

# Solarguide™

## Solarization Resistant UV Fiber

### Fiber Type:

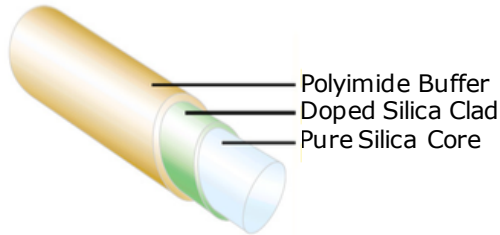
Step Index  
Multimode

### Fiber Construction:

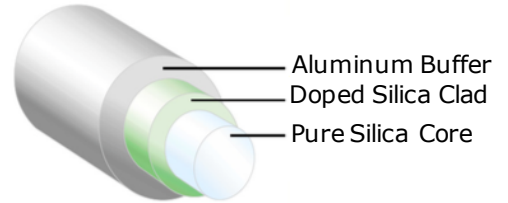
Silica Core/  
Silica Clad/  
Polymer or  
Metal Coated

### Trade Name:

Solarguide™  
UV-VIS (High  
OH)  
190nm -1250nm



**Polyimide Buffer Fiber**



**Aluminum Buffer Fiber**

Fiberguide's Solarguide fiber is hydrogen infused to improve long-term attenuation stability at short UV wavelengths (190nm - 230nm). Solarguide fibers are the ideal choice for UV Spectroscopy, Lithography, Excimer Laser Systems, and UV curing applications that use Deuterium Lamps or other UV sources below 230nm.

### SPECIFICATIONS:

Fiber Type	Step Index Multimode
Wavelength	UV-VIS ( <b>High OH</b> ) 190nm ~ 1250nm
Standard Core/Clad Ratio:	1.1
Core / Cladding Sizes	50/125µm to 600/660µm
Numerical Aperture (NA)	0.22
Coating Material	Thermocoat (Polyimide) certified to Namsa Class VI
Recommended Bend Radius	Short Term: 100 X Clad Diameter Long Term: 200 X Clad Diameter
Proof Test	100% Proof Test Using 4-Axis Bend Method

### Applications:

- Laser Surgery
- Semiconductor Manufacturing
- UV Illumination
- Photo Initiated Chemistry
- UV Curing
- Analytical Instruments

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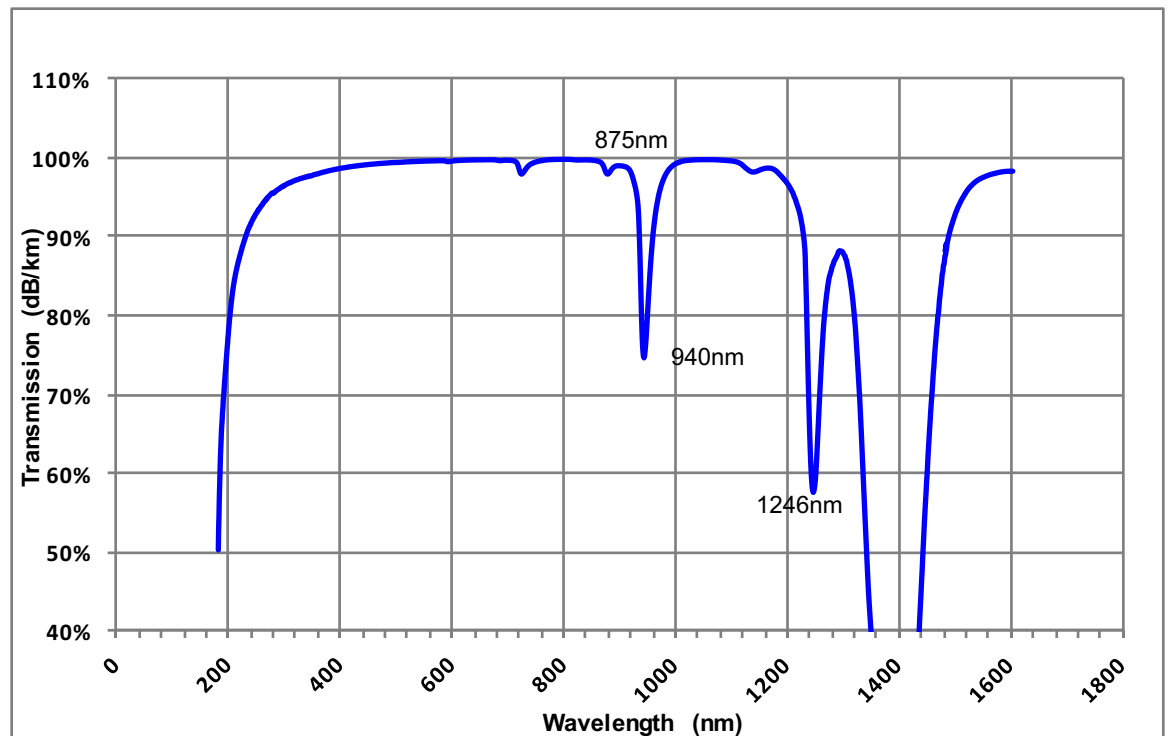
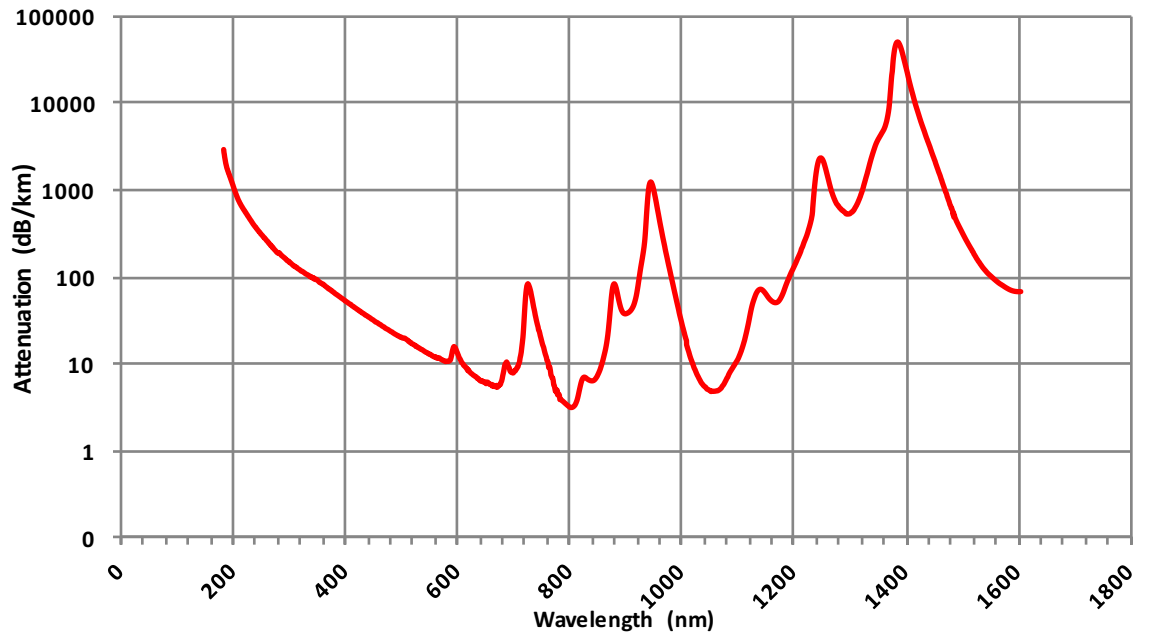
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Index of Refraction (IOR) @ 633 nm		
Fiber Type	Layer	Numerical Aperture (NA)
		0.22
Solarguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode	Core	1.457
	Cladding	1.410

Polyimide/Thermocoat Coating				
Temperature: -190 °C to +350 °C / -310 °F to + 662 °F				
<b>Fiber Type:</b> Solarguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode				
<b>Wavelength:</b> UV-VIS (High OH): 190 nm - 1250 nm				
<b>Numerical Aperture (NA):</b> Standard: 0.22 ± 0.02 (Full acceptance Angle 25°)				
<b>Proof Test:</b> 50 KPSI 4-Axis Bend Test				
Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius short term/ long term (mm)
UVS50/125/145THY	50 ± 2	125 + 1/-3	145 ± 5	≥ 13/25
UVS100/110/130THY	100 ± 2	110 ± 2.2	130 ± 5	≥ 11/22
UVS200/220/245THY	200 ± 4	220 ± 4.4	245 ± 5	≥ 22/44
UVS300/330/355THY	300 ± 6	330 ± 6.6	355 ± 10	≥ 33/66
UVS400/440/480THY	400 ± 8	440 ± 8.8	480 ± 10	≥ 44/88
UVS600/660/710THY	600 ± 12	660 ± 13.2	710 ± 15	≥ 66/132

Aluminum Coating				
Temperature: -269 °C to +400 °C/ -452 °F to +752 °F				
<b>Fiber Type:</b> Solarguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode				
<b>Wavelength:</b> UV-VIS (High OH): 190 nm - 1250 nm				
<b>Numerical Aperture (NA):</b> Standard: 0.22 ± 0.02 (Full acceptance Angle 25°)				
<b>Proof Test:</b> 100 KPSI 4-Axis Bend Test				
Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius short term/ long term (mm)
UVS100/110/140H2A	100 ± 2	110 ± 2.2	150 ± 15	≥ 11/22
UVS200/220/280H2A	200 ± 4	220 ± 4.4	280 ± 28	≥ 22/44
UVS300/330/430H2A	300 ± 6	330 ± 6.6	430 ± 43	≥ 33/66
UVS400/440/530H2A	400 ± 8	440 ± 8.8	530 ± 53	≥ 44/88