

ArmD™ UVWFS, WFNS Broadband Fiber

Silica/silica fibers for applications from UV-C to IR-B

Armadillo is pleased to introduce a new fiber with extremely low loss for the 200 nm to 2500 nm wavelength range. The UVWFS and WFNS fiber combines the properties of UV and WF fibers, making them suitable for a wide range of applications.

Wavelength

ArmD™ UVWFS	200 - 2200 nm
ArmD™ WFNS	300 - 2400 nm

Numerical aperture (NA)

Low	0,12 ± 0,02 0,15 ± 0,02
Standard	0,22 ± 0,02
High	0,26 ± 0,02 0,28 ± 0,02

Broadband

Advantages

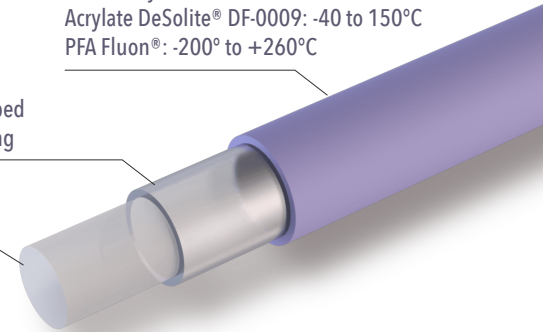
- Low losses @ range 200 nm - 2000 nm
- Any value of NA from 0,12 to 0,28 available upon request
- Very low NA expansion
- Biocompatible material
- Manufactured ISO 9001 compliant facility

Jacketing Options:

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

Fluorine-doped silica cladding

Silica glass core

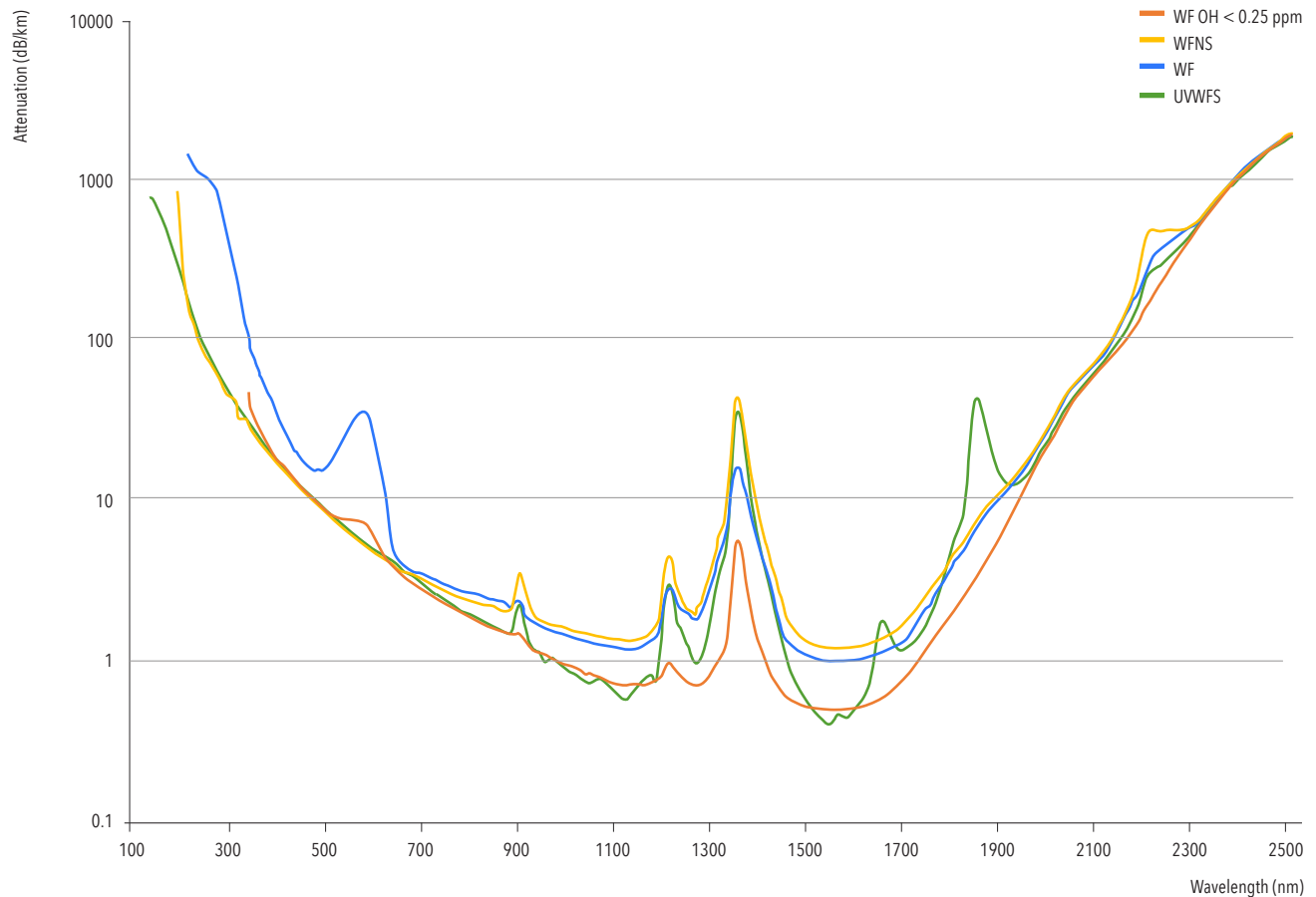


Technical data

Wavelength / spectral range	ArmD™ UVWFS: 200 - 2200 nm, ArmD™ WFNS: 300 - 2400 nm
Numerical aperture (NA)	0,12 ± 0,02 0,15 ± 0,02 0,22 ± 0,02 0,26 ± 0,02 0,28 ± 0,02 or customised
Operating temperature	-190 to +350 °C
Core diameter	Available from 100 to 1000 µm
OH Content	~5ppm
Standard core / cladding ratios	1 : 1,06 1 : 1,1 1 : 1,2 1 : 1,4 or customized
Standard proof test	70 kpsi (polyimide jacket)
Minimum bending radius	50 × cladding diameter (short-term mechanical stress) 300 × core diameter (during use with high laser power)

Attenuation values

The following diagrams provide an overview of attenuation values in relation to wavelengths:



Applications

ArmD™ UWFWS optical fiber is the first choice for many applications where different types of fibers are needed. Armadillo UWFWS and WFNS optical fibers stand out.

Widely utilized across diverse fields such as spectroscopy, analytical instruments, sensing, astronomy, aerospace, avionics, military applications, and more, these versatile fibers consistently deliver exceptional performance.

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Product code key using the example of WF 300/330 (H)(B)N (28)

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|-----------------------------------|---|
| 1 Fiber type | UV = ArmD™ UV WF = ArmD™ WF WFGE = ArmD™ WFGE HUV = ArmD™ HUV HWF = ArmD™ 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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