AD-FO-MM50-X-OM4: Multimode optical fiber 50/125 6 to 48 OM4 cores

Central Loose Tube – Steel Reinforced

4 to 12 fibers Indoor/Outdoor – LSOH

50/125OM4

Application

- Very high-speed data cables intended for local IT networks for campus, bypass and horizontal links. They are suitable for all types of environments: residential, tertiary, industrial or Public Establishments (ERP).
- Optimized design for easier preparation and access to fibres.
- Protection against rodents.

Reference standards

Cables and fibres	Cabling Systems	Apps
NF EN 60793 NF EN 60794	EN NF 50173-1 ISO/IEC 11801	IEEE 802.3 10M à 10Gbit IEEE 802.5 Token ring ANSI X3T9-5 (FDDI) ATM (155, 622, …)

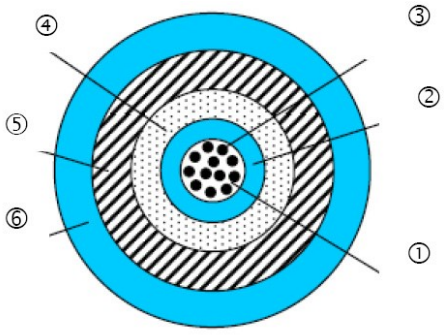
Fire Outfit

IEC 60332-1.1 et IEC 60332-1.2
IEC 60332-3.24 (3C)*

NF C 32070-2.2 (C1)*

Description

1 Fiber optic: multimode or singlemode (FOTAG color code)
2 Tube: thermoplastic material
3 Sealing in filling gel tube
4 Reinforcements: glass wicks with IPA hydroblocking product
5 Armor: Ringed Copolymer Steel
6 Final sheath: blue LSOH



Main Features

Features		Values
Temperature range	Transport and storage	-40°C à +70°C
	Facility	-5°C à +50°C
	Functioning	-40°C à +70°C
Maximum pull (N)		1200
Crushing strength (N/cm)		500
Minimum bending radius (mm)		150
Standard packaging		Reels 2100 m ou 4200 m
Nominal sheath thickness (mm)		1,3
Nominal cable diameter (mm)		8,5
Rated weight (kg/km)		83

AD-FO-MM50-X-OM4: Multimode optical fiber 50/125 6 to 48 OM4 cores

Standards	
EN 50173-1 / ISO/IEC 11801	50/125 OM4
UIT-T	G.651.1
CEI / EN	60793-2-10 A1a.3

Dimensional specifications	
Core diameter	50 +/- 2,5 µm
Cladding diameter	125 +/- 1 µm
Final coating diameter	245 +/- 10 µm
Cladding non-circularity	≤ 1 %
Core non-circularity	≤ 6 %
Core/cladding concentricity error	≤ 1 µm
Sheath/coating eccentricity	≤ 10 µm

Cabled fiber linear attenuation *	
λ = 850 nm	≤ 2,7 dB/km
λ = 1300 nm	≤ 0,8 dB/km
Attenuation uniformity	≤ 0,2 dB

(*) Guaranteed transmission values for cable lengths greater than or equal to 1000 m. The optical transmission values are warranted for lengths of cable exceeding 1000 m.

Effective group index	
λ = 850 nm	1,483
λ = 1300 nm	1,479

Mechanical tests Mechanical specification	
DC voltage test Tensile proof test	Elongation strain > 1% for 1 sec (0.69 GPa)
Tensile strength test Dynamic tensile strength	≥ 45 N
Stress corrosion resistance constant (nd) Dynamic fatigue stress corro-sion	≥ 20
Stripping test Coating strip force	1,2 N < Fmoy med < 3 N Fmax < 5 N

Environmental specifications Environmental specifications	
Temperature variation Temperature cy-cling [-60; 85°C]	≤ 0,2 dB/km at 850 and 1300 nm
Aging in dry heat Aging (85°C / 30 days)	≤ 0,2 dB/km at 850 and 1300 nm
Aging in damp heat Aging (85°C / 85% RH / 30 days)	≤ 0,2 dB/km at 850 and 1300 nm

Transmission characteristics Optical specification	
Numerical aperture Numerical aperture	0,2 +/- 0,015
Bandwidth (LED) λ = 850 nm λ = 1300 nm	≥ 3500 MHz.km ≥ 500 MHz.km
Bandwidth (VCSEL) λ = 850 nm with DMD measurement with DMD measurement	≥ 4700 MHz.km

Macrobend attenuation		
	λ = 850 nm	λ = 1300 nm
100 tours turns / rayon radius 75 mm	≤ 0,5 dB/km	≤ 0,5 dB/km

Reference	Description
AD-FO-MM50-6-OM4	Multimode optical fiber cable 50/125 6 cores OM4
AD-FO-MM50-12-OM4	Multimode optical fiber cable 50/125 12 cores OM4
AD-FO-MM50-24-OM4	Multimode optical fiber cable 50/125 24 cores OM4
AD-FO-MM50-48-OM4	Multimode optical fiber cable 50/125 48 cores OM4