Legacy Graded-Index Multimode Optical Fibre 50/125 µm (1300 nm bandwidth optimized)

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 1300 nm and can also be used at 850 nm and is suitable for use in premises cabling 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, Fibre Channel and 1Gb/s Ethernet. Because of the nature of the Plasma-activated Chemical Vapor Deposition (PCVD and APVD™) manufacturing process, this fibre offers the highest bandwidth available in the market. OM1 and OM2 fibre selections are available.

The fibre complies with or exceeds ITU Recommendation G.651.1, IEC 60793-2-10 type A1a.1 Optical Fibre Specification, TIA/EIA-492AAAB detail specification and Telcordia GR-20-CORE and GR-409-CORE specifications.

Features	Advantages
Produced by the PCVD and APVD™ processes, the ultimate processes for graded- index multimode fibres	• Superior geometry, uniformity and purity of glass • PCVD and APVD™ produced multimode fibres show excellent modal bandwidth performance
Coated with the dual layer UV Acrylate	• Optimized performance in tight-buffer cable applications • High resistance to micro-bending • Stable performance over a wide range of environmental conditions • Improved an easier stripability of tight buffer coatings

Key Industry Leading Milestones

1999 — First shipments of what in 2002 became OM3 fibre

2003 — First OM3 type fibre with 10 Gb/s extended reach over 550 m: MaxCap-OM4 fibre

2006 — First Bend-Insensitive single-mode fibre: BendBright-XS

2010 — Bend-Insensitive OM2 / OM2+ / OM3 / OM4 fibre: MaxCap-BB-OMx

Prysmian Group
fibresales@prysmiangroup.com
www.draka.com/communications.com

Netherlands: Tel: +31(0)40 29 58 710
France: Tel: +33(0)321 79 49 00
USA: Tel: +1 800-879-9862

Legacy Graded-Index Multimode Optical Fibre 50/125 µm (1300 nm bandwidth optimized)

Product Type: Legacy 50 / 125 / 242 µm Multimode Fibre (OM1 / OM2)
Coating Type: Dual Layer Primary Coating (DLPC9)

Issue date: 04/12
Supersedes: 02/12

Characteristics	Conditions	Specified Values	Units
Optical Specifications (Uncabled fibre)			
Attenuation Coefficient	850 nm	≤ 2.2 ≤ 2.3	dB/km
	1300 nm	≤ 0.5 ≤ 0.6	dB/km
Numerical Aperture		0.200 ± 0.015	
Chromatic Dispersion			
Zero Dispersion Wavelength, λ_0		$1295 \leq \lambda_0 \leq 1340$	nm
Zero Dispersion Slope, S_0	$1295 \text{ nm} \leq \lambda_0 \leq 1310 \text{ nm}$	≤ 0.105	$ps/nm^2.km$
	$1310 \text{ nm} \leq \lambda_0 \leq 1340 \text{ nm}$	$\leq 0.000375 (1590 - \lambda_0)$	$ps/nm^2.km$
Overfilled Modal Bandwidth[1,2]	850 nm	≥ 400 to ≥ 1000	MHz.km
	1300 nm	≥ 400 to ≥ 1500	MHz.km
Bending Loss	100 turns, D=75 mm; 850nm / 1300nm	≤ 0.5	dB
Backscatter Characteristics[3]			
Point Discontinuity[4]	850 nm, 1300 nm	≤ 0.1	dB
Irregularities over fibre length	850 nm, 1300 nm	≤ 0.1	dB
Reflections		Not allowed	
Group Index of Refraction (Typ.)	850 nm	1.482	
	1300 nm	1.477	
Geometrical Specifications			
Core Diameter		50 ± 2.5	µm
Core Non-Circularity		≤ 5	%
Core/Cladding Concentricity Error		≤ 1	µm
Cladding Diameter		125.0 ± 1.0	µm
Cladding Non-Circularity		≤ 0.7	%
Coating Diameter		242 ± 5	µm
Coating Non-Circularity		≤ 5	%
Coating/Cladding Concentricity Error		≤ 6	µm
Length	Standard lengths up to *Other lengths available on request*	26.4	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[5]	> 3.8 (550)	GPa (kpsi)
Fatigue Parameter (Typical)	Dynamic fatigue, unaged and aged[5]	$n_d > 25$	
Coating Strip Force	Average strip force, unaged and aged[6]	1 to 3	N
	Peak strip force, unaged and aged[6]	1.3 to 8.9	N
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

1). The modal bandwidth is linearly normalized to 1 km, according to IEC 60793-2-10.
2). Dual window bandwidth specifications are selectable.
3). OTDR measurement with 0.5 µs pulse width.
4). Mean of bi-directional measurement.
5). Aging at 85°C, 85% RH, 30 days.
6). Aging at 23°C, 0°C and 45°C; 30 days at 85°C and 85% RH; 14 days water immersion at 23°C.

Prysmian Group
fibresales@prysmiangroup.com
www.draka.com/communications.com

Netherlands: Tel: +31(0)40 29 58 710
France: Tel: +33(0)321 79 49 00
USA: Tel: +1 800-879-9862