

# ArmD® UV, ArmD® NIR

## Silica/silica fiber with optional buffers

Experience superior performance and optimal fiber optic properties across UV to NIR wavelengths with Armadillo's ArmD® UV/NIR fibers. These fibers are offered in a variety of core diameters and assemblies tailored to meet your specific application requirements.

Wavelength		Numerical Aperture (NA)	
ArmD® UV	200 - 1100 nm	Low	0.12 ± 0.02
ArmD® NIR	300 - 2600 nm	Standard	0.22 ± 0.02
		High	0.28 ± 0.02 or customized

### 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 DeSolute® DF-0009: -40 to 150°C

PFA Fluon®: -200° to +260°C

## Advantages

- Pure synthetic, fused silica glass core
- High resistance against laser damage
- Multimode, 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

Fluorine-doped silica cladding

Silica glass core

Buffer (if provided)  
Silicone,  
hard polymer

## Technical data

Fibers with OH contents	<0.25 and <0.1 ppm are available upon request
Operating temperature	-200 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
OH content	ArmD® UV: high (> 700 ppm) ArmD® NIR: 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)

### Possible customizations:

- Solarization resistant properties (sealing carbon layer)
- Metal coating for enhanced heat resistance
- Broad spectrum (ArmD® Broadband)



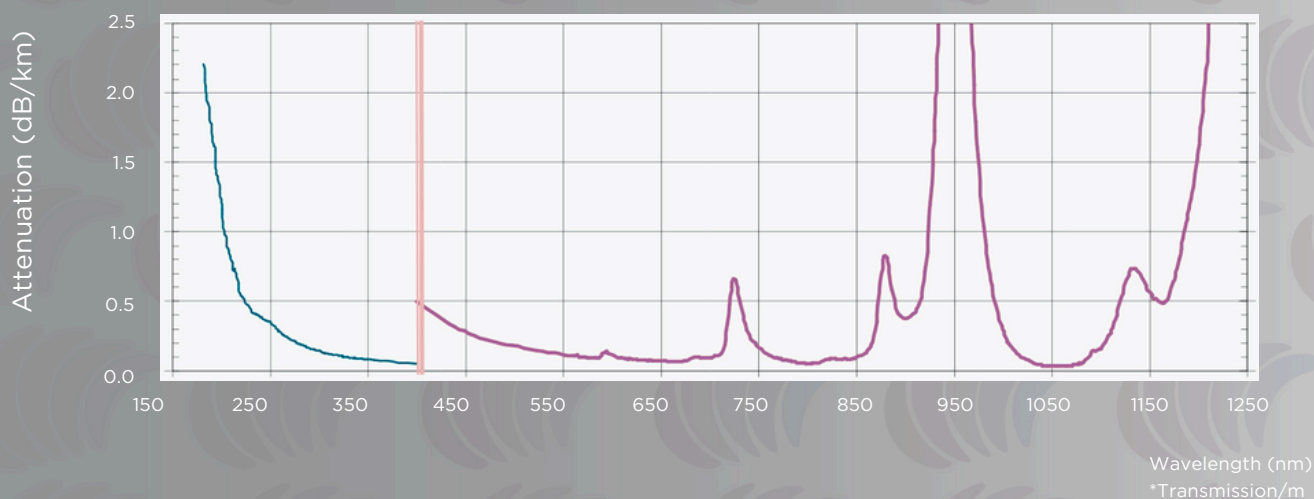
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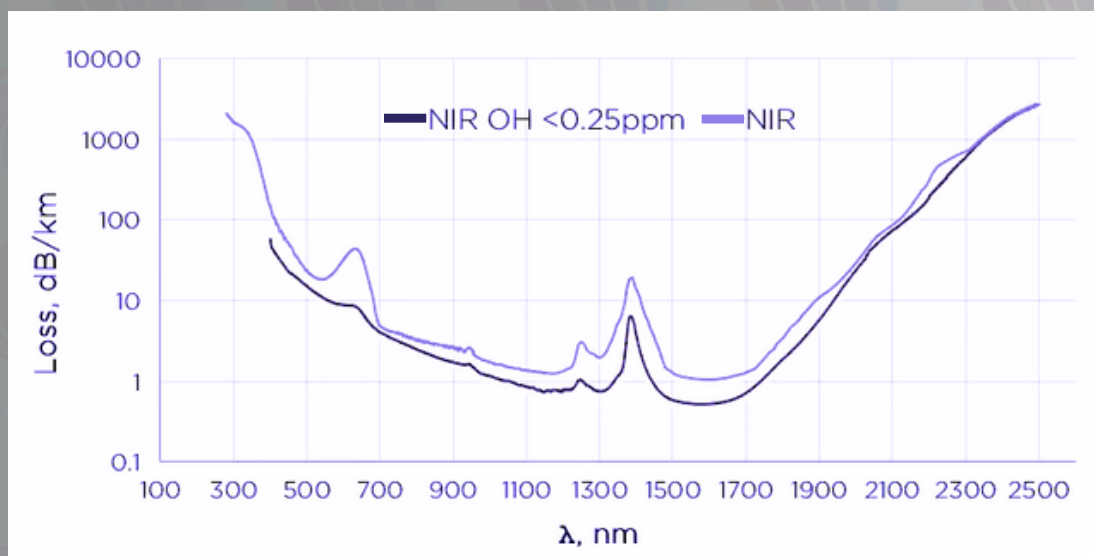
# Attenuation values

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

## ArmD® UV



## ArmD® NIR



## Applications

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



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