OPTICAL FIBER CATALOG

- ✧ FiberHome® A1a or OM1 (50/125μm) multi-mode fiber
- ✧ FiberHome® A1b or OM1 (62.5/125μm) multi-mode fiber
- ✧ FiberHome® A1a.1 or OM2+ (50/125μm) multi-mode fiber
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FiberHome® A1a or OM1 (50/125μm) multi-mode fiber

FiberHome®50/125μm fiber is a grade-index multi-mode fiber, PCVD process guarantees the perfect refractive index control, and the fiber is comprehensively optimized for performance at the 850nm and 1300nm windows with the highest bandwidth and lowest attenuation. It complies with or exceeds the specification of ITU-T recommendation G.651.1 and the IEC 60793-2-10 A1a.1 type fiber.

The 50/125μm fiber is suitable for LANs, video, voice and data services using LD and LED sources.

A1a or OM1 fiber characteristics		
Optics specifications		
Attenuation (dB/km)	@850nm	≤2.80dB/km
	@1300nm	≤1.00dB/km
Bandwidth (MHz·km)	@850nm	≥200MHz·km
	@1300nm	≥200MHz·km
Numerical aperture		0.20±0.015μm
Max Reel Lengths		8.8km/reel
Zero-Dispersion wavelength		1295-1340nm
Zero-Dispersion slope		≤0.11
Effective group index (Neff) @850nm		1.475
Effective group index (Neff) @1300nm		1.473
Back scatter characteristics (at 850nm&1300nm)		
Point discontinuity		≤0.10dB
Attenuation uniformity		≤0.10dB/km
Geometrical characteristics		
Core diameter		50±2.5μm
Cladding diameter		124.5±1.0μm
Core non-circularity		≤6.0%
Cladding non-circularity		≤2.0%
Core/cladding concentricity error		≤1.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ75mm,100 turns @850nm	≤0.5dB
	Φ75mm,100 turns @1300nm	≤0.5dB
Environmental characteristics (at 850nm & 1300nm)		
Temperature induced attenuation (-60~+85℃)		≤0.1dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.1dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.1dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.1dB/km

FiberHome® A1b or OM1 (62.5/125μm) multi-mode fiber

FiberHome®62.5/125μm fiber is a grade-index multi-mode fiber, PCVD process guarantees the perfect refractive index control, and the fiber is comprehensively optimized for performance at the 850nm and 1300nm windows with the highest bandwidth and lowest attenuation. It complies with or exceeds the specification of the IEC 60793-2-10 A1b type fiber.

The 62.5/125μm fiber is suitable for LANs, video, voice and data services using LD and LED sources.

A1b or OM1 fiber characteristics		
Optics specifications		
Attenuation (dB/km)	@850nm	≤3.00dB/km
	@1300nm	≤1.00dB/km
Bandwidth (MHz·km)	@850nm	≥100MHz·km
	@1300nm	≥160MHz·km
Numerical aperture		0.275±0.015
Max Reel Lengths		16.8km/reel
Zero-Dispersion wavelength		1295-1340nm
Zero-Dispersion slope		≤0.11
Effective group index (Neff) @850nm		1.493
Effective group index (Neff) @1300nm		1.488
Back scatter characteristics (at 850nm&1300nm)		
Point discontinuity		≤0.10dB
Attenuation uniformity		≤0.10dB/km
Geometrical characteristics		
Core diameter		62.5±2.5μm
Core non-circularity		≤6.0%
Cladding diameter		124.5±1μm
Cladding non-circularity		≤2.0%
Core/cladding concentricity error		≤1.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ75mm,100 turns @850nm	≤0.5dB
	Φ75mm,100 turns @1300nm	≤0.5dB
Environmental characteristics (at 850nm & 1300nm)		
Temperature induced attenuation (-60~+85℃)		≤0.15dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.20dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.20dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.20dB/km

FiberHome® A1a.1 or OM2+ multi-mode fiber

A1a.1 or OM2+ fiber characteristics		
Optics specifications		
Attenuation (dB/km)	@850nm	≤2.5dB/km
	@1300nm	≤0.8dB/km
OFL bandwidth (MHz·km)	@850nm	≥700MHz·km
	@1300nm	≥500MHz·km
Effective modal bandwidth (MHz·km)	@850nm	≥950MHz·km
Numerical aperture	(50um)	0.200±0.015
10GB max link length	OM2+	150m
Effective group index (N_{eff}) @850nm		1.475
Effective group index (N_{eff}) @1300nm		1.473
Zero-Dispersion wavelength		1295-1340nm
Zero-Dispersion slope		≤0.11
Max Reel Lengths		8.8km/reel
Back scatter characteristics (at 850nm&1300nm)		
Point discontinuity		≤0.10dB
Irregularities over fiber length and point discontinuity		≤0.10dB
Geometrical characteristics		
Core diameter		50±2.5μm
Core non-circularity		≤5.0%
Cladding diameter		124.5±1.0μm
Cladding non-circularity		≤2.0%
Core/cladding Concentricity error		≤1.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding /coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ75mm,100 turns @850nm	≤0.5dB
	Φ75mm,100 turns @1300nm	≤0.5dB
Environmental characteristics (at 850nm & 1300nm)		
Temperature induced attenuation (-60~+85℃)		≤0.10dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.10dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.10dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.10dB/km

FiberHome®A1a.2 or OM3 fiber multi-mode fiber

FiberHome® A1a.2 or OM3 fiber is a laser-optimized grade-index multi-mode fiber, PCVD process guarantees the perfect refractive index control, and the fiber can use low-cost 850nm Vertical Cavity Surface Emitting Lasers (VCSEL) for 10Gb/s Ethernet applications. It complies with or exceeds the specification of the IEC 60793-2-10 A1a.2 type fiber or ISO/IEC 11801 OM3 fiber.

A1a.2 or OM3 fiber characteristics		
Optics specifications		
Attenuation (dB/km)	@850nm	≤2.5dB/km
	@1300nm	≤0.8dB/km
OFL bandwidth (MHz·km)	@850nm	≥1500MHz·km
	@1300nm	≥500MHz·km
Effective modal bandwidth (MHz·km)	@850nm	≥2000MHz·km
Numerical aperture	(50um)	0.200±0.015
10GB max link length	OM3	300m
Effective group index (N_{eff}) @850nm		1.475
Effective group index (N_{eff}) @1300nm		1.473
Zero-Dispersion wavelength		1295-1340nm
Zero-Dispersion slope		≤0.11
Max Reel Lengths		8.8km/reel
Back scatter characteristics (at 850nm&1300nm)		
Point discontinuity		≤0.10dB
Irregularities over fiber length and point discontinuity		≤0.10dB
Geometrical characteristics		
Core diameter		50±2.5μm
Core non-circularity		≤5.0%
Cladding diameter		124.5±1.0μm
Cladding non-circularity		≤2.0%
Core/cladding Concentricity error		≤1.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding /coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ75mm,100 turns @850nm	≤0.5dB
	Φ75mm,100 turns @1300nm	≤0.5dB
Environmental characteristics (at 850m & 1300nm)		
Temperature induced attenuation (-60~+85℃)		≤0.10dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.10dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.10dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.10dB/km

FiberHome®A1a.3 or OM4 fiber multi-mode fiber

A1a.3 or OM4 fiber characteristics		
Optics specifications		
Attenuation (dB/km)	@850nm	≤2.5dB/km
	@1300nm	≤0.8dB/km
OFL bandwidth (MHz·km)	@850nm	≥3500MHz·km
	@1300nm	≥500MHz·km
Effective modal bandwidth (MHz·km)	@850nm	≥4700MHz·km
Numerical aperture	(50um)	0.200±0.015um
10GB max link length	OM4	550m
Effective group index (N_{eff}) @850nm		1.475
Effective group index (N_{eff}) @1300nm		1.473
Zero-Dispersion wavelength		1295-1340nm
Zero-Dispersion slope		≤0.11
Max Reel Lengths		8.8km/reel
Back scatter characteristics (at 850nm&1300nm)		
Point discontinuity (average of bidirectional measurement)		≤0.10dB
Irregularities over fiber length and point discontinuity		≤0.10dB
Geometrical characteristics		
Core diameter		50±2.5μm
Core non-circularity		≤5.0%
Cladding diameter		124.5±1.0μm
Cladding non-circularity		≤2.0%
Core/cladding Concentricity error		≤1.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding /coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ75mm,100 turns @850nm	≤0.5dB
	Φ75mm,100 turns @1300nm	≤0.5dB
Environmental characteristics (at 850nm & 1300nm)		
Temperature induced attenuation (-60~+85℃)		≤0.10dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.10dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.10dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.10dB/km

FiberHome® B1.3 (G.652D) single mode fiber

FiberHome® G.652D fiber optimizes the features in 1310nm (O-band) and 1550nm(C-band).OH ions and structure defects are reduced to minimum by advanced manufacturing process. Compared to traditional single mode fiber, operation area of low-water-peak optical fiber is be enlarged and its capacity is increased by 50%. Therefore, it is the most ideal optical fiber for CWDM or MAN system.

VAD process provides excellent performance of low PMD index, low splice loss and high reliability.

It complies with or exceeds the specification of ITU-T recommendation of G.652D and the IEC 60793-2-50 B1.3 type fiber.

B1.3 (G.652D) fiber characteristics		
Optics specifications		
Attenuation	@1310nm	≤0.34dB/km
	@1383nm(after hydrogen aging)	≤0.34dB/km
	@1550nm	< 0.19dB/km
	@1625nm	≤0.24dB/km
Dispersion	@1285nm～1340nm	-3.0ps/(nm·km)～3.0ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm～1324nm
Zero-Dispersion slope		≤0.092ps/(nm^2·km)
Mode field diameter (MFD) at 1310nm		9.2±0.4μm
Mode field diameter (MFD) at 1550nm		10.4±0.8μm
PMD	Max. for fiber on the reel	0.20ps/km$^{1/2}$
	Max. for link designed value	0.10ps/km$^{1/2}$
Cable cutoff wavelength λ_{cc}(nm)		≤1260nm
Effective group index（N_{eff}）@1310nm		1.4683
Effective group index（N_{eff}）@1550nm		1.4688
Back scatter characteristics (at 1310nm&1550nm)		
Point discontinuity		≤0.05dB
Attenuation uniformity	1285~1330nm	≤0.03dB/km
	1525~1575nm	≤0.02dB/km
Geometrical characteristics		
Cladding diameter		125±0.7μm
Cladding non-circularity		≤0.7%
Core/cladding concentricity error		≤0.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.0~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ60mm,100 turns @1625nm	≤0.05dB
	Φ32mm,1turn @1550nm	≤0.05dB
Environmental characteristics (at 1310nm & 1550nm)		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.05dB/km

FiberHome®B4 (G.655) single mode fiber

FiberHome® G.655 single mode fiber is comprehensively optimized for attenuation and dispersion performance at the 1550nm operating wavelength. The fiber has the lowest attenuation and moderate dispersion at 1550nm, which enables excellent performance in multi-channel Dense Wavelength Division Multiplex (DWDM) systems traditionally operation in the C-band (1530nm-1565nm), as well as in emerging L-band (1565-1625nm) systems.

B4 fiber characteristics		
Optics specifications		
Attenuation	@1550nm	≤0.22dB/km
	@1625nm	≤0.27dB/km
Attenuation vs. Wavelength	@1525~1575nm (difference with 1550nm)	≤0.02dB/km
	@1625nm (difference with 1550nm)	≤0.03dB/km
Dispersion	1530nm-1565nm	2.0-6.0ps/(nm·km)
	1565nm-1625nm	4.5-11.2ps/(nm·km)
Zero-Dispersion wavelength		≥1520nm
Zero-Dispersion slope	max	≤0.084ps/(nm^2·km)
	typical	≤0.075ps/(nm^2·km)
Mode field diameter (MFD) at 1550nm		9.6±0.5μm
PMD	Max. for fiber on the reel	0.2ps/$km^{1/2}$
	Max. for link designed value	0.08ps/$km^{1/2}$
	Typical for link designed value	0.04ps/$km^{1/2}$
Cable cutoff wavelength λcc(nm)		≤1450nm
Effective group index (N_{eff}) @1550nm		1.469
Effective group index (N_{eff}) @1625nm		1.469
Point discontinuity		≤0.05dB
Geometrical characteristics		
Cladding diameter		125.0±1μm
Cladding non-circularity		≤1.0%
Core/cladding concentricity error		≤0.6μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Back scatter characteristics (at 1550nm&1625nm)		
Point discontinuity		0.05dB
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.3~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥27
Macrobend loss	Φ32mm,1turn	≤0.50dB (1550&1625nm)
	Φ60mm,100turns	≤0.05dB (@1625nm)
Environmental characteristics (at 1550nm & 1625nm)		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.05dB/km

FiberHome®B6a (G.657A) single mode fiber

FiberHome® G.657A bending insensitive single mode optical fiber has low macro-bending sensitivity and low water peak attenuation. It is comprehensively optimized for use in O-E-S-C-L band. It allows for easy installation and is widely use in access network, FTTx networks and special indoor applications.

VAD process provides excellent performance of low PMD index, low splice loss and high reliability.

It complies with or exceeds the specification of ITU-T recommendation of G.652D/ G.657A and the IEC 60793-2-50 B6-a type fiber.

FiberHome® B6a.1 (G.657A1) single mode fiber

B6a.1 or G.657A1fiber characteristics		
Optics specifications		
Attenuation	@1310nm	≤0.34dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.20dB/km
	@1625nm	≤0.24dB/km
Dispersion	@1285nm～1340nm	-3.0ps/(nm·km)～3.0ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm^2·km)
Mode field diameter (MFD) at 1310nm		9.2±0.4μm
Mode field diameter (MFD) at 1550nm		10.4±0.8μm
PMD	Max. for fiber on the reel	0.2ps/km$^{1/2}$
	Max. for link designed value	0.1ps/km$^{1/2}$
Cable cutoff wavelength λ_{cc}(nm)		≤1260nm
Effective group index（Neff）@1310nm		1.4683
Effective group index（Neff）@1550nm		1.4688
Back scatter characteristics (at 1310nm&1550nm)		
Point discontinuity		≤0.05dB
Attenuation uniformity	1285nm~1330nm	≤0.03dB/km
	1525nm~1575nm	≤0.02dB/km
Geometrical characteristics		
Cladding diameter		125±0.7μm
Cladding non-circularity		≤0.7%
Core/cladding concentricity error		≤0.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.0~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ30mm,10turn @1550nm	≤0.25dB
	Φ30mm,10turns @1625nm	≤1.0dB
	Φ20mm,1turn @1550nm	≤0.75dB
	Φ20mm,1turns @1625nm	≤1.5dB
Environmental characteristics (at 1310nm & 1550nm)		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.05dB/km

FiberHome® B6a.2 (G.657A2) single mode fiber

B6-a2 or G.657A2 fiber characteristics		
Optics specifications		
Attenuation	@1310nm	≤0.34dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.20dB/km
	@1625nm	≤0.24dB/km
Dispersion	@1285nm～1340nm	-3.0ps/(nm·km)～3.0ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm^2·km)
Mode field diameter (MFD) at 1310nm		8.6±0.4μm
Mode field diameter (MFD) at 1550nm		9.8±0.5μm
PMD	Max. for fiber on the reel	0.2ps/km$^{1/2}$
	Max. for link designed value	0.1ps/km$^{1/2}$
Cable cutoff wavelength λ_{cc}(nm)		≤1260nm
Effective group index（Neff）@1310nm		1.4683
Effective group index（Neff）@1550nm		1.4688
Back scatter characteristics (at 1310nm&1550nm)		
Point discontinuity		≤0.05dB
Attenuation uniformity	1285nm~1330nm	≤0.03dB/km
	1525nm~1575nm	≤0.02dB/km
Geometrical characteristics		
Cladding diameter		125±0.7μm
Cladding non-circularity		≤0.7%
Core/cladding concentricity error		≤0.5μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Coating strip force (typical value)		1.0~8.9N
Dynamic stress corrosion susceptibility parameter (typical value)		≥20
Macrobend loss	Φ30mm,10turn @1550nm	≤0.03dB
	Φ30mm,10turns @1625nm	≤0.1dB
	Φ20mm,1turn @1550nm	≤0.1dB
	Φ20mm,1turns @1625nm	≤0.2dB
	Φ15mm,1turns @1550nm	≤0.5dB
	Φ15mm,1turns @1625nm	≤1.0dB
Environmental characteristics (at 1310nm & 1550nm)		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.05dB/km