Cabled Optical Fibres Specifications

LANMARK-OF OM4 GIGALITEFLEX FIBRE: TECHNICAL SPECIFICATION

Aginode Ref: LANmark-FiberOM4

- Fully OM4 standard compliant
- Effective Modal Bandwidth of 4700 Mhz.km
- Supports 10 Gbit-SR till 550 m
- Superior geometric tolerances
- Low attenuation values
- Enhanced Macrobend loss performance
- Tight fibre bend radius: 7.5 mm



STANDARDS

ISO/IEC 11801

High-Performance Graded Index Multimode Fibre with EMB 4700 Mhz.km for 10 Gb/s Ethernet LAN applications over 550 meters

With LANmark-OF OM4 GIGAliteFLEX Aginode Cabling Solutions offers a fully OM4 standard (IEC 60793-2-10 as fibre type A1a.3b) compliant multimode fibre. LANmark-OF OM4 GIGAliteFLEX ensures highest bandwidth performance for Premises, Local Area Network (LAN) and Storage Area Network (SAN) while its low-cost 850 nm lasers (VCSEL) optimised design contributes to overall system cost reduction.

Key performance characteristics

- Guarantees reliable system performance for 10 Gb/s Ethernet serial transmission over 550 m
- Guaranteed OM4 compliance: Effective Modal Bandwidth (EMB) of 4700 Mhz.km, Overfilled Launch Bandwidth (OFL) of 3500 Mhz.km @ 850 nm and 500 Mhz.km @ 1300 nm.
- 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.

Bend Performance and Compatibility

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.

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 OM4

- 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 OM4 fibre
- IEC 60793-2-10 as fibre type A1a.3b
- Compliant to annex D4 (DMD template requirements) and annex D5 (EMBc: calculated effective modal bandwidth) of IEC 60793-2-10 ed. 4.

LANmark-OF OM4 - 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 OM4 - Optical parameters

Characteristics	Spec Values	Unit
Bandwidth (Overfilled Launch) 850 nm	≥ 3500	Mhz.km
Bandwidth (Overfilled Launch) 1300 nm	≥ 500	Mhz.km
Effective Modal Bandwidth (EMB) 850 nm	≥ 4700	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 1300 nm	1.0	dB/km
Attenuation uniformity	≤ 0.2	dB
Numerical Aperture	0.20 ± 0.02	

LANmark-OF OM4 - Macrobend Loss

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Mandrel Radius (mm)	Number of Turns	Induced attenuation (dB) @ 850 nm	Induced attenuation (dB) @ 1300 nm
37.5	100	≤ 0,5	≤ 0,5
15	2	≤ 0,1	≤ 0,3
7.5	2	≤ 0,2	≤ 0,5

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