

ArmD® NIR-Ge

Ge-doped silica/silica fiber

Armadillo ArmD® NIR-Ge fibers distinguish themselves with maximum numerical aperture values, unparalleled performance, and an extensive spectral range. Offering a wide range of core diameter options and customizable solutions, these fibers can be tailored to meet your specific needs.

Wavelength

ArmD® NIR-Ge 400 – 2600 nm

Numerical Aperture (NA)

Standard 0.37 ± 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

Advantages

- Germanium-doped 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

Fluorine-doped silica cladding

Germanium-doped silica glass core

Buffer (if provided)
Silicone,
hard polymer

Technical data

Operating temperature	-200 to +350 °C
Core diameter	Available from 20 to 1000 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 (short-term mechanical stress) 150 × core diameter (during use with high laser power)

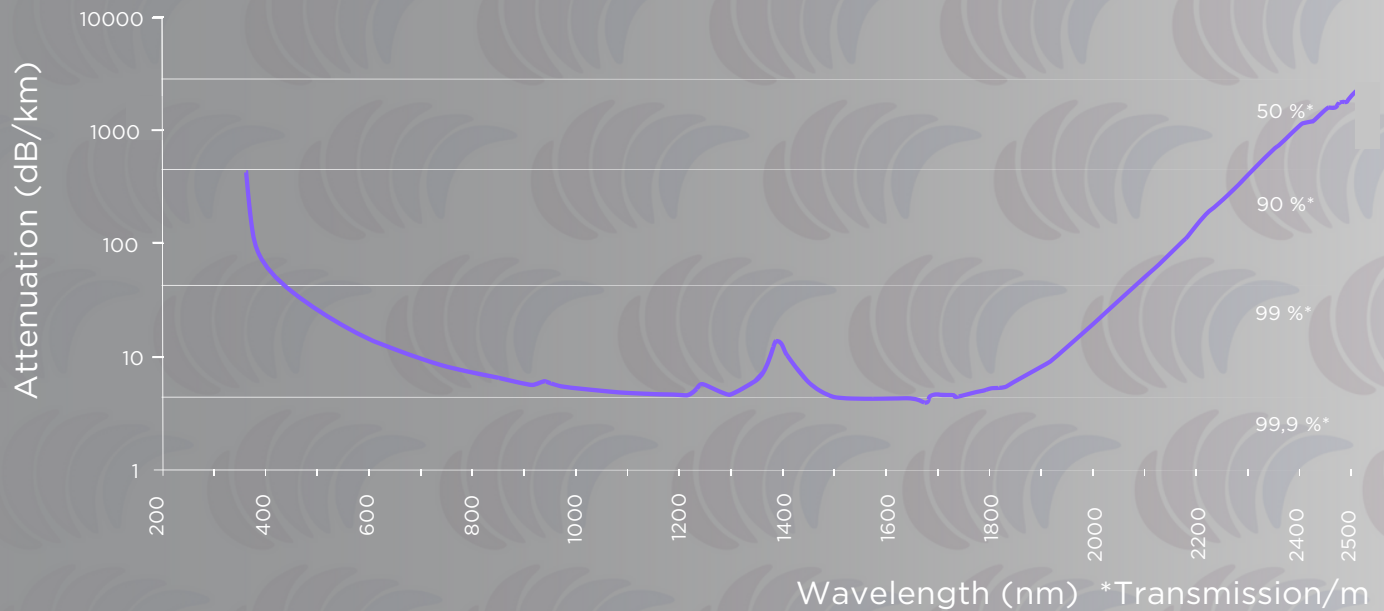


armadillosia.com
+1-408-900-8883
info@armadillosia.com



Attenuation

The following diagram provides a summary of attenuation values in relation to wavelengths



Applications

Primarily chosen for applications such as spectroscopy, laser technology, research, photodynamic therapy, and various other purposes.

How to read product code:

UV 300/330 (H)(B)N (28)

1 2 3 4 5 6

- Fiber type:** UV = ArmD® UV | NIR = ArmD® NIR | UV-SRC = ArmD® UV-SRC | SHP = ArmD® Shaped | NIR-Ge = ArmD® NIR-Ge | UV-HC = ArmD® UV-HC | NIR-HC = ArmD® NIR-HC | MID-IR = ArmD® MID-IR | BBand = ArmD® Broadband
- Standard core / cladding ratios:** Core $\varnothing$ (μm) / Cladding $\varnothing$ (μm)
- Buffer:** H = hard polymer buffer | S = silicone buffer | No information = no buffer
- Colour:** B = black | BL = blue | W = white | Y = yellow | R = red | G = green | No information = transparent
- 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)
- Numerical aperture (NA):** 12 = 0.12 | 28 = 0.28 | 22 = 0.22



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