

FiberHome® Next Generation Multimode Optical Fiber (OM5)



ISO 9001 specification

Shanghai stock code: 600498

Description

FiberHome® next generation multimode optical fiber reduces the differential mode delay (DMD) phenomenon observed on the conventional fibers in 10Gigabit applications. The bandwidth performance is extended to the 953 nm band, which can support multiple wavelength transmission applications. In addition, the OM5 / SWDM combination can better demonstrate the advantages of long-distance transmission in links with a transmission distance of 100G or higher speeds exceeding 100 m.

Application

FiberHome® next generation multimode optical fiber (OM5) can maximally support current and emerging high-speed Ethernet, fiber channel and fiber optic interconnection applications. In the data center design, it can fully support higher-speed (100Gb/s and 400Gb/s Ethernet, 16Gb/s and 32Gb/s Fiber Channel) data transmission requirements.

Norms

FiberHome® next generation multimode optical fiber (OM5) complies with or exceeds the latest ITU-T G.651 and IEC 60793-2-10 A1a.4 cabling standards.

Characteristics

- Suited to applications in 10Gigabit Ethernet and higher bit-rat systems
- Precise control of refractive index profile
- Designed for use at 850nm and 1300nm, while supporting 850-950nm short-wavelength transmission
- Good mechanical and environmental performance
- Good bending loss resistance at short radius bends

Next Generation Multimode Optical Fiber Feature (OM5)			
Features	Conditions	Value	Unit
Optical Requirements			
Attenuation	850nm	≤2.5	dB/km
	953nm	≤1.8	dB/km
	1300nm	≤0.8	dB/km
Bandwidth	850nm	≥3500	MHz.km
	953nm	≥1850	MHz.km
	1300nm	≥500	MHz.km
Effective bandwidth	850nm	≥4700	MHz.km
	953nm	≥2470	MHz.km
Numerical Aperture		0.20±0.015	
DMD		complies with IEC60793-2-10	
Zero dispersion wavelength		1295~1340	nm
Zero dispersion slope	1295~1310nm	≤0.105	ps/(nm ² .km)
	1310~1340nm	≤0.000375 (1590-λ0)	ps/(nm ² .km)
Point discontinuities	1300nm	≤0.10	dB
Geometrical Requirements			
Core Diameter		50±2.5	μm
Core Non-Circularity		≤5.0	%
Cladding diameter		124.5±1	μm
Cladding Non-Circularity		≤1.0	%
Core/Cladding Concentricity Error		≤1.5	μm
Coating Diameter		245±10	μm
Coating/Cladding Concentricity Error		≤12.0	μm
Environmental Requirements (850nm&1300nm)			
Temperature dependence	-60°C~+85°C	≤0.10	dB/km
Temperature-humidity cycling	-10°C~+85°C, 98%RH	≤0.10	dB/km
Water-soaked Dependence	23°C, for 30 days	≤0.10	dB/km
Damp Heat Dependence	85°C and 85%RH, for 30 days	≤0.10	dB/km
Dry heat	85°C, for 30 days	≤0.10	dB/km
Mechanical Requirements			
Proof test		≥9.0	N
Macro-bend induced attenuation 2 turns Φ30mm	850nm	≤0.1	dB
	1300nm	≤0.3	dB
Macro-bend induced attenuation 2 turns Φ15mm	850nm	≤0.2	dB
	1300nm	≤0.5	dB
Coating strip force	Typical average force	1.0~5.0	N
	Peak force	1.3~8.9	N
Delivery length	1.1~8.8		km/reel