Cabled Optical Fibres Specifications

LANMARK-OF OM5 GIGALITEFLEX FIBRE: TECHNICAL SPECIFICATION

Aginode Ref: LANmark-FiberOM5

- 4 times the transmission capacity of OM4 when using SWDM
- Fully OM5 standard compliant
- Multiplexing capacity over 850-950nm
- Compatible with OM4 (Effective Modal Bandwidth of 4700 Mhz.km @ 850nm)
- Supports 10 Gbit-SR till 550 m @850nm
- Supports 100Gbit-SR4 till 100 m @850nm
- Low attenuation values



STANDARDS

ISO/IEC 11801

High-Performance Graded Index Multimode Fibre allowing Short Wavelength Division Multiplexing over 850-950nm

With LANmark-OF OM5 GIGAliteFLEX Aginode Cabling Solutions offers a fully OM5 standard (IEC 60793-2-10 as fibre type A1a.4b) compliant multimode fibre. LANmark-OF OM5 GIGAliteFLEX ensures highest bandwidth performance for Premises, Local Area Network (LAN) and Storage Area Network (SAN) while its low-cost 850 -950 nm lasers (VCSEL) optimised design contributes to overall system cost reduction.

Key performance characteristics

- Operational Wavelength Mutiplexing capacity over 850-950nm
- Guaranteed OM4 legacy compliance: Effective Modal Bandwidth (EMB) of 4700 Mhz.km, Overfilled Launch Bandwidth (OFL) of 3500 Mhz.km @ 850 nm, 1850Mhz.km @ 953nm and 500 Mhz.km @ 1300 nm.
- Guarantees reliable system performance for 10 Gb/s Ethernet serial transmission over 550 m @850nm and 100Gb/s parallel transmission over 100m @850nm
- Optimised for low cost 850 nm system applications using VCSEL as light sources.
- Highest effective modal bandwidth values ensured by most stringent DMD characterization.
- Fully compatible with multimode 50/125 µm installed fibre base.

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Aginode is indicative only and shall not be binding on Aginode or be treated as constituting a representation on the part of Aginode.

Bend Performance and Compatibility

Aginode' GIGAliteFLEX bend-insensitive fibres deliver the best macrobending performance in the industry while maintaining compatibility with traditional optical fibres, equipment, practices and procedures. GIGAliteFLEX multimode fibers are designed to withstand tight bends with substantially less signal loss than traditional multimode fibre. This new multimode optical fibre allows very tight bends that are especially useful in very dense patching zones. With greater signal protection when subjected to tight bending, Aginode' GIGAliteFLEX bend-insensitive fibre offers greater system security meaning maximized network up-time.

Standardization and compliances for LANmark-OF OM5

- EC 60793-1-49: differential mode delay (DMD) to measure effective modal bandwidth (EMB)
- EC 60793-1-41: overfilled mode launch bandwidth (OFL BW)
- ISO/IEC 11801 (2) as OM5 fibre
- IEC 60793-2-10 as fibre type A1a.4b
- Compliant to annex D4 (DMD template requirements) and annex D5 and D6 (EMBc: calculated effective modal bandwidth) of IEC 60793-2-10 ed. 6.

LANmark-OF OM5 - Geometrical Characteristics

Characteristic	Spec Values	Unit
Core Diameter	50 ± 2.5	µm
Core Non-Circularity	≤ 6.0	%
Core/Clad Concentricity	≤ 1.5	µm
Cladding Diameter	125 ± 1.0	µm
Cladding Non-Circularity	≤ 1.0	%
Coating Diameter	250 ± 15.0	µm
Coating/Clad Concentricity Error	≤ 10.0	µm

LANmark-OF OM5 - Optical performance

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Characteristics	OM5 Spec Values	Unit
Targeted operational wavelength(s)	850-950	nm
Bandwidth (Overfilled Launch) 850 nm	≥ 3500	Mhz.km
Bandwidth (Overfilled Launch) 953 nm	≥ 1850	Mhz.km
Bandwidth (Overfilled Launch) 1300 nm	≥ 500	Mhz.km
Effective Modal Bandwidth (EMB) 850 nm	≥ 4700	Mhz.km
Effective Modal Bandwidth (EMB) 953 nm	≥ 2470	Mhz.km
Transmission link lengths for 1 Gb/s (SX/LX)	900/550	m
Transmission link lengths for 10 Gb/s (SR/LX4)	550*/300	m
Transmission link lengths for 40 Gb/s (SR4)	150*	m
Transmission link lengths for 100 Gb/s (SR4)	100*	m
Attenuation 850 nm	3.0	dB/km
Attenuation 953 nm	2.3	dB/km
Attenuation 1300 nm	1.0	dB/km
Attenuation uniformity	≤ 0.2	dB
Numerical Aperture	0.20 ± 0.02	-

* with engineered link of maximum 1.0 dB connector insertion loss

LANmark-OF OM5 - Macrobending Loss

Maximum Macro Bending	Number of Turns	Induced attenuation (dB) @ 850 nm	Induced attenuation (dB) @ 1300 nm
37.5mm	100	0.5 dB	0.5 dB
15 mm	2	0.1 dB	0.3 dB
7.5 mm	2	0.2 dB	0.5 dB

ドキュメンテーション

Bend OM5.xlsx xlsx — 9.75 KB　ダウンロード

Optical OM5_1.xlsx xlsx — 8.49 KB　ダウンロード

Geometry OM5.xlsx xlsx — 9.81 KB　ダウンロード

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