

## 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

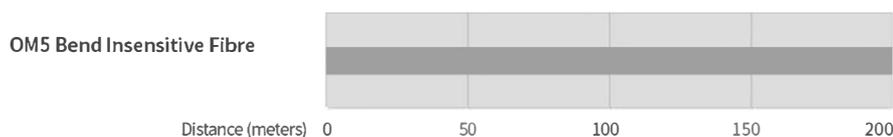
### BENEFITS AND APPLICATIONS

- 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

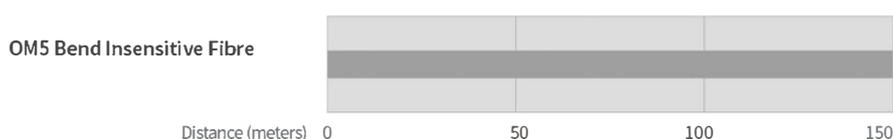


### System Link Length

40 & 100 Gb/s Link Length @850nm



100Gb/s Link Length Based on WDM



Characteristics	Conditions	Specified values	Units
<b>Geometry Characteristics</b>			
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]
<b>Optical Characteristics</b>			
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 <sup>1</sup>	-	150	[m]
40Gb/s WDM <sup>1</sup>	-	440	[m]
40GBASE-SR4 / 100GBASE-SR10 <sup>2</sup>	850nm	200	[m]
Numerical Aperture	-	0.200±0.015	--
Group Refractive Index	850nm	1.482	--
	1300nm	1.477	--
Zero Dispersion Wavelength, λ <sub>0</sub>	-	1297-1328	[nm]
Zero Dispersion Slope, S <sub>0</sub>	-	≤4 (-103) / (840 0 <sub>v</sub> /840) <sup>4</sup>	[ps/(nm <sup>2</sup> · km)]
Macrobending Loss <sup>3</sup>	-	@850nm      @1300nm	--
2 Turns @ 15 mm Radius	-	≤0.1      ≤0.3	[dB]
2 Turns @ 7.5 mm Radius	-	≤0.2      ≤0.5	[dB]
<b>Backscatter Characteristics</b>		<b>850nm &amp; 1300nm</b>	
Step (Mean of Bidirectional Measurement)	-	≤0.10	[dB]
Irregularities Over Fibre Length and Point Discontinuity	-	≤0.10	[dB]
Attenuation Uniformity	-	≤0.08	[dB/km]
<b>Environmental Characteristics</b>		<b>850nm &amp; 1300nm</b>	
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]
<b>Mechanical Specification</b>			
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 <sub>p</sub> 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.