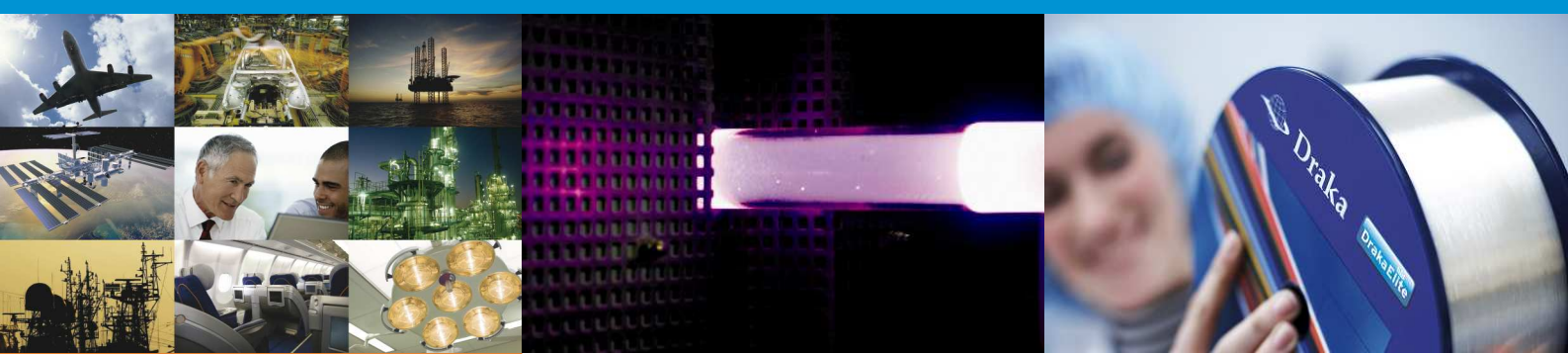


Legacy fiber for industrial, military and transport applications



Specialty Fiber



Issue date: 12/09
Supersedes: 05/09

For data transmission and communication in harsh environments

- Transport
- Industry



Value Innovation is a way of looking at the world. How we can help our customers do more, make more, save more, achieve more.



Product Type: 100 / 140 μm

Coating Type: Dual Layer Primary Coating (DLPC9)

This graded-index 100/140 μm multimode fiber has a 100 μm core diameter and a 140 μm cladding diameter. The fibre is designed for use at 850 nm and/or 1300 nm.

With its large core diameter and high Numerical Aperture this fiber is optimized for applications where high and easy coupling efficiency to a light source is necessary, e.g. in industrial systems and systems in transportation vehicles (e.g. aircrafts).

The fiber complies with or exceeds IEC 60793-2-10 type A1d Optical Fiber Specification.

Features	Benefits
Produced by the PCVD process, the ultimate process for graded-index multimode fiber	PCVD produced multimode fibers show excellent modal bandwidth performance
Coated with the Dual Layer UV Acrylate DLPC9	<ul style="list-style-type: none"> • Optimized performance in tight buffer cable applications • High resistance to micro-bending • Stable performance over a wide range of environmental conditions • Improved easy stripping of tight buffer coatings
Excellent high temperature resistant Acrylate coating manufacturing process	Superior geometry, uniformity and homogeneity

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Characteristics	Conditions	Specified Values	Units
Optical Specifications (Uncabled fiber)			
Attenuation Coefficient	850 nm	≤ 3..2 ≤ 3.5	dB/km
	1300 nm	≤ 0.7 ≤ 0.7	dB/km
Overfilled Modal Bandwidth ¹	850 nm	≥ 100 to ≥ 500	MHz.km
	1300 nm	≥ 100 to ≥ 500	MHz.km
Numerical Aperture		0.290 ± 0.015	
Chromatic Dispersion			
Zero dispersion wavelength, λ ₀		1330 ≤ λ ₀ ≤ 1385	nm
Zero dispersion slope, S ₀	1330 nm ≤ λ ₀ ≤ 1365 nm	≤ 0.105	ps/nm ² .km
	1365 nm ≤ λ ₀ ≤ 1385 nm	≤ 0.0005 (1575 - λ ₀)	ps/nm ² .km
Bending Loss	850 nm, 1300 nm / 100 turns, 75 mm diam.	≤ 0.5	dB
Backscatter Characteristics ²			
Point discontinuity ³	850 nm, 1300 nm	≤ 0.1	dB
Irregularities over fiber length	850 nm, 1300 nm	≤ 0.1	dB
Reflections		Not allowed	
Group Index of Refraction (Typ.)	850 nm	1.497	
	1300 nm	1.492	
Geometrical Specifications			
Core Diameter		100 ± 4.0	μm
Core Non-Circularity		≤ 5	%
Core/Cladding Concentricity Error		≤ 3	μm
Cladding Diameter		140.0 ± 2.0	μm
Cladding Non-Circularity		≤ 1.0	%
Coating Diameter		242 ± 10	μm
Coating Non-Circularity		≤ 6	%
Coating/Cladding Concentricity Error		≤ 10	μm
Length	Standard lengths up to <i>Other lengths available on request</i>	0.8 / 1.1 / 2.2 / 3.3 / 4.4	km
Environmental Specifications			
Temperature cycling	850 nm, 1300 nm / -60°C to 85°C	≤ 0.1	dB/km
Temperature- Humidity cycling	850 nm, 1300 nm / -10°C to 85°C, 4-98% RH	≤ 0.1	dB/km
Water Immersion	850 nm, 1300 nm / 23°C, 30 days	≤ 0.1	dB/km
Dry Heat	850 nm, 1300 nm / 85°C, 30 days	≤ 0.1	dB/km
Damp Heat	850 nm, 1300 nm / 85°C; 85% RH, 30 days	≤ 0.1	dB/km
Mechanical Specifications			
Proof test	Off line	> 0.7 (100)	GPa (kpsi)
Dynamic tensile strength (median value)	0.5 meter gauge length unaged and aged ⁴	> 3.8 (550)	GPa (kpsi)
Fatigue parameter (Typ.)	Dynamic fatigue, unaged and aged ⁴	n _d > 25	
Coating strip force	Average strip force, unaged and aged ⁵	1 to 3	N
	Peak strip force, unaged and aged ⁵	1.3 to 8.9	N

1). The modal bandwidth is linearly normalised to 1 km, according to IEC 60793-2-10.

2). OTDR measurement with 0.5 μs pulse width.

3). Mean of bi-directional measurement.

4). Aging at 85°C, 85% RH, 30 days

5). Aging: • 23°C, 0°C and 45°C

• 30 days at 85°C and 85% RH

• 14 days water immersion at 23°C

How can we be of service to you?

Value Innovation is a way of looking at the world. How can we help our customers do more, make more, save more, achieve more?

Take DrakaElite™. Based on our proprietary manufacturing process and our control of all technological building blocks, we offer an extensive portfolio of specialized optical fibers that have been designed, developed, manufactured

and tested for every environment. Whether you want to guide, amplify, transmit, process, control or sense light, Draka has the fiber you need, whatever your environment. And if for some reason we don't have exactly what you need, well, we'll just make it.

That's Value Innovation in action.

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