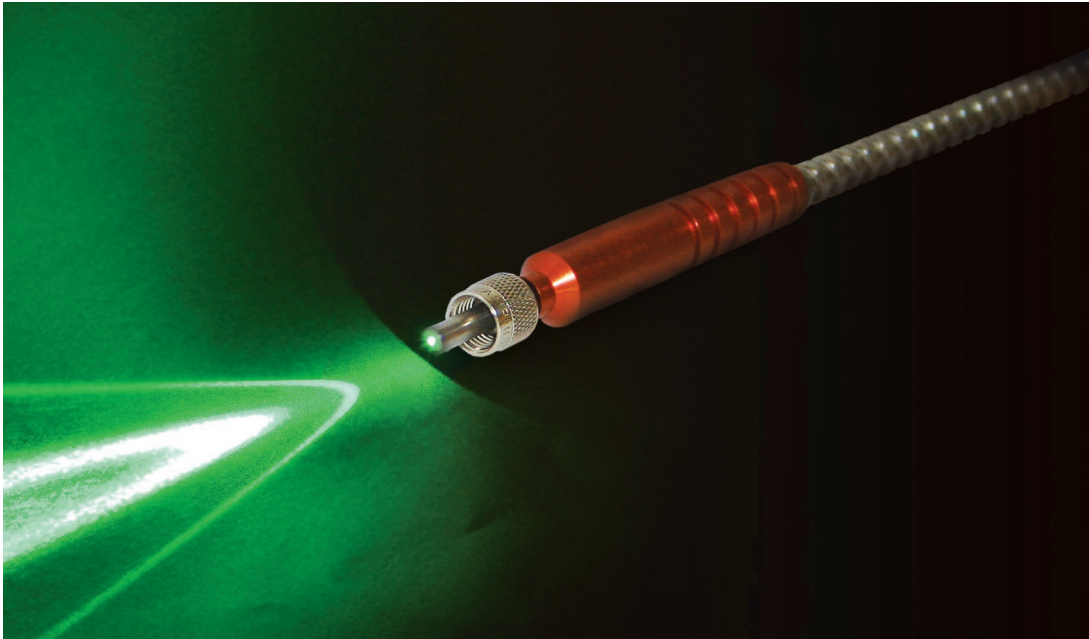


Fiber Optic Cables

Applied Analytics Data Sheet No. DS-206A



The veins of an Applied Analytics spectrophotometer.

In analysis, the quality of the signal is ultimately the most important parameter. Applied Analytics manufactures all of our fiber optic cables in-house to ensure spectroscopic-grade quality—sufficient throughput and longevity for demanding analysis applications. In the applications we serve, our fibers must have the tolerances to handle wide temperature fluctuations and years of wear and tear. Each fiber is individually performance-tested at our facilities.

Features

- » Highly consistent performance from low UV range to NIR range
- » Average lifetime: 2.5 years in typical usage
- » Protected from wear and tear by stainless steel and Teflon tubing
- » Proven solarization-resistant

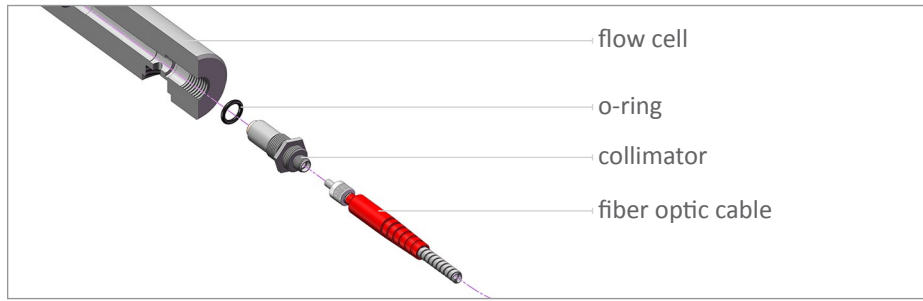
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Suitability for Extreme Conditions

Corrosion

The fiber optics are not a wetted part, meaning that they are never exposed to the potentially corrosive process sample. This is ensured by the o-ring inseted between the sample flow cell and the collimator (into which the fiber optic cable is inserted):



The stainless steel and Teflon tubing protects the fibers from mishandling as well as corrosion.

Temperature

Our fiber optic cables have an operational range of 0 to 65 °C.

Technical Data

Physical Specifications

	(@ 550 μm core)	(@ 910 μm core)
Standard Length	1.8 m	-
Custom Length Range	1 m to 3 m	3 m to 7 m
Core Diameter	550 $\mu\text{m} \pm 2\%$	910 $\mu\text{m} \pm 2\%$
Clad Diameter	600 $\mu\text{m} \pm 2\%$	1000 $\mu\text{m} \pm 2\%$
Buffer Diameter	630 $\mu\text{m} \pm 3\%$	1035 $\mu\text{m} \pm 3\%$
Coating Diameter	1040 $\mu\text{m} \pm 5\%$	1400 $\mu\text{m} \pm 5\%$

Materials

Standard Connection	Pure silica core
Cladding	Fluorine silica cladding
2nd Cladding (Buffer)	Hard polymer
Coating	Tefzel
Tubing	Stainless steel and Teflon tubing

Operating Conditions

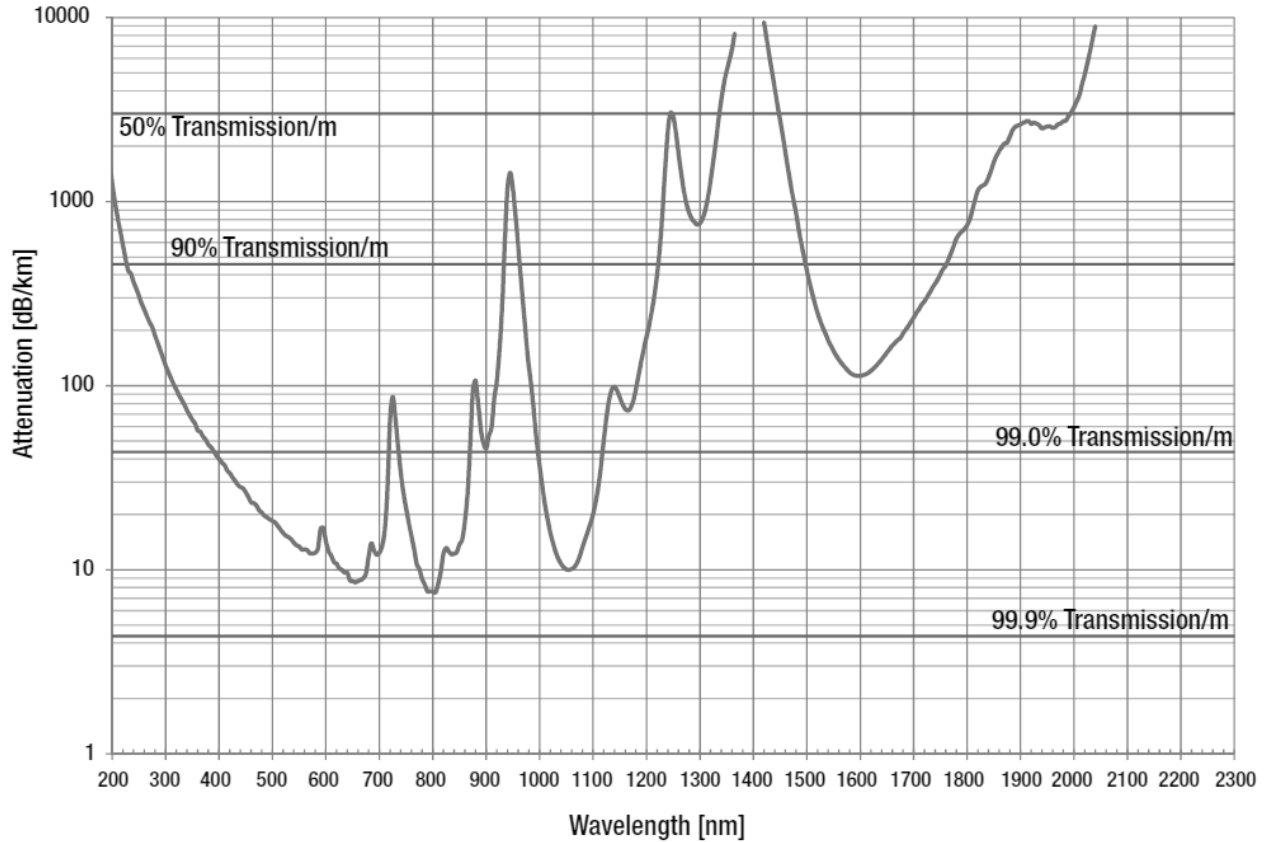
Operating Temp.	-40 to 70 °C
Numerical Aperture	0.22 \pm 0.02
Proof Test Level	70 kpsi
Smallest Bend Radius	@ 550 μm core: 9 cm (3 cm temporarily) @ 910 μm core: 15 cm (5 cm temporarily)

Fiber Optic Cables

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Revised 14 April 2017

Fiber Optic Performance Plot



How to Order Spares

To order spare fibers, please send an email to sales@a-a-inc.com specifying requested lengths and quantities.



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