

Optran® UV, Optran® WF

Silica/silica fiber with optional buffers

Superior performance and fiber optic properties from UV to IR wavelengths: Armadillo®'s Optran® UV / WF fibers are available in a range of core diameters and assemblies, tailored to your specific application needs.

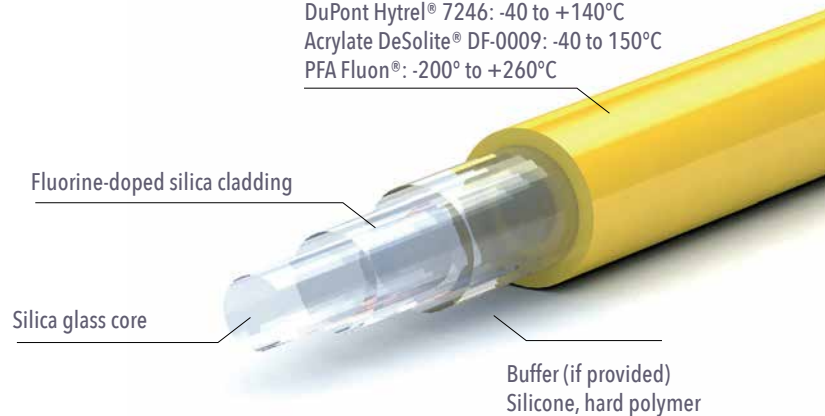
Wavelength		Numerical aperture (NA)	
Optran® UV	190 - 1200 nm	Low	0,12 ± 0,02
Optran® WF	300 - 2400 nm	Standard	0,22 ± 0,02
		High	0,28 ± 0,02

Jacketing Options:
 Polyimide: -190 to +350°C
 ETFE (Tefzel®): -40 to +150°C
 Nylon: -40 to +100°C
 Acrylate: -40 to +85°C
 DuPont Hytrel® 7246: -40 to +140°C
 Acrylate DeSolite® DF-0009: -40 to 150°C
 PFA Fluon®: -200° to +260°C

Standard

Advantages

- Pure synthetic, fused silica glass core
- High resistance against laser damage
- Step-index profile
- Special jackets available for high temperatures, high vacuum and harsh chemicals
- Very low NA expansion
- Biocompatible material
- Sterilizable using ETO and other methods



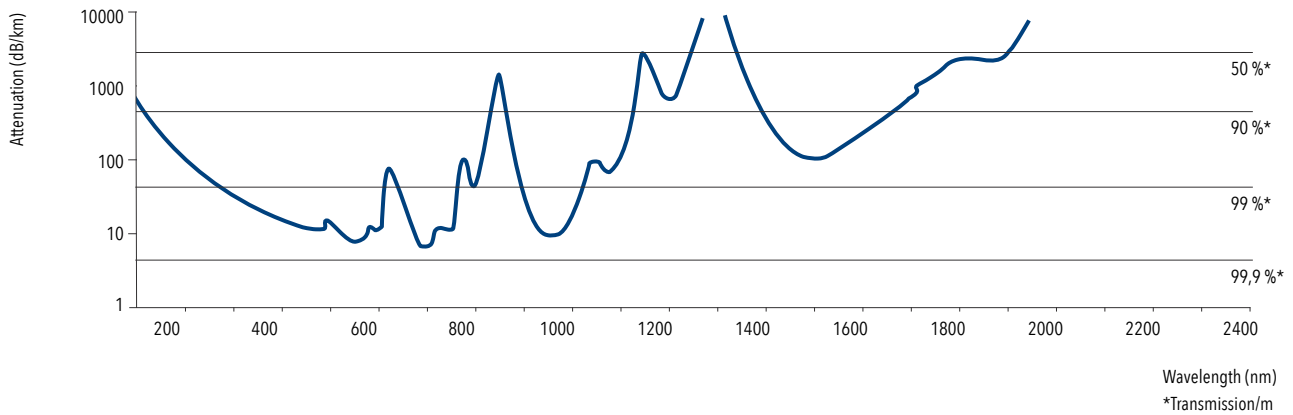
Technical data

Wavelength / spectral range	Optran® UV: 190 - 1200 nm Optran® WF: 300 - 2400 nm
Numerical aperture (NA)	0,12 ± 0,02 0,22 ± 0,02 0,28 ± 0,02 or customized
Fibers with OH contents	<0,25 and <0,1 ppm are available upon request
Operating temperature	-190 to +350 °C
Core diameter	Available from 25 to 2000 µm
Standard core / cladding ratios	1 : 1,04 1 : 1,06 1 : 1,1 1 : 1,15 1 : 1,2 1 : 1,25 1 : 1,4 or customised
OH content	Optran® UV: high (> 700 ppm) Optran® WF: low (< 1 ppm) Fibers with OH contents < 0,25 and < 0,1 ppm are available upon request
Standard proof test	100 kpsi (nylon, ETFE, acrylate jacket) 70 kpsi (polyimide jacket)
Minimum bending radius	50 × cladding diameter (short-term mechanical stress) 150 × core diameter (during use with high laser power)

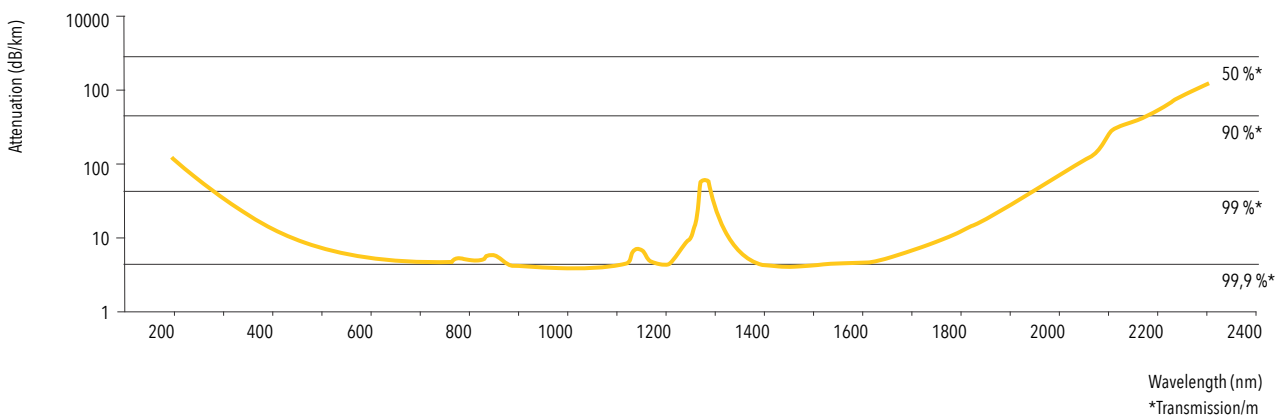
Attenuation values

The following diagrams provide an overview of attenuation values relative to the wavelengths:

Optran® UV



Optran® WF



Applications

First choice for applications including spectroscopy, medical diagnostics, medical technology, laser delivery systems and many more.

1 2 3 4 5 6
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Product code key using the example of WF 300/330 (H)(B)N (28)

- | | |
|-----------------------------------|---|
| 1 Fiber type | UV = Optran® UV WF = Optran® WF WFGE = Optran® WFGE HUV = Optran® HUV HWF = Optran® HWF |
| 2 Standard core / cladding ratios | Core \varnothing (μm) / Cladding \varnothing (μm) |
| 3 Buffer | H = hard polymer buffer No information = silicone buffer |
| 4 Colour | B = black BL = blue W = white Y = yellow R = red G = green No information = transparent |
| 5 Jacket material | A = acrylate jacket (no buffer) F = PFA Fluon® N = nylon jacket (silicone or hard polymer jacket)
T = ETFE jacket (silicone or hard polymer buffer) P = polyimide jacket (no buffer) |
| 6 Numerical aperture (NA) | 12 = 0,12 28 = 0,28 No information = 0,22 (standard) |

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