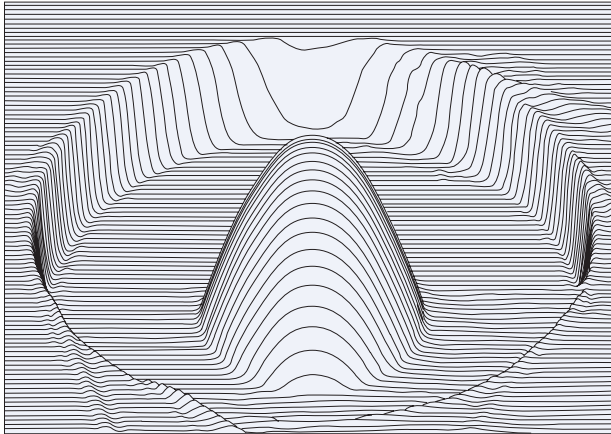




Graded-Index Multimode Optical Fibre (50/125 µm)

Product Type: 50 / 125 µm (OM1 / OM2)

Coating Type: Dual Layer Primary Coating (DLPC9)



This graded-index 50/125 µm multimode fibre has a 50 µm core diameter and a 125 µm cladding diameter. The fibre is designed for use at 850 nm and/or 1300 nm. This 50/125 µm fibre is suitable for use in premises wiring applications, like Local Area Networks (including backbone, riser and horizontal) with video, data and/or voice services using LED, VCSEL and Fabry-Perot laser sources at 850 nm or 1300 nm.

This multimode fibre assures full compatibility with legacy systems, like Fast Ethernet, FDDI, ATM and Fibre Channel. Because of the nature of the Plasma-activated Chemical Vapour Deposition (PCVD) manufacturing process, this fibre offers the highest bandwidth available in the market.

The fibre complies with or exceeds the ITU Recommendation G.651 or the IEC 60793-2-10 type A1a.1 Optical Fibre Specification.

Coating

The multimode fibre is coated with a dual layer UV curable acrylate, type DLPC9. Designed for more stringent tight-buffer cable applications, the fibre also performs perfectly in loose tube buffer constructions and demonstrates a high resistance to microbending.

The coating offers an excellent stable coating strip force over a wide range of environmental conditions and coating stripping leaves no residues on the bare glass fibre. In tight buffer applications the entire coating construction (tight buffer and primary coating) can in general very easily be stripped off. The DLPC9 coated fibres show unique high and stable values for the dynamic stress corrosion susceptibility parameter (n_D), which offers a greatly improved mechanical protection to the optical fibre when used in harsh environments.

Features	Benefits
<ul style="list-style-type: none"> Produced by the PCVD process, the ultimate process for graded-index multimode fibres 	<ul style="list-style-type: none"> PCVD produced multimode fibres show excellent modal bandwidth performance
<ul style="list-style-type: none"> Coated with the dual layer UV acrylate DLPC9 	<ul style="list-style-type: none"> Optimized performance in tight-buffer cable applications High resistance to microbending Stable performance over a wide range of environmental conditions Improves easy stripping of tight buffer coatings

Draka Comteq | Optical Fibre

Netherlands:

Tel: +31 (0)40 29 58 700

Fax: +31 (0)40 29 58 710

France:

Tel: +33 (0)3 21 79 49 00

Fax: +33 (0)3 21 79 49 33

USA:

Tel: +1 800 869 3355

Fax: +1 828 459 8444

Email: fibresales@draka.com

Website: www.drakafibre.com | www.draka.com



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Coating Type: Dual Layer Primary Coating (DLPC9)

Characteristics	Conditions	Specified Values	Units
Optical Characteristics			
Attenuation Coefficient	850 nm	≤ 2.2 ≤ 2.3 ≤ 2.4	[dB/km]
	1300 nm	≤ 0.4 ≤ 0.5 ≤ 0.6	[dB/km]
Minimum Modal Bandwidth ^{1,2)}	850 nm	400 to > 1000	[m]
	1300 nm	400 to > 1500	[m]
Numerical Aperture		0.200 ± 0.015	
Chromatic Dispersion		FDDI Spec	
Backscatter Characteristics ³⁾	1300 nm		
Step ⁴⁾		≤ 0.1	[dB]
Irregularities over fibre length		≤ 0.1	[dB]
Reflections		Not allowed	
Group Index of Refraction (Typical)	850 nm	1.482	
	1300 nm	1.477	

Geometrical Characteristics

Core Diameter		50 ± 2.5	[µm]
Core Non-Circularity		≤ 5	[%]
Core / Cladding Concentricity Error		≤ 1.5	[µm]
Cladding Diameter		125.0 ± 1.0	[µm]
Cladding Non-Circularity		≤ 1.0	[%]
Coating Diameter		242 ± 7	[µm]
Coating Non-Circularity		≤ 5	[%]
Coating Concentricity Error		≤ 10	[µm]
Length	Standard lengths up to	17.6	[km]

Environmental Characteristics

Temperature Dependence	850 nm, 1300 nm / -60°C to +85°C	≤ 0.1	[dB/km]
Temperature and Humidity Cycling	850 nm, 1300 nm / -10°C to +85°C, 90% R.H.	≤ 0.1	[dB/km]
Watersoak Dependence	850 nm, 1300 nm / 20°C for 30 days	≤ 0.1	[dB/km]
Damp Heat Dependence	850 nm, 1300 nm / 85 °C, 85% R.H., 30 days	≤ 0.1	[dB/km]

Mechanical Characteristics

Proof Test	off line	≥ 0.7 GPa (100 kpsi); 1% strain equivalent	
Bending Dependence	850 nm, 1300 nm		
Induced Attenuation	100 turns, 75 mm diameter	≤ 0.5	[dB]
Dynamic Stress Corrosion			
Susceptibility Parameter n _d (Typical)		≥ 27	
Coating Strip Force	Typical average force	1.7	[N]
	Peak force	≥ 1.3 ≤ 8.9	[N]

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

²⁾ Dual window bandwidth specifications are selectable; possibilities are:

850 nm	1300 nm
400	2000 MHz.km
600	1200 MHz.km
800	800 MHz.km

³⁾ OTDR measurement with 0.5 µs pulse width.

⁴⁾ Mean of bi-directional measurement.