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# Product Specifications

**Product :** LC-LC DX MM OM5 Patch Cables - OM5 Serie
**Product family :** Zyberspeed

**Description**

WideBand OM5 Bending Insensitive Multimode Fibre is a 50µm laser-optimized multimode fibre designed for short wavelength division multiplexing (SWDM) applications. Unlike legacy OM4 multimode fibre with high bandwidth at 850nm, OM5 Bending Insensitive Multimode Fibre has high bandwidth in the 850-950nm window and maintaining backward compatibility with legacy OM4 fibre. WideBand OM5 and multi-wavelength transceivers are a viable solution for 100Gb/s and 400Gb/s multi-wavelength systems.

WideBand OM5 Bending Insensitive Multimode Fibre complies with or exceeds ISO/IEC 11801-1 OM5 specification, IEC 60793-2-10 A1-OM5 specification, and TIA-492AAAF A1-OM5 specification.

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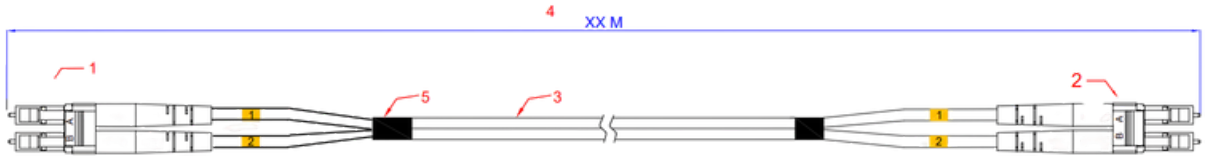
| Specification | Performation |
|---|---|
| 1.LC/UPC Connector MM 3.0mm | 1.Insertion loss:Typical<0.2dB，Max<0.3dB |
| 2.LC/UPC Connector MM 3.0mm | 2.Return loss:UPC>30dB, |
| 3.2F MM OM5 φ3.0mm Duplex Cable LSZH Leme Green | 3.Durability:<0.2dB,Typical Change:1000 Matings |
| 4.Length:XX M | 4.Insert-pull Test:500times<0.5dB |
| 5.Heat Shrink | 5.Opearting Temperature:-20℃ to +70℃ |

**Product figure**

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**Length Tolerance:**

| Tolerance | L≤500 mm | 500<L≤5000 mm | 5000<L≤10000 mm | 10000<L≤30000 mm | 30000< L≤100000 mm | L>100000 mm |
|---|---|---|---|---|---|---|
| MM | +50/-0 | +100/-0 | +150/-0 | +250/-0 | +1%L/-0 | +1.5%L/-0 |

| Features | Benefits and Applications |
|---|---|
| • Designed for multi-wavelength systems.<br>• High bandwidth in the wavelength range of 850-950nm.<br>• Backward compatibility with legacy OM4 fibre. | Support single-wavelength and multi-wavelength transmission system from 40Gb/s to 400Gb/s |
| • Superior geometry uniformity<br>• Low attenuation<br>• High bandwidth<br>• Low differential mode delay (DMD) | Data centers - Data storage networks - High-performance computing centers - Office centers - Local area networks (LAN) |
| Very low macro-bending sensitivity | Supports the use and installation of optical cables with a small bending radius |
| Coated with YOFC's proprietary dual layer UV curable acrylate | • High resistance to micro-bending<br>• Optimized performance in tight-buffer cable applications<br>• Stable performance over a wide range of environmental conditions |

**Environmental Characteristics**

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Temperature Cycling | at -60°C to 85°C | ≤ 0.10 | dB/km |
| Temperature-Humidity Cycling | at -10°C to 85°C and 46% 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 |

## Geometry Characteristics

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| 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 17.6 | km/reel |

## Optical Characteristics

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Attenuation | 850nm | ≤ 2.4 | dB/km |
| Attenuation | 953nm | ≤ 1.7 | dB/km |
| Attenuation | 1300nm | ≤ 0.6 | dB/km |

### Overfilled Modal Bandwidth

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Overfilled Modal Bandwidth | 850nm | ≥ 3500 | MHz·km |
| Overfilled Modal Bandwidth | 953nm | ≥ 1850 | MHz·km |
| Overfilled Modal Bandwidth | 1300nm | ≥ 500 | MHz·km |

### Effective Modal Bandwidth

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Effective Modal Bandwidth | 850nm | ≥ 4700 | MHz·km |
| Effective Modal Bandwidth | 953nm | ≥ 2470 | MHz·km |

### Application Support Distance

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| 16T-SR8.2 | 850/910nm | 100 | m |
| 800G-SR4.2 | 850/910nm | 100 | m |
| 400GBASE-SR4.2 | 850/910nm | 150 | m |
| 100Gb/s SWDM | 850-950nm | 150 | m |

### Additional Optical Characteristics

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Numerical Aperture | — | 0.200 ± 0.015 | — |
| Group Refractive Index | 850nm | 1.482 | — |
| Group Refractive Index | 1300nm | 1.477 | — |
| Zero Dispersion Wavelength, $\lambda_0$ | — | 1297–1328 | nm |
| Zero Dispersion Slope, $S_0$ | — | ≤4.103 / (840λ) | ps/(nm²·km) |

### Macrobending Loss

| Characteristics | Conditions | Specified Values | Units |
|---|---|---|---|
| Macrobending Loss | @850nm | — | — |
| 2 Turns @ 15mm Radius | — | ≤ 0.1 | dB |
| 2 Turns @ 7.5mm Radius | — | ≤ 0.2 | dB |
| Macrobending Loss | @1300nm | — | — |
| 2 Turns @ 15mm Radius | — | ≤ 0.3 | dB |
| 2 Turns @ 7.5mm Radius | — | ≤ 0.5 | dB |