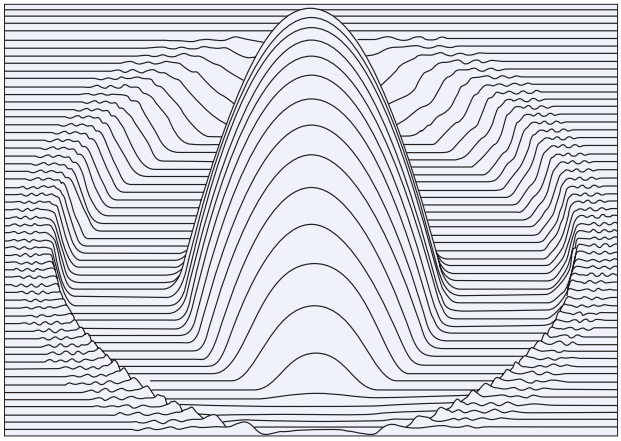
Draka

Draka Comteq | Optical Fibre

Issue date: 11/05
Supersedes: 11/04

Graded-Index Multimode Optical Fibre (62.5/125 µm)

Product Type: 62.5 / 125 µm (OM1 / OM2)
Coating Type: Dual Layer Primary Coating (DLPC9)



This graded-index 62.5/125 µm multimode fibre has a 62.5 µm core diameter and a 125 µm cladding diameter. The fibre is designed for use at 850 nm and/or 1300 nm. This 62.5/125 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 A1b 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
• Produced by the PCVD process, the ultimate process for graded-index multimode fibres	• PCVD produced multimode fibres show excellent modal bandwidth performance
• Coated with the dual layer UV acrylate DLPC9	• 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

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Characteristics	Conditions	Specified Values			Units
Optical Characteristics					
Attenuation Coefficient	850 nm	≤ 2.7	≤ 2.8	≤ 3.0	[dB/km]
	1300 nm	≤ 0.5	≤ 0.6	≤ 0.7	[dB/km]
Minimum Modal Bandwidth [1,2]	850 nm		160 to > 300		[m]
	1300 nm		500 to > 1000		[m]
Numerical Aperture			0.275 ± 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		1.496		
	1300 nm		1.491		
Geometrical Characteristics					
Core Diameter			62.5 ± 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*
160	*500 MHz.km*
200	*600 MHz.km*
250	*800 MHz.km*

[3] *OTDR measurement with 0.5 µs pulse width.*

[4] *Mean of bi-directional measurement.*