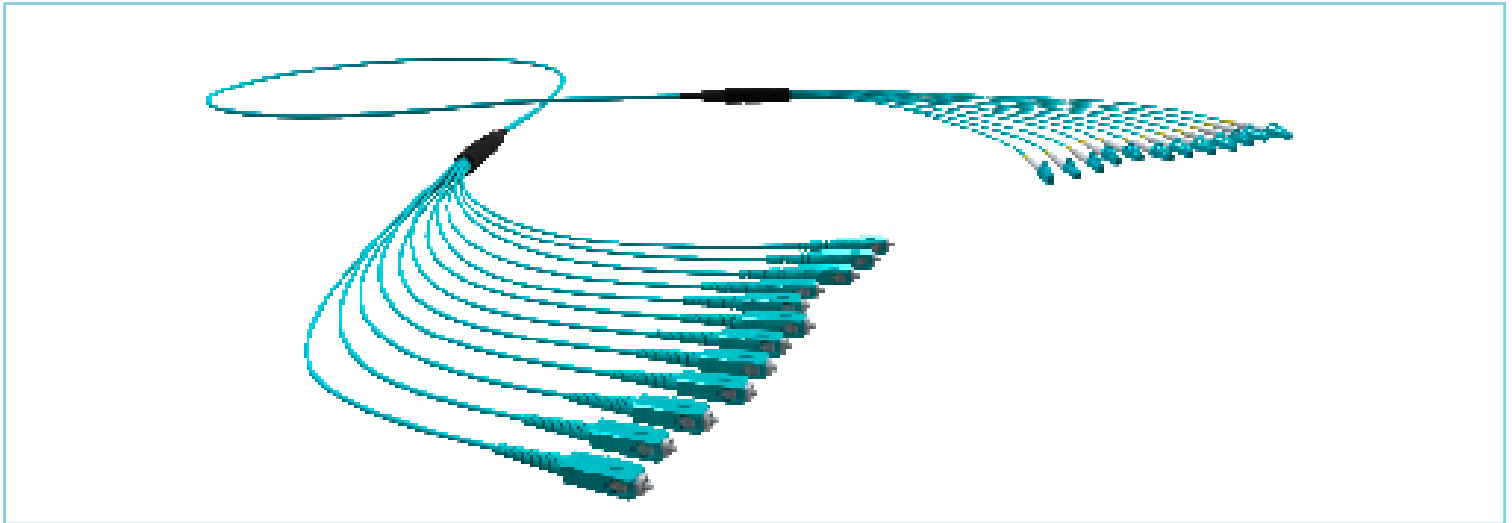


# Multifibre FirstLight Micro Cable Assemblies

V.3.4



## Description

The FirstLight Micro Cable assembly features a small, compact size of Micro Cable providing flexible though ruggedized product with the improved optical performance of Micro Cable structure. The standard 2mm patch lead style tails are ruggedized to secure the optical fibre in the non-protected environments outside the patch panel or Optical

Distribution Frames (ODFs). The network topology can be reduced and simplified by direct connection to active equipment bypassing wall boxes, ODFs of fibre patch panels, the end result is a greatly improved power budget and reduced fibre management space.

## Features

- ▶ Available in OM1, OM2, OM3, OM4 and G.652D (OS1/OS2), G.657A1 fibre types
- ▶ 12 and 24 cores standard (high core counts up to 144 fibers available)
- ▶ 2mm ruggedised tails (900µm tails available)
- ▶ LSZH, OFNP, OFNR cable jacket
- ▶ Available with all standard connectivity
- ▶ Factory terminated and tested

## Benefits

- ▶ Compact small dimension flexible Micro Cable applied
- ▶ Improved optical performance of loose tube structure
- ▶ Zero-U space application - direct connection to active equipment
- ▶ Secure FirstLight Prime breakout module
- ▶ Reduced weight and carriage costs

## Application

- ▶ Internal Short Optical Links
- ▶ Front Panel/Equipment Connections
- ▶ Data Centre Infrastructure
- ▶ Storage Area Network (SAN)

## Standards Compliance

- ▶ TIA/EIA-568-C.3 and ISO/IEC 11801
- ▶ ISO/IEC 60793 and ISO/IEC 60794
- ▶ ISO/IEC 61753, IEC 61754 and IEC 61755
- ▶ ISO/IEC 60332-1, IEC 61034-1/2 and IEC 61754-1/2
- ▶ Compliant to Directive 2002/95/EC (RoHS) and REACH SvHC

## Connector Performance

| CONNECTOR MATING | IL Average Standard | IL MAX Standard | IL Average Premium | IL MAX Premium | RETURN LOSS        |
|------------------|---------------------|-----------------|--------------------|----------------|--------------------|
| MM               | 0.15 dB             | 0.30 dB         | 0.08 dB            | 0.15 dB        | NA                 |
| SM               | 0.18dB              | 0.30dB          | 0.12dB             | 0.15dB         | >55/65dB (UPC/APC) |

## Cable Performance

| FibreType (ISO/IEC 11801)                                   | OS1/OS2             | OM1                | OM2                | OM3                | OM4                |
|---|---------------------|--------------------|--------------------|--------------------|--------------------|
| Attenuation Coefficient [dB/km]                             | ≤ 0.38 Max (1310nm) | ≤ 3.5 Max (850nm)  | ≤ 3.5 Max (850nm)  | ≤ 3.5 Max (850nm)  | ≤ 3.5 Max (850nm)  |
|   | ≤ 0.25 Max (1550nm) | ≤ 1.5 Max (1300nm) | ≤ 1.5 Max (1300nm) | ≤ 1.5 Max (1300nm) | ≤ 1.5 Max (1300nm) |
| Minimum Bandwidth: Overfilled Launch [Mhz-km]               | ≤ 0.34 Typ (1310nm) | ≤ 2.9 Typ (850nm)  | ≤ 2.7 Typ (850nm)  | ≤ 2.7 Typ (850nm)  | ≤ 2.7 Typ (850nm)  |
|   | ≤ 0.19 typ (1550nm) | ≤ 1.2 typ (1300nm) | ≤ 0.9 typ (1300nm) | ≤ 0.9 typ (1300nm) | ≤ 0.9 typ (1300nm) |
| Minimum Bandwidth: Laser Effective Modal Bandwidth [Mhz-km] | NA                  | ≥ 200 (850nm)      | ≥ 500 (850nm)      | ≥ 1500 (850nm)     | ≥ 3500 (850nm)     |
|   | NA                  | ≥ 500 (1300nm)     | ≥ 500 (1300nm)     | ≥ 500 (1300nm)     | ≥ 500 (1300nm)     |
| Minimum Bandwidth: Laser Effective Modal Bandwidth [Mhz-km] | NA                  | NA                 | NA                 | ≥ 2000 (850nm)     | ≥ 4700 (850nm)     |
|   | NA                  | NA                 | NA                 | ≥ 2000 (850nm)     | ≥ 4700 (850nm)     |

# Multifibre FirstLight Micro Core Assemblies

V.3.4

## Technical Specification

|                       |   |
|-----------------------|---|
| Element               | Characteristic  |
| Fibre                 | G.652D(OS1/OS2), G.657A1, OM1, OM2, OM3, OM4 (ISO/IEC 60793)  |
| Cable                 | Microcable- 12, 24 cores (ISO/IEC 60794)<br>MAX OD: Max OD 12 cores 4.5 ± 0.3mm / Max OD 24 cores Flat 4.5 x 7.4 ± 0.3mm<br>Jacket material: LSZH, OFNP, OFNR<br>Jacket colour: OS1/OS2 (Yellow), OM1/OM2 (Orange), OM3 (Aqua), OM4 (Aqua/Erika Violet) |
| Connectors            | LC, (IEC 61754-20), SC (IEC 61754-14), FC (IEC 61754-13), ST (IEC 61754-2)  |
| Packaging             | Length ≤100mtr: HD Bag Length >100mtr: Drum   |
| Operating Temperature | -20 ~ +60°C   |
| Storage Temperature   | -40 ~ +70°C   |

Typical tail length 1000mm

| No. | Description                            | Qty. |
|-----|--|------|
| 1   | 12 Fibre Micro Cable                   | 1    |
| 2   | Ruggedised Breakout Module             | 2    |
| 3   | 2mm Furcation Tubing                   | 24   |
| 4   | Connector Assembly End 1               | 12   |
| 5   | Connector Assembly End 2               | 12   |
| 6   | Channel Identification Marker (C-Clip) | 30   |
| 7   | Serial Number Label (Wrap Around)      | 1    |

**Length Tolerances:**  
 -0/+100mm (Length<0.5m)  
 -0/+150mm (0.5m<Length<5m)  
 -0/+200mm (5m<Length<20m)  
 ±1% (Length≥20m)

Typical tail length 1000mm

| No. | Description                             | Qty. |
|-----|---|------|
| 1   | 24 Fibre Flat Micro Cable               | 1    |
| 2   | Ruggedised Breakout Module              | 4    |
| 3   | 2mm Furcation Tubing                    | 48   |
| 4   | Connector Assembly End 1                | 24   |
| 5   | Connector Assembly End 2                | 24   |
| 6   | Channel Identification Marker (C-Clip)  | 78   |
| 7   | Sub Unit Identification Marker (C-Clip) | 4    |
| 8   | Serial Number Label (Wrap Around)       | 1    |
| 9   | Split Retainer                          | 2    |

**Length Tolerances:**  
 -0/+100mm (Length<0.5m)  
 -0/+150mm (0.5m<Length<5m)  
 -0/+200mm (5m<Length<20m)  
 ±1% (Length≥20m)

## Part Number Generator

|                    |                        |     |           |     |                         |     |           |     |                   |     |                           |    |                           |                    |      |
|--------------------|------------------------|-----|-----------|-----|-------------------------|-----|-----------|-----|-------------------|-----|---------------------------|----|---------------------------|--------------------|------|
| PRE                |                        |     |           |     |                         |     |           |     |                   |     |                           |    |                           |                    |      |
| <b>Fibre Count</b> | <b>Connector END A</b> |     |           |     | <b>Connector END B*</b> |     |           |     | <b>Fibre Type</b> |     | <b>Cable Construction</b> |    | <b>Cable length (Mtr)</b> | <b>Jacket Type</b> |      |
| 12                 | LC                     | LC  | FC        | FC  | LC                      | LC  | FC        | FC  | OS1/OS2           | 09  | Micro Cable               | MC | XX                        | LSZH               | -    |
| 24                 |                        |     |           |     |                         |     |           |     |                   |     |                           |    |                           | PL                 | OFNP |
| 48                 | LC/APC                 | LCA | FC/APC    | FCA | LC/APC                  | LCA | FC/APC    | FCA | OM1               | 62  |                           |    |                           | RI                 | OFNR |
| 72                 | SC                     | SC  | E2000     | E2  | SC                      | SC  | E2000     | E2  | OM2               | 50  |                           |    |                           |                    |      |
|                    | SC/APC                 | SCA | E2000/APC | E2A | SC/APC                  | SCA | E2000/APC | E2A | OM3               | OM3 |                           |    |                           |                    |      |
|                    | ST                     | ST  |           |     | ST                      | ST  |           |     | OM4               | OM4 |                           |    |                           |                    |      |
|                    |                        |     |           |     |                         |     |           |     | G.657/A1          | A1  |                           |    |                           |                    |      |

\* If end B differ from end A

## Example Part Number

**PRE24LCOM3MC20**

This part number refers to 24 cores OM3 LC to LC Micro multifibre cable assembly, 20 metres, LSZH Jacket in aqua.