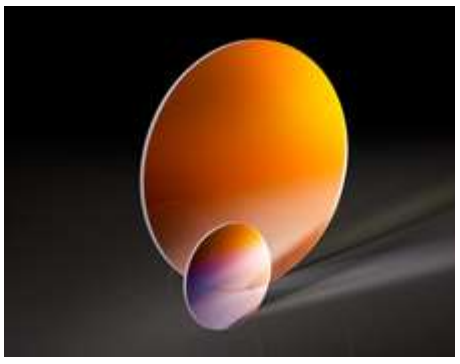
Frequently Purchased Together

#63-831 - 12mm Dia. x 30mm FL, VIS-NIR Coated, UV Double-Convex Lens
C$207.20
Qty



#63-794 - 12mm Dia. x 25mm FL VIS-NIR Coated, UV Plano-Convex Lens
C$226.80
Qty

#37-322 - Norland Optical Adhesive NOA 61, 1 oz. Application Bottle
C$57.00
Qty



#11-746 - 12.7mm Dia., 370 - 550nm BBAR Coated, Ultrafast Thin Window
C$200.20
Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	12.0mm Optic Dia., Optic Mount	Fixed		#64-555	C$45.85 Request Quote	10 In Stock 1

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Understanding Optical Specifications

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Lens Geometry Performance Comparison

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