

WideCap-OM5 Multimode Fibre

Multimode Fibre Optimised for WDM Systems

Product Type: WideCap-OM5
Coating Type: Dual Layer Primary Coating (DLPC9)

Issue date: 10-2017



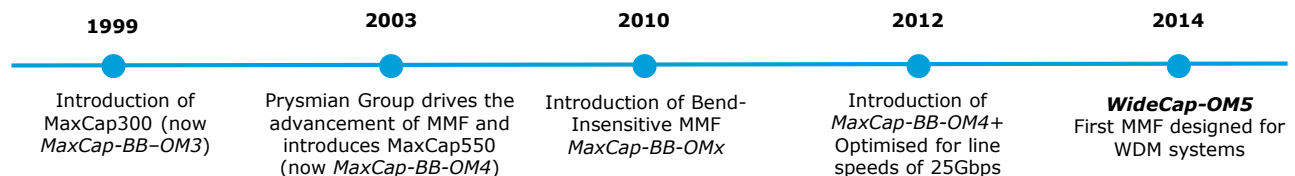
WideCap-OM5 multimode fibre is designed to support single wavelength and multi-wavelength transmission systems in the 850-950 nm wavelength window. WideCap-OM5 and WDM transmission systems provide high bandwidth and support efficient fiber count solutions to meet the increasing data demand in data center and LAN networks. WideCap-OM5 incorporates BendBright® technology to deliver enhanced macro-bending performance and is backward compatible with existing OM4 fibres and applications.

Standards references

WideCap-OM5 multimode fibre complies with or exceeds IEC 60793-2-10 type A1a.4, ISO/IEC 11801-OM5, TIA/EIA-492AAAE and Telcordia GR-20-CORE and GR-409-CORE specifications.

Features	Advantages
WideCap-OM5 offers high bandwidth in the vicinity 850 nm to 950nm window	Up to 400% more capacity than OM4 when using WDM technology
WideCap-OM5 multimode fibre is designed for single wavelength and WDM systems	Supports existing applications and emerging 100 Gb/s duplex systems. Enables next-generation 400 Gb/s technologies using 8 fibres
WideCap-OM5 uses BendBright® technology to deliver enhanced macro-bending performance	Allows the use of smaller, high density management systems in space limited data centres, computer rooms and LANs, improving overall system network reliability

Prysmian Group Multimode Fibre Innovation



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Characteristics	Conditions	Specified Values	Units
OPTICAL SPECIFICATIONS			
Attenuation Coefficient	850 nm	≤ 2.4	dB/km
	953 nm	≤ 1.8	
	1300 nm	≤ 0.6	
Numerical Aperture		0.200 ± 0.015	
Chromatic Dispersion			
Zero Dispersion Wavelength, λ_0		1297 ≤ λ_0 ≤ 1328	Nm
Zero Dispersion Slope, S_0	1295 nm ≤ λ_0 ≤ 1310 nm 1310 nm ≤ λ_0 ≤ 1340 nm	≤ 4(-103)/(840(1-(λ_0/840)⁴)) ps/nm ² .km	ps/nm².km
Fibre Capacity¹	100Gbps WDM²	150	M
	40Gbps WDM²	440	
	40GBASE-SR4 / 100GBASE-SR4	200	
Overfilled Modal Bandwidth (OFL)	850 nm	≥ 3500	MHz.km
	953 nm	≥ 1850	
	1300 nm	≥ 500	
Effective Modal Bandwidth (EMB)	850 nm	≥ 4700	MHz.km
	953 nm	≥ 2470	
Bending Loss	2 turns, Radius=7.5 mm; 850nm / 1300nm	≤ 0.2 / ≤ 0.5	dB
	2 turns, Radius=15 mm; 850nm / 1300nm	≤ 0.1 / ≤ 0.3	
	100 turns, Radius=37.5 mm; 850nm/1300nm	≤ 0.5 / ≤ 0.5	
Backscatter Characteristics³			
Point Discontinuity⁴	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		≤ 1.5	µm
Cladding Diameter		125.0 ± 1.0	µm
Cladding Non-Circularity		≤ 1	%
Coating Diameter		242 ± 5	µm
Coating Non-Circularity		≤ 5	%
Coating/Cladding Concentricity Error		≤ 10	µm
Length	Standard lengths up to	8.8	km
MECHANICAL SPECIFICATIONS			
Proof Test		> 0.7 (100)	GPa (kpsi)
Dynamic Tensile Strength (median value)	0.5 meter gauge length, unaged and aged	> 3.8 (550)	GPa (kpsi)
Fatigue Parameter (Typical)	Dynamic fatigue	$n_d > 20$	
Coating Strip Force	Average strip force	1 to 3	N
	Peak strip force	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) Support distances considering maximum cabled fibre attenuation of 3.0 dB/km at 850 nm, a maximum total connection loss of 1.0 dB
 2) Support distance with SWDM transceivers <http://www.swdm.org/msa/>