

OM5 Bend Insensitive Multimode Fibre

FEATURES:

CERTECH WideBand OM5 Bend Insensitive Multi mode Fibre is a 50µm laser-optimized multimode fibre designed for short wavelength division multiplexing (SWDM) applications. Unlike traditional OM4 fibre with high bandwidth performance in a narrow band centred at 850nm, CERTECH OM5 Bend Insensitive Multimode Fibre delivers OM4 performance in the 850-950nm window while maintaining compatibility with current multi mode fibres. OM5 and multi-wavelength transceivers are a viable solution for future 100Gb/s and 400Gb/s multi-wavelength systems.

- Designed for multi-wavelength systems
- Maintaining compatibility with current OM4 multi mode optical fibre
- Very low macro-bending sensitivity

BENEFITS AND APPLICATIONS

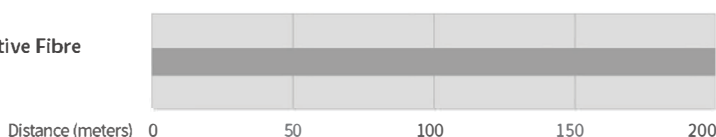
- Duplex transmission of 40&100&400 Gb/s using SWDM technology
- Supports today's application including 100Gb/s Ethernet
- Supports installation with small cable bend radii and compact organizers
- Optimized performance in tight-buffer cable applications
- High resistance to micro-bending Stable performance over a wide range of environmental conditions



System Link Length

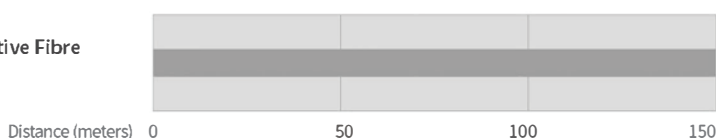
40 & 100 Gb/s Link Length @850nm

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100Gb/s Link Length Based on WDM

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Characteristics	Conditions	Specified values		Units
Geometry Characteristics				
Core Diameter	–	50±2.5		[µm]
Core Non-Circularity	–	≤5.0		[%]
Cladding Diameter	–	125.0±1.0		[µm]
Cladding Non-Circularity	–	≤0.6		[%]
Coating Diameter	–	245±7		[µm]
Coating/Cladding Concentricity Error	–	≤10.0		[µm]
Coating Non-Circularity	–	≤6.0		[%]
Core/Cladding Concentricity Error	–	≤1.0		[µm]
Delivery Length	–	up to 8.8		[km/reel]
Optical Characteristics				
Attenuation	850nm	≤2.4		[dB/km]
	953nm	≤1.7		[dB/km]
	1300nm	≤0.6		[dB/km]
Overfilled Modal Bandwidth	850nm	≥3500		[MHz · km]
	953nm	≥1850		[MHz · km]
	1300nm	≥500		[MHz · km]
Effective Modal Bandwidth	850nm	≥4700		[MHz · km]
	953nm	≥2470		[MHz · km]
Application support distance on	–	--		--
100Gb/s WDM ¹	–	150		[m]
40Gb/s WDM ¹	–	440		[m]
40GBASE-SR4 / 100GBASE-SR10 ²	850nm	200		[m]
Numerical Aperture	–	0.200±0.015		--
Group Refractive Index	850nm	1.482		--
	1300nm	1.477		--
Zero Dispersion Wavelength, λ ₀	–	1297-1328		[nm]
Zero Dispersion Slope, S ₀	–	≤4 (-103) / (840 λ ₀ /840) ⁴)		[ps/(nm ² · km)]
Macrobending Loss ³	–	@850nm	@1300nm	--
2 Turns @ 15 mm Radius	–	≤0.1	≤0.3	[dB]
2 Turns @ 7.5 mm Radius	–	≤0.2	≤0.5	[dB]
Backscatter Characteristics 850nm & 1300nm				
Step (Mean of Bidirectional Measurement)	–	≤0.10		[dB]
Irregularities Over Fibre Length and Point Discontinuity	–	≤0.10		[dB]
Attenuation Uniformity	–	≤0.08		[dB/km]
Environmental Characteristics 850nm & 1300nm				
Temperature Cycling	at -60°C to 85°C	≤0.10		[dB/km]
Temperature-Humidity Cycling	at -10°C to 85°C and 4% to 98% RH	≤0.10		[dB/km]
Water Immersion	at 23°C for 30 days	≤0.10		[dB/km]
Dry Heat	at 85°C for 30 days	≤0.10		[dB/km]
Damp Heat	at 85°C and 85% RH for 30 days	≤0.10		[dB/km]
Mechanical Specification				
Proof Test	–	≥9.0		[N]
	–	≥1.0		[%]
	–	≥100		[kpsi]
Coating Strip Force	typical average force	1.5		[N]
	peak force	≥1.3, ≤8.9		[N]
Dynamic Stress Corrosion Susceptibility Parameter (n _p , typical)	–	20		--

Remarks: 1. Support distance with SWDM transceivers

2. Support distances considering maximum cable attenuation of 3.0 dB/km at 850 nm, maximum total splice/connector loss of 1.0 dB and VCSELs maximum RMS spectral width ≤ 0.45 nm

3. The launch condition for the macrobending loss measurement fulfils that described in IEC 61280-4-1.