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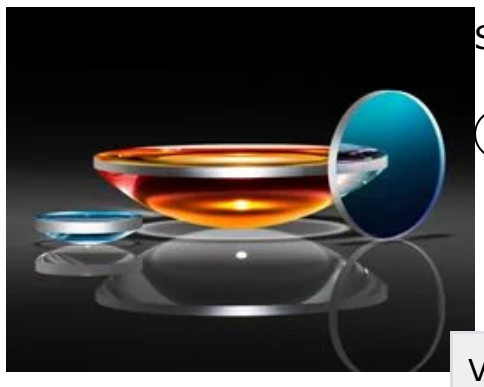
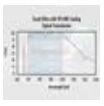
TECHSPEC®

18mm Dia x 27mm FL VIS-NIR Coated, UV Plano-Convex Lens



UV Fused Silica Plano-Convex (PCX) Lenses





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General

Type:	Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):	18.00 +0.0/-0.025	**Centering (arcmin):**	<1
Center Thickness CT (mm):	5.50 ±0.10	**Edge Thickness ET (mm):**	1.62
Clear Aperture CA (mm):	17	**Bevel:**	Protective as needed

Optical Properties

Effective Focal Length EFL (mm):	27.00 @ 587.6nm	**Back Focal Length BFL (mm):**	23.23
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
Focal Length Tolerance (%):	±1	**Radius R_1 (mm):**	12.38

f/#:	1.5	**Numerical Aperture NA:**	0.33
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

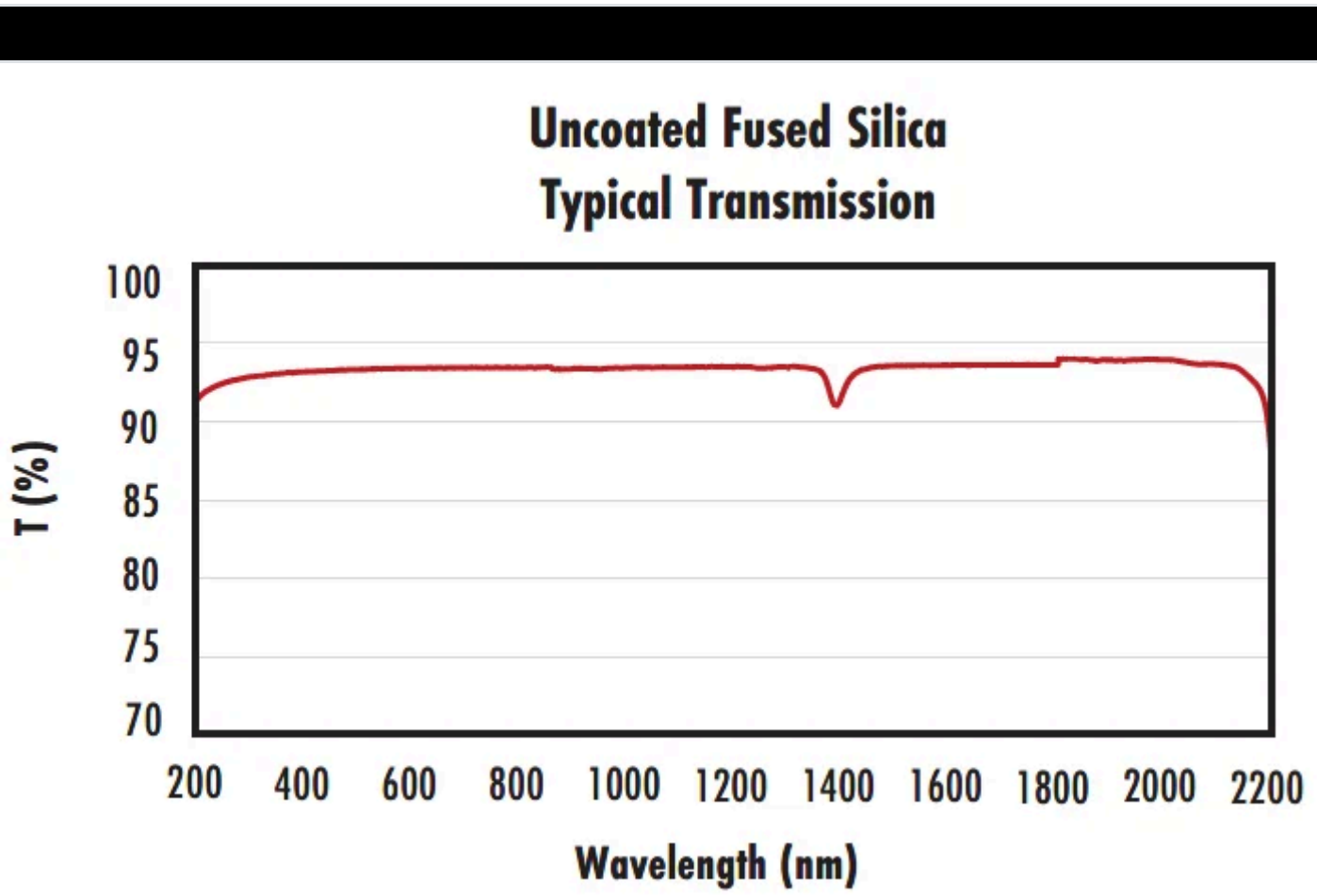
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

Product Details

- AR Coated to Provide <1.25% Reflection per Surface for 400 - 870nm and for 890 – 1000nm
- Precision Fused Silica Substrate
- Various Coating Options: **Uncoated**, **MgF_2**, **UV-AR**, **UV-VIS**, **VIS-EXT**, **VIS 0°**, **YAG-BBAR**, **NIR I**, and **NIR II**

TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses VIS-NIR Coated feature precision specifications and a **variety of coating options** on a broadband substrate. Fused Silica is commonly used in applications from the Ultraviolet (UV) through the Near-Infrared (NIR). Its low index of refraction, low coefficient of thermal expansion, and low inclusion content make it ideal for laser applications and harsh environmental conditions. TECHSPEC® UV Fused Silica Plano-Convex (PCX) Lenses VIS-NIR Coated feature industry leading diameter and centration specifications, making them ideal for integration into demanding imaging and targeting applications. These lenses are VIS-NIR coated to increase their coating performance in the visible and near infrared region.

Technical Information



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

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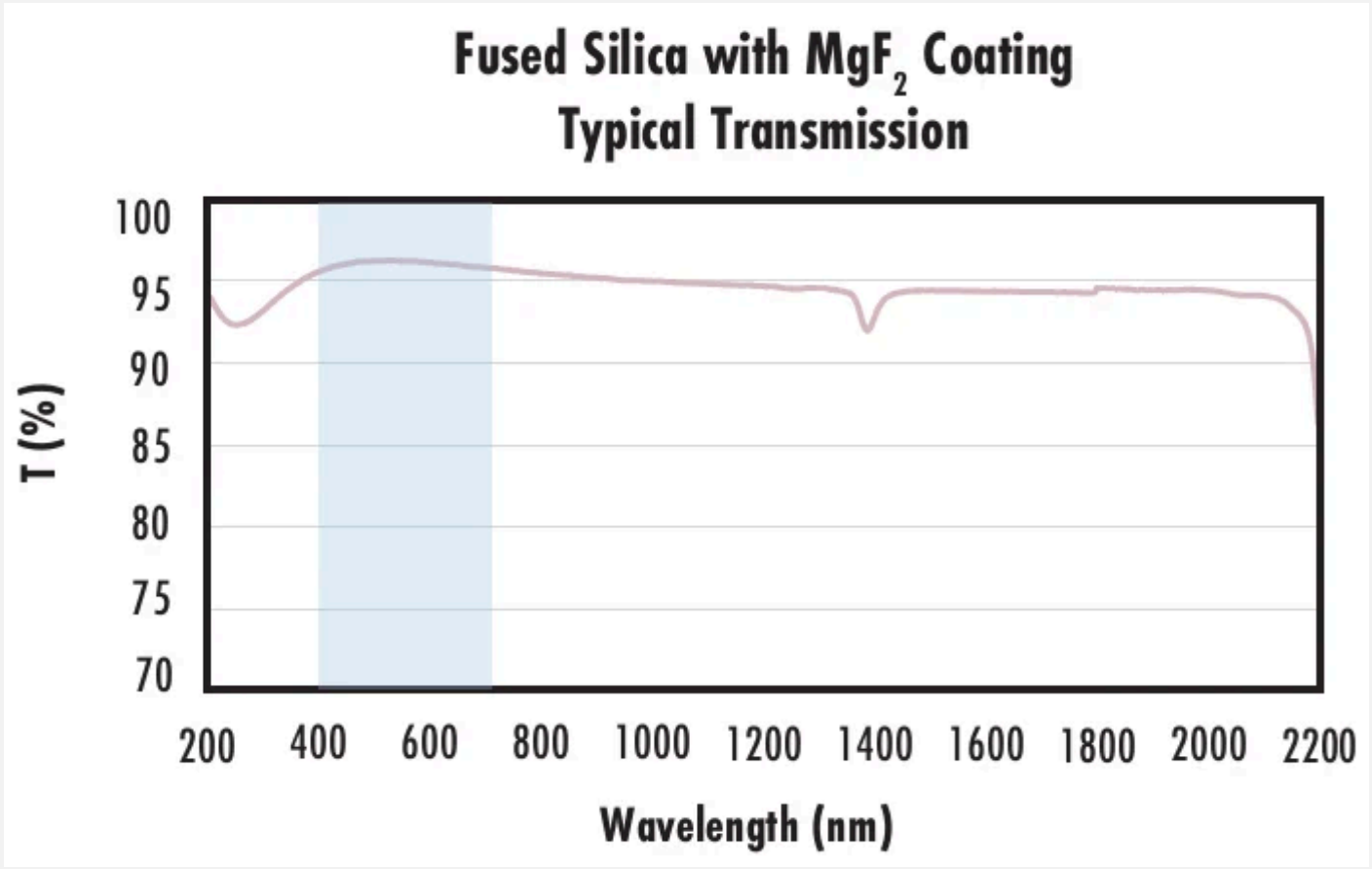

Typical transmission of a 3mm thick fused silica wind with MgF2 (400-700nm) coating at 0° AOI.

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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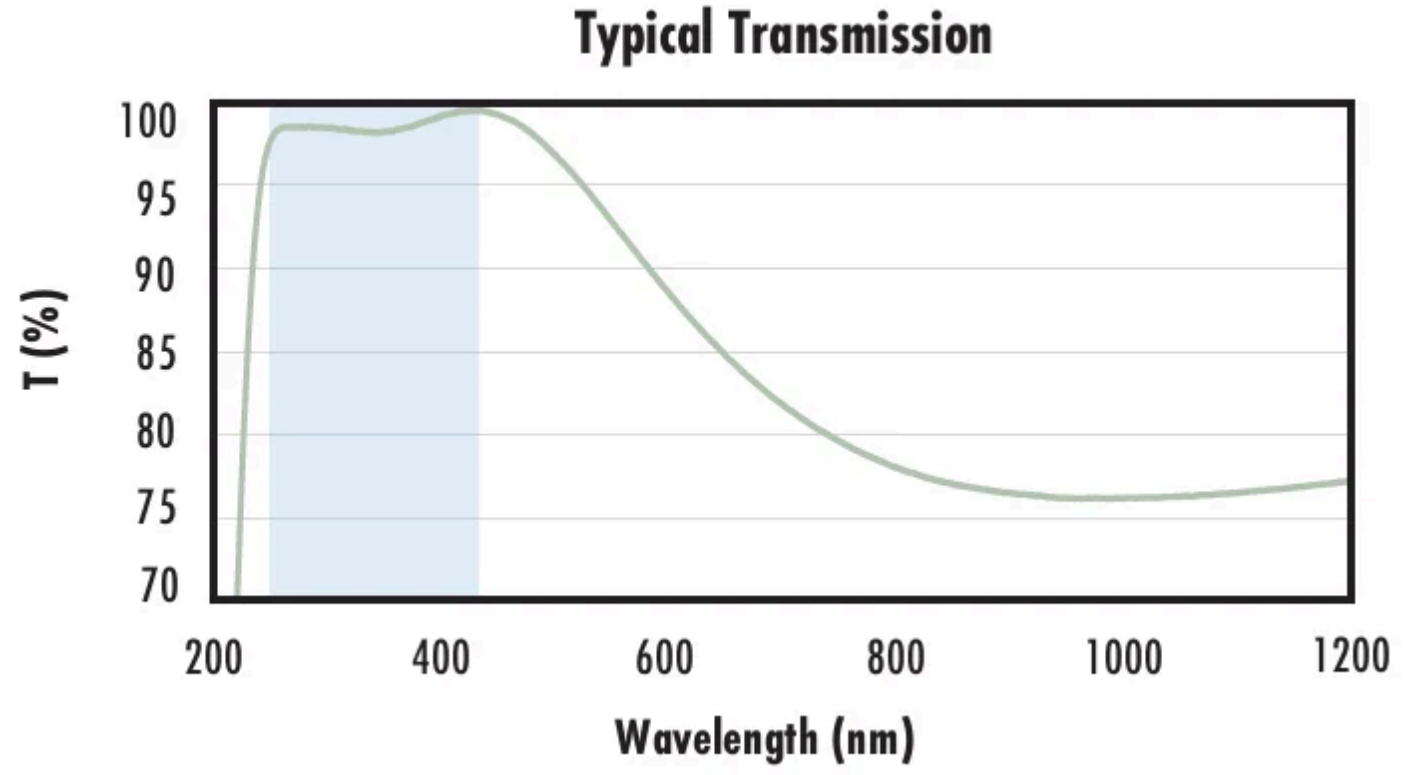

Typical transmission of a 3mm thick fused silica wind with UV-AR (250-425nm) coating at 0° AOI.

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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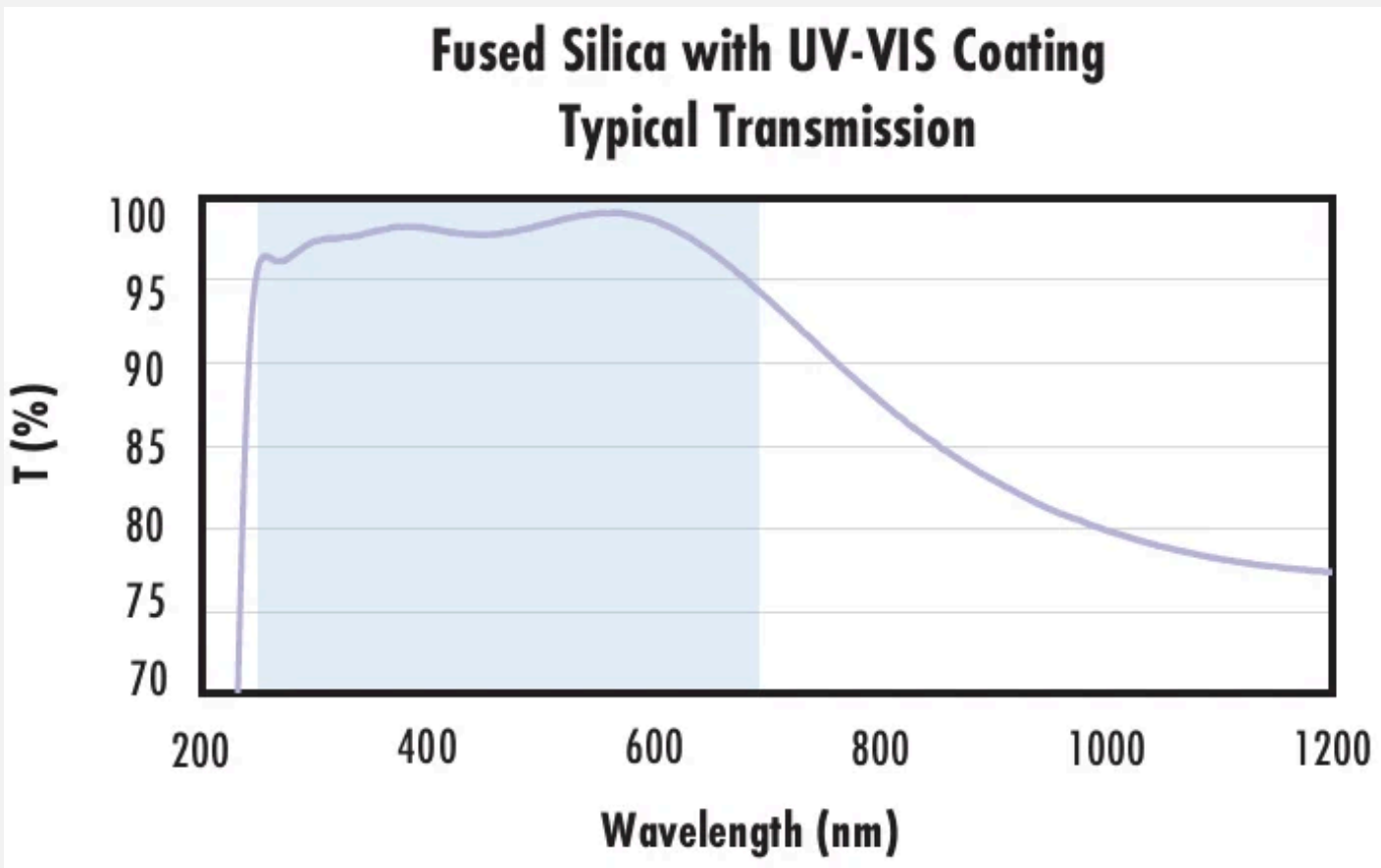

Typical transmission of a 3mm thick fused silica wind with UV-VIS (250-700nm) coating at 0° AOI.

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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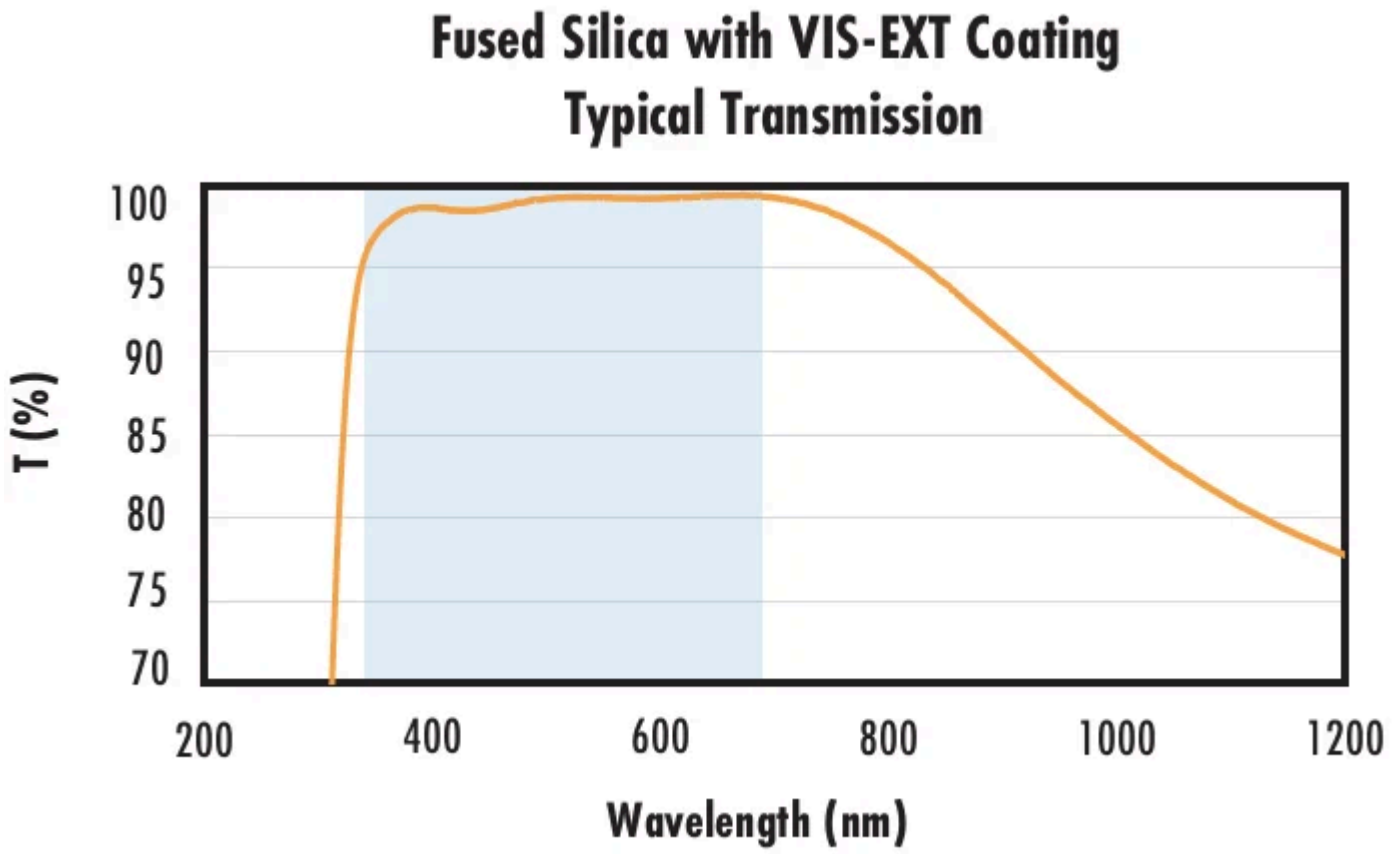

Typical transmission of a 3mm thick fused silica wind with VIS-EXT (350-700nm) coating at 0° AOI.

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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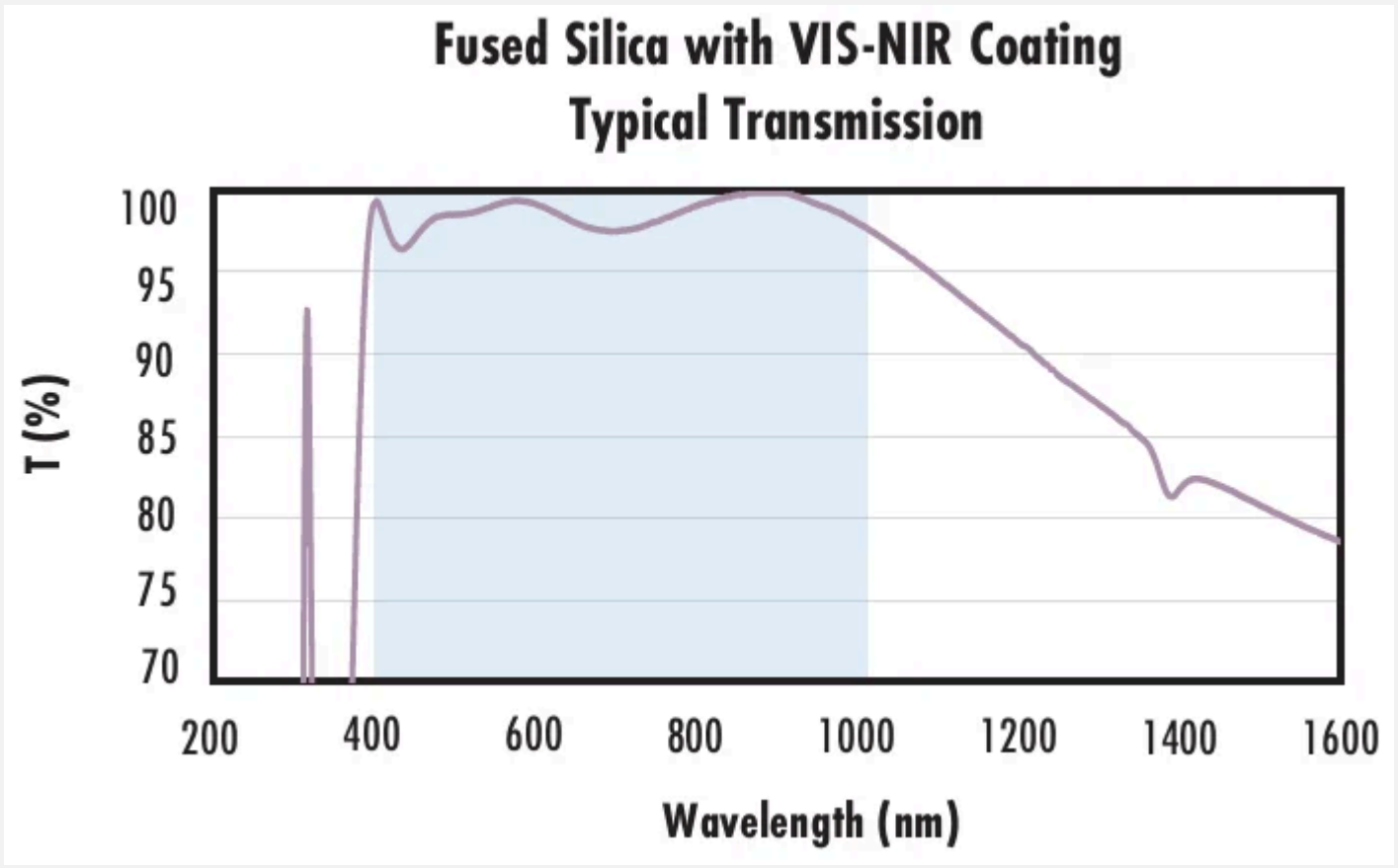

Typical transmission of a 3mm thick fused silica wind with VIS-NIR (400-1000nm) coating at 0° AOI.

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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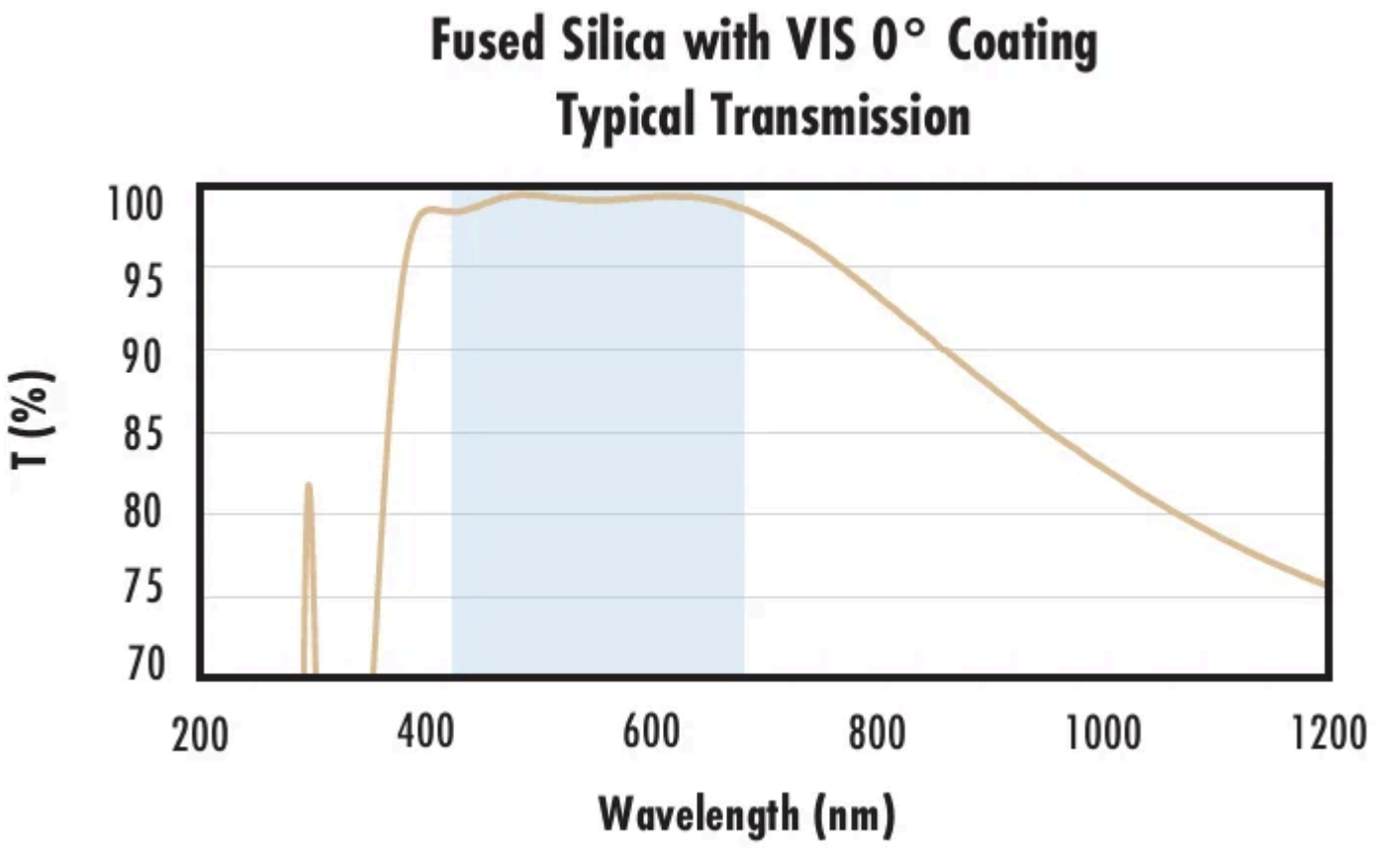

Typical transmission of a 3mm thick fused silica wind with VIS 0° (425-675nm) coating at 0° AOI.

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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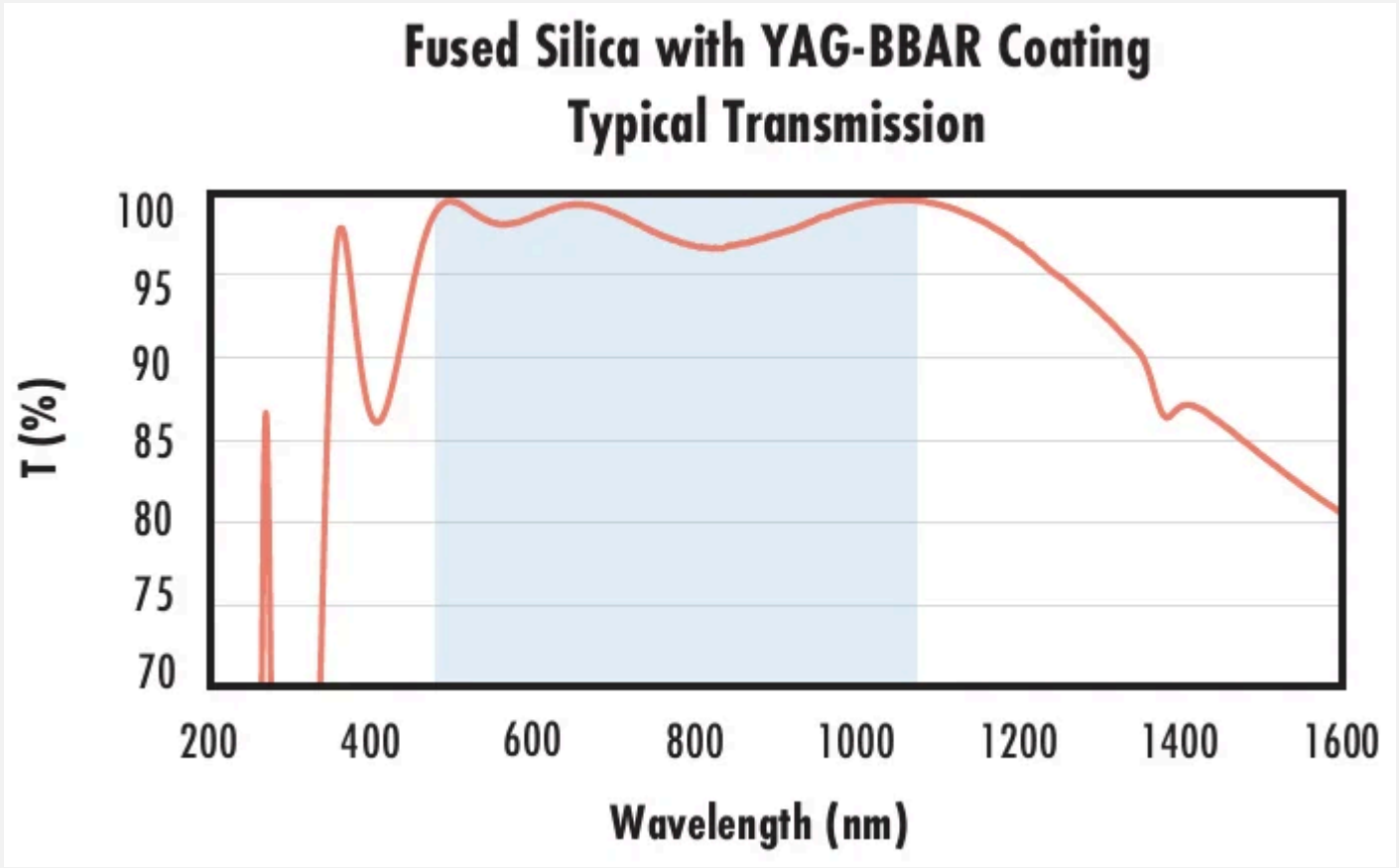

Typical transmission of a 3mm thick fused silica wind with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

R_{abs} ≤ 0.25% @ 532nm
R_{abs} ≤ 0.25% @ 1064nm
R_{avg} ≤ 1.0% @ 500 - 1100nm

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

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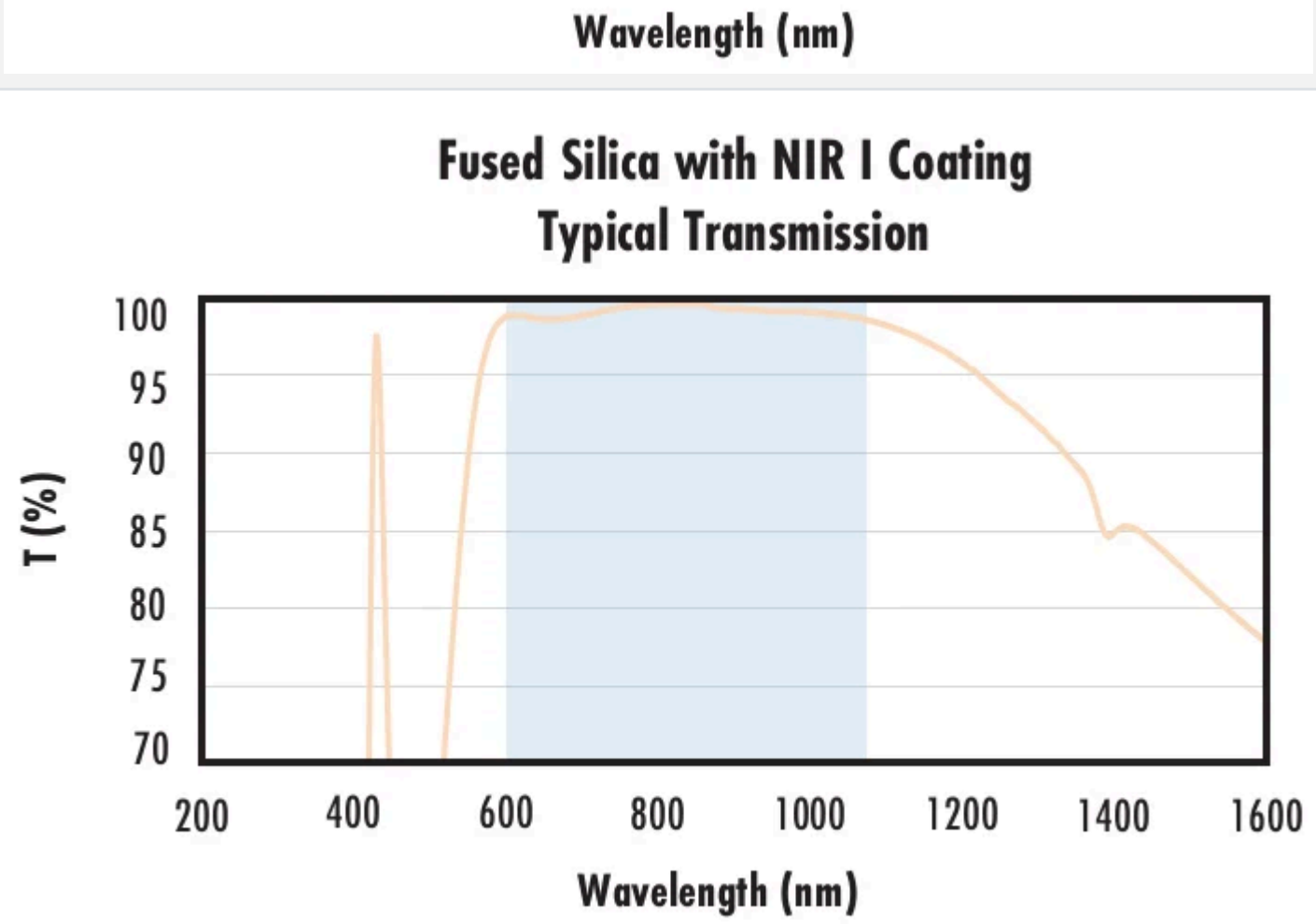

Typical transmission of a 3mm thick fused silica wind with NIR I (600 - 1050nm) coating at 0° AOI.

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

R_{avg} ≤ 0.5% @ 600 - 1050nm

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

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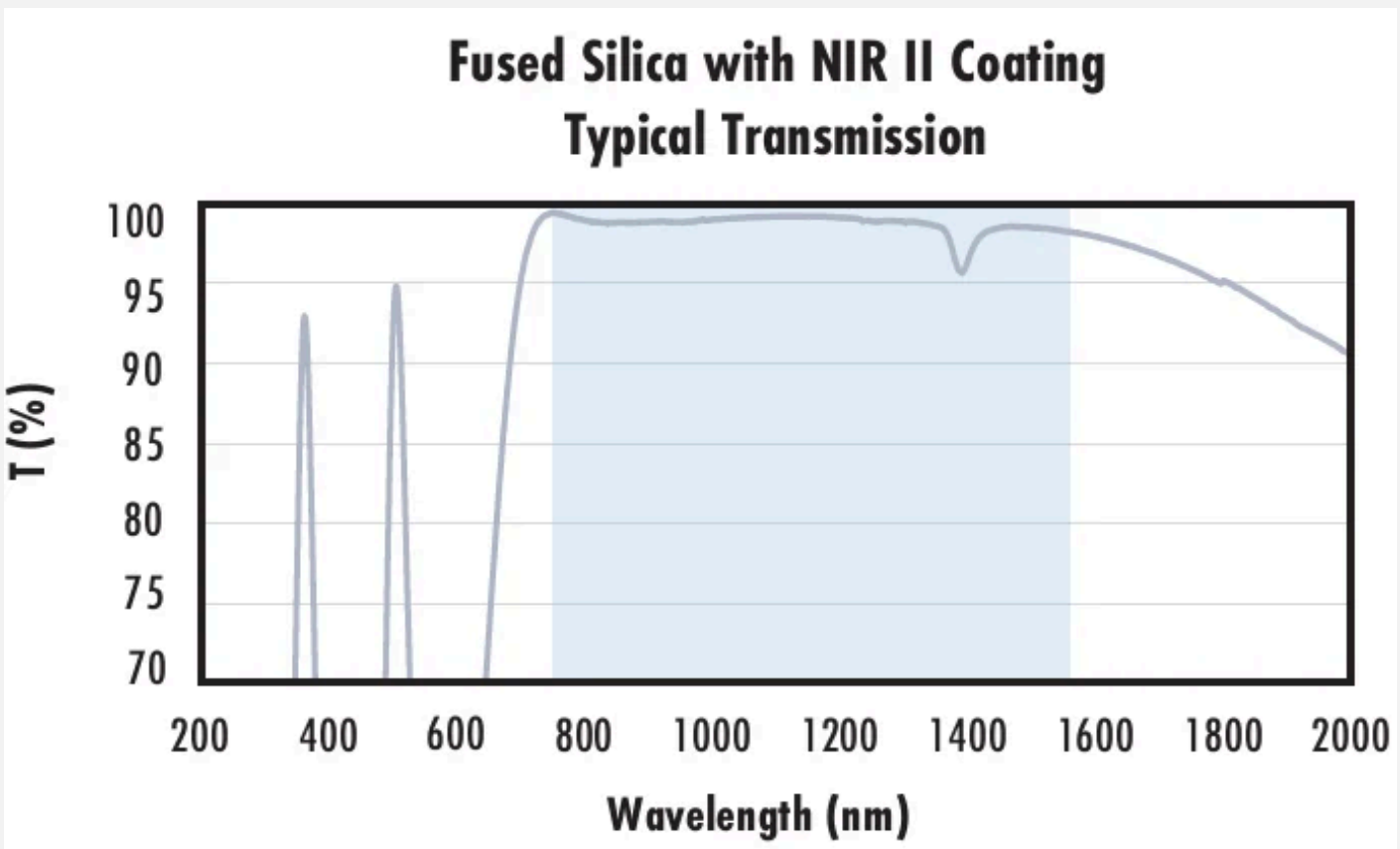

Typical transmission of a 3mm thick fused silica wind with NIR II (750 - 1550nm) coating at 0° AOI.

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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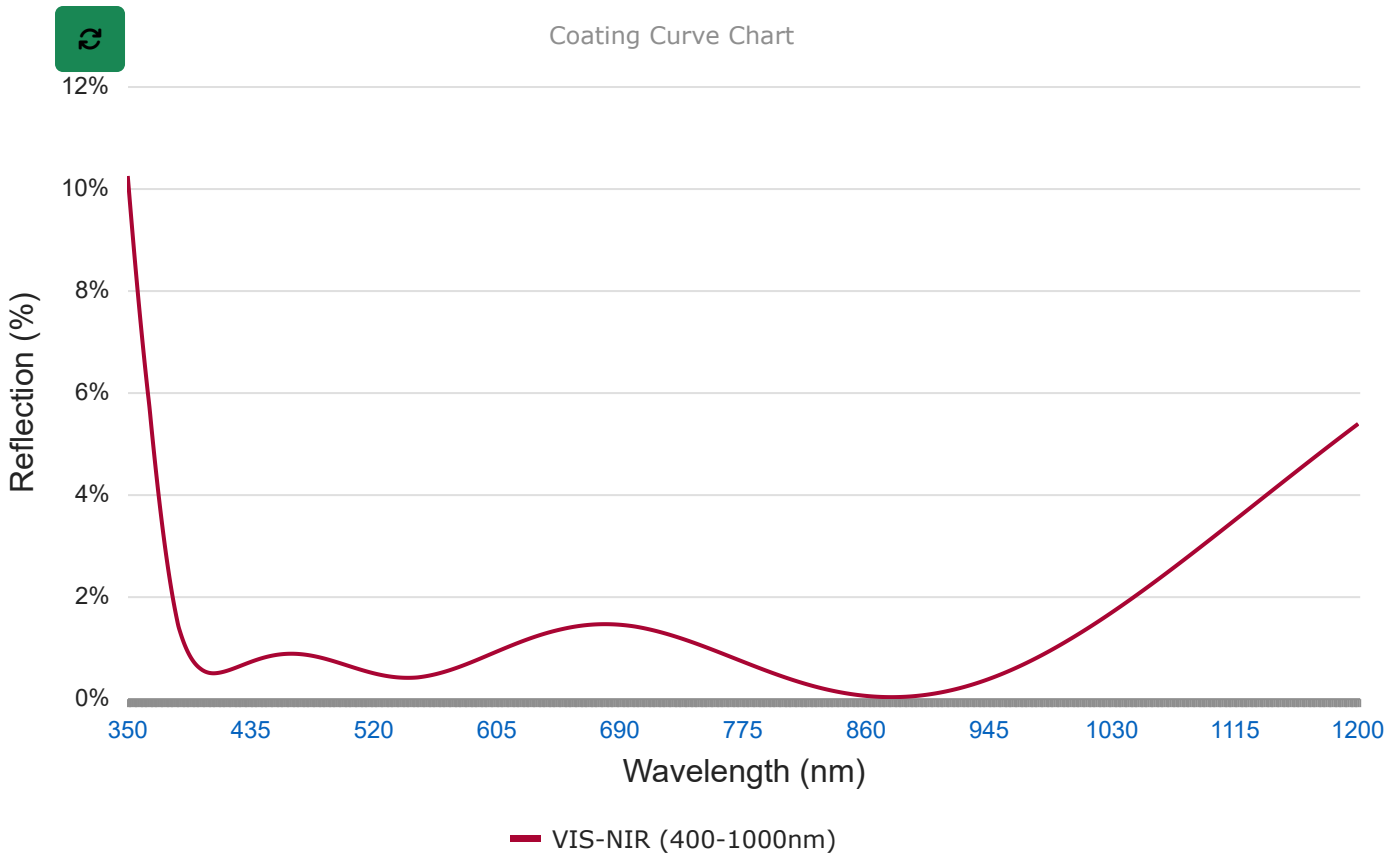
Coating Curves

VIS-NIR (400-1000nm)



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

Related Products

C, S, and T-Mount Circular Optic Mounts

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UV Fused Silica Aspheric Lenses

Frequently Purchased Together

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£100.80
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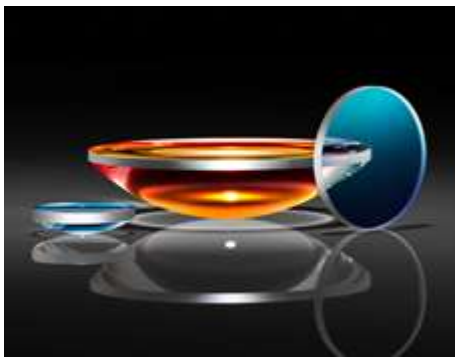
#49-522-INK – 9.0mm Diameter x -12 FL, NIR I, Inked, Plano-Concave Lens
£45.60
Qty



#36-735 – 18mm Dia x 36mm FL VIS-NIR Coated, UV Plano-Convex Lens
£136.80
Qty

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