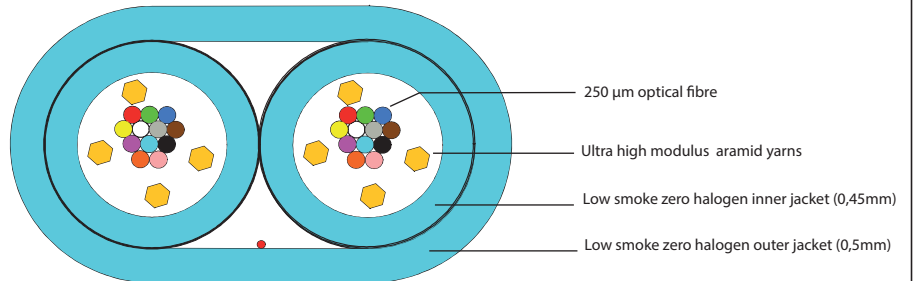


## Microcable OM3 FanOut - FanOut 12 LC Duplex Ultra 2mm LSZH

Cat. No(s): 0 324 11/12/13/14/15



### 1. DESCRIPTION

Preterm factory made with OM3 microcable 24 fibres into 2mm duplex ruggedized tails. Assembled with LC duplex Ultra connectors. The Legrand core, ultra and quantum connectivity performances are far superior than standard. They provide the following benefits for the user :

- Wider range of applications
- More flexibility in the design
- Energy saving on the active (transceivers).

### 2. APPLICATIONS

Convenient for internal applications. Ruggedized tails allow direct connection to the front of panel or active equipment.

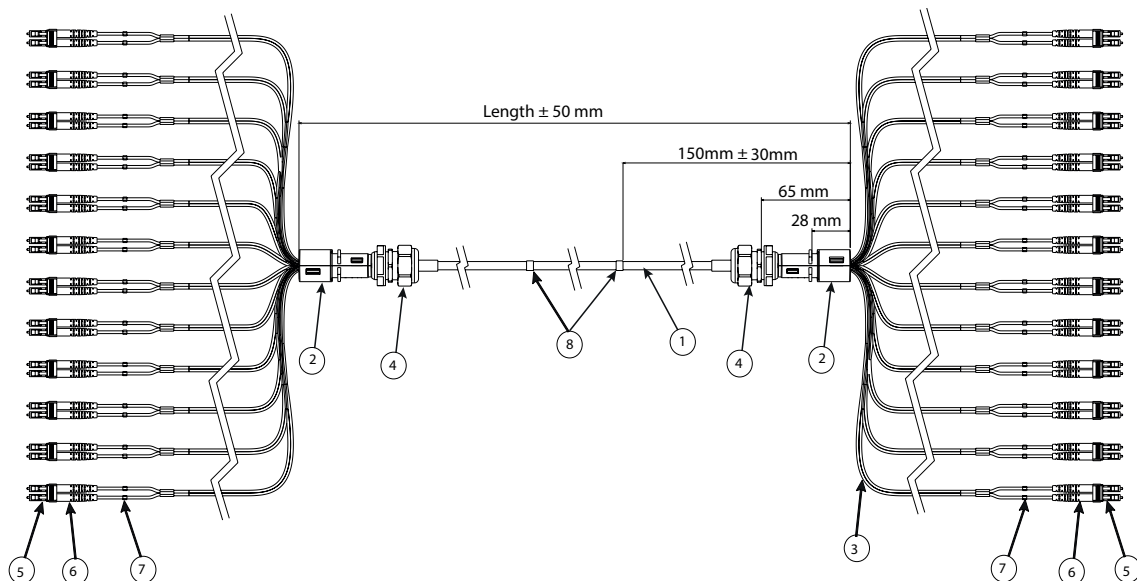
### 3. BREAKOUT MODULE

The breakout is the element providing secure transition between cable and tails. The cable, the furcation tubing and their strength members are securely attached to the breakout module, the 250 µm fibres are securely routed from cable into the tails.

### 4. FURCATION TUBING

Diameter : 2mm  
OM3 : colour Aqua

### 5. ILLUSTRATION



1	Microcable	4	Cable Gland	7	Identification clip
2	Breakout Module	5	Connector LC Duplex	8	Serial Number Label
3	2mm Ruggedized Duplex Tubing	6	Connector Boot		


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### 6. CONNECTOR LC ULTRA PERFORMANCE 2MM DUPLEX

#### 6.1 Construction

Connector Type		LC Multimode	
Configuration		Duplex	
Ferrule	Material	Zirconia ceramic	
	Concentricity	≤ 1 μm	
Polishing		PC	
Connector colour		Beige	
Boot	Colour	White	
	Size	2mm	



#### 6.2 Mechanical performance

Mechanical properties	Criteria with attenuation change <0,2dB	Standard
Mating durability	500 matings	IEC 61300-2-2
Vibration	10-55Hz, 0.75 amplitude	IEC 61300-2-1
Drop	Drop height 1.5m, 5 drops	IEC 61300-2-12
Cable retention	Magnitude 70N	IEC 61300-2-4
Cable torsion	1.5kg	IEC 61300-2-5
Operating temperature	-25°C to +70°C 12 cycles	IEC 61300-2-22
Cold	-25°C for 96 hours	IEC 61300-2-17
Dry heat	+70°C for 96 hours	IEC 61300-2-18

#### 6.3 Optical performance

Optical performance	Multimode	Standard
IL Max/Master	0.15dB	IEC 61300-3-4
Typ. IL/Master	0.08dB	IEC 61300-3-4
IL Max/Random *	0.20dB	IEC 61300-3-34
Typ. IL / Random *	0.10dB	IEC 61300-3-34
Return Loss	> 35dB	IEC 61300-3-6

\* Performance is guaranteed only with other components of the same Legrand range (Core, Ultra and Quantum). Mixing ranges or use of components of other brand may lead to a different performance of the system. The uncertainty value for field measurement with LSPM testing using a reference cord defined in ISO/IEC 14763-3 applies to field testing with proposed Legrand testing cords. Refer to the Fiber Optic Testing Guide for Legrand Solutions.

#### 6.4 Production quality control

- 3D endface geometry (interferometry): sampling quality control
- Optical performance: 100% factory tested.

#### 6.5 Standard

IEC 61754-20 ; ANSI/TIA 604-10  
ROHS and REACH Compliant

### 7. CABLE APPLICATION AND INSTALLATION

The intended application for this cable is internal connections inside data centres , where the cable is installed on "raceways" or other means where a robust cable is called for.

Following catalog numbers are available or ready to use, other configurations made to order :

Cat. No.	Designation	Dimension
0 324 11	12 LC Duplex - 12 LC Duplex Microcable OM3 ultra LSZH	10 m
0 324 12		20 m
0 324 13		30 m
0 324 14		40 m
0 324 15		50 m

## Microcable OM3 FanOut - FanOut 12 LC Duplex Ultra 2mm LSZH

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### 8. CABLE TECHNICAL SPECIFICATIONS

#### 8.1 Standards

EN 50173-5, IEC 60794-2-20, ISO/IEC 24764

#### 8.2 Flame resistance

LSHF-FR (FRNC) : IEC 60332-1-2 ; IEC 60332-2-2 ; IEC 60754-1 ; IEC 60754-2 ; IEC 61034

EN 50399 : Class Dca s2, d2, a1, Class Eca

#### 8.3 Construction

Fibre	24 primary coated fibres nominally 242 µm
Fibre colours	According to ANSI/TIA 598-C also in agreement with IEC 60304 : blue, orange, green, brown, grey, white, red, black, yellow, violet, pink and aqua
Strength member	Ultra high modulus Aramid yarns
Inner sheath	Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised, 0,45 mm
Reinforcement	Ultra high modulus Aramid yarns
Outer sheath	Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised, 0,5 mm
Sheath colours	Aqua, RAL 6027

#### 8.4 Physical properties

Property	IEC 60794-1-21/22 method	Value
Fibre count	-	24
Nominal dimensions	-	Inner : Ø 3.0 mm +0.1 mm -0.2 mm
		Outer : Ø 4.5 mm +0.2 mm -0.2 mm
Nominal weight (kg/km)	-	20
Tensile strength (dynamic)	E1	1000 N
Tensile strength (permanent)	E1	500 N
Compressive strength (crush)	E3	400 N
Impact	E4	5 Nm, R = 12.5 mm
Torsion	E07	Pass
Kink	E10	No Kink
Min. Bending radius	E11	R = 20 mm
Temperature range	F12	According to IEC 60794-2-50 F12 : -10°C to 70°C

### 9. FIBRES TECHNICAL SPECIFICATIONS

#### 9.1 General and application

This fibre is a laser-optimised, bend-insensitive graded-index multimode OM3 fibre suitable for transmission speeds of 10 Gb/s or higher. It has a 50 µm core diameter and a 125 µm cladding diameter. The fibre is optimised for maximum transmission properties at 850 nm ; but is also well suited for 1300 nm systems. This fibre is fully compliant to the OM3 specification.

The fibre supports 750 m link length for a 1000BASE-SX system and 300 m for 10GBASE-SX, as well as 70m for 25GBASE-SR and 50GBASE-SR.

The outstanding bending performance of this fibre supports future compact cable management.

#### 9.2 Standards and normes

IEC 60793-2-10 : type A1a.2

EN 60793-2-10 : type A1a.2

ANSI/TIA-492 AAAC

EN 50173 : Category OM3

ISO/IEC 11801 : Category OM3

IEEE 802.3 - 2002 incl. amendment 802.3ae - 2002

## Microcable OM3 FanOut - FanOut 12 LC Duplex Ultra 2mm LSZH

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### 9.3 Attenuation IEC 60793-1-40

Maximum attenuation value of cable at 850 nm	≤ 3.0 dB/km
Maximum attenuation value of cable at 1300 nm	≤ 1.0 dB/km
Attenuation limit according to IEC 60793-2-10, 850 nm	≤ 2.5 dB/km
Attenuation limit according to IEC 60793-2-10, 1300 nm	≤ 0.8 dB/km
Inhomogeneity of OTDR trace for any two 1000 meter fibre lengths	Max. 0.1 dB/km
Fibre bending loss R=7.5 mm 850/1300 nm	≤ 0.2 dB / ≤ 0.5 dB
Fibre bending loss R=15 mm 850/1300 nm	≤ 0.1 dB / ≤ 0.3 dB

### 9.4 Bandwidth - IEC 60793-1-41

Overfilled (OFL) modal bandwidth at 850 nm	≥ 1500 MHz.km
Overfilled (OFL) modal bandwidth at 1300 nm	≥ 500 MHz.km
Effective Modal Bandwidth (EMB) at 850 nm (Assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49)	≥ 2000 MHz.km

### 9.5 Group Index of Refraction IEC 60793-1-22

Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

### 9.6 Other properties

Attribute	Measurement method	Units	Limits
Core diameter	IEC/EN 60793-1-20	µm	50 ± 2.0
Cladding diameter	IEC/EN 60793-1-20	µm	125.0 ± 1.0
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core non-circularity	IEC/EN 60793-1-20	%	≤ 5
Core-cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 1.5
Primary coating diameter - uncolored	IEC/EN 60793-1-21	µm	242 ± 5
Primary coating diameter - colored	IEC/EN 60793-1-21	µm	250 ± 15
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 6
Proof stress level	IEC/EN 60793-1-30	Gpa	≥ 0.7 (≈1%)
Typical average strip force	IEC/EN 60793-1-32	N	1.7
Strip force (peak)	IEC/EN 60793-1-32	N	1.3 ≤ F <sub>peak strip</sub> ≤ 8.9
Numerical aperture	IEC/EN 60793-1-43	N	0.200 ± 0.015

## 10. PACKAGING

Catalogue number	0 324 11	0 324 12	0 324 13	0 325 14	0 325 15
Length (m)	10	20	30	40	50
Packaging	Carton reel				