

ArmD™ Plus UV, ArmD™ Plus WF

Multi-Clad, High NA pure silica/silica core fiber

Armadillo's ArmD™ Plus stands as the highest Numerical Aperture (NA) pure fused silica core fiber, boasting NAs of 0.28 and 0.30. Tailored for a diverse range of applications, from spectroscopy to sensing, our innovative ArmD™ Plus fibers exhibit exceptional spectral transmission spanning 190 to 2400 nm, coupled with high efficiency in coupling. We provide a comprehensive range of standard core sizes and cladding materials, along with the option for custom fibers to meet your specific specifications.

Wavelength		Numerical aperture (NA)	
ArmD™ Plus UV	190 - 1200 nm	Standard	0,28 ± 0,02
ArmD™ Plus WF	400 - 2400 nm	High	0,30 ± 0,02

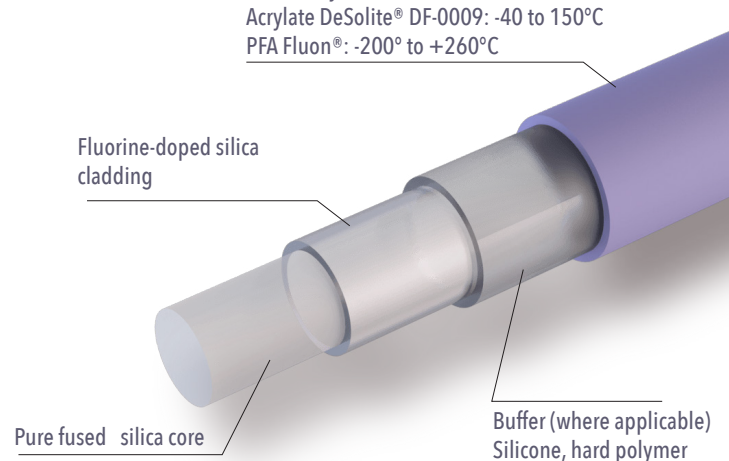
Jacketing Options:

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

ArmD™ Plus

Advantages

- High laser damage resistance
- Specialty coatings available for high temperatures, high vacuum and harsh chemicals
- Biocompatible materials
- RoHS compliant
- Step-index profile
- Pure fused silica core
- Sterilizable by ETO and other methods
- Manufactured at GMP and ISO 9001 compliant facility



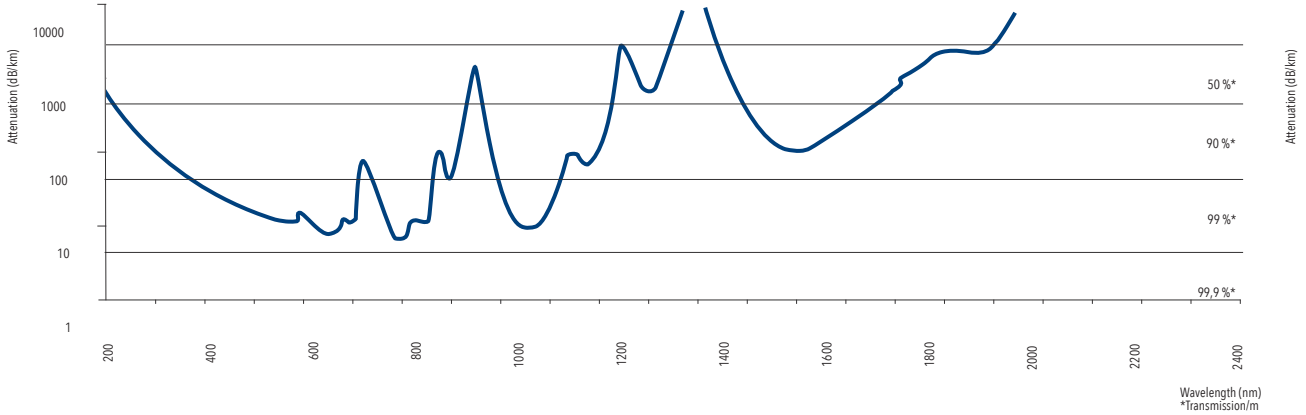
Technical data

Wavelength / spectral range	ArmD™ Plus UV: 190 - 1200 nm ArmD™ Plus WF: 400 - 2400 nm
Numerical aperture (NA)	0,28 ± 0,02 0,30 ± 0,02 or customized
Operating temperature	-190 to +350 °C
Core diameter	Available from 20 to 3000 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 customized
Standard proof-test	100 kpsi (nylon, ETFE, acrylate jacket) 70 kpsi (polyimide jacket)
Minimum bending radius	50 × cladding diameter (momentary mechanical stress) 150 × core diameter (during usage with high laser power)

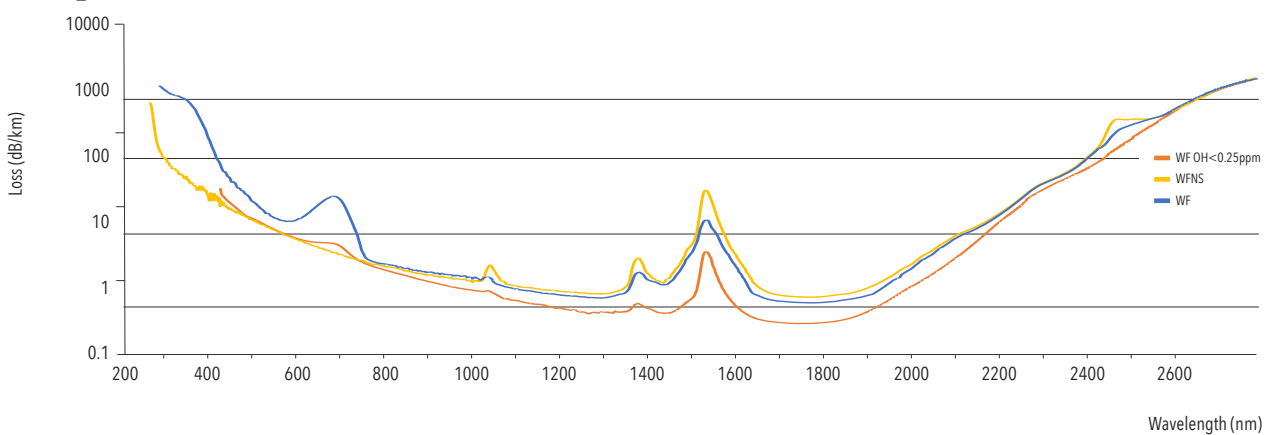
Attenuation values

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

ArmD™ Plus UV



ArmD™ Plus WF



Applications

Primarily selected for applications such as spectroscopy, medical diagnostics, medical technology, laser delivery systems, and various others.

1 2 3 4 5 6
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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) |

SIA "Armadillo"

LV40203150242
Krisjana Valdemara iela 33-27,
Rīga LV 1010 Latvia



<https://armadillosia.com>
Phone +1 408 900-8883
Fax 408 834-7430
info@armadillosia.com