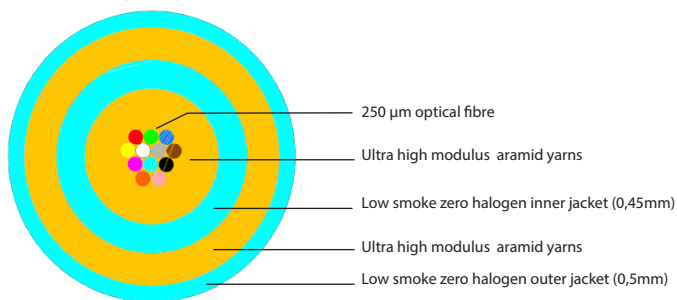


### Microcable OM3 MTP Ultra LSZH

Cat.No(s): 0 324 41/42/43/44/45



### 1. DESCRIPTION

MTP® Trunk multicore cable assemblies route multifibre MTP® connection. The design offers assemblies of 12 cores fiber cables using a compact and rugged microcore structure.

### 2. APPLICATIONS

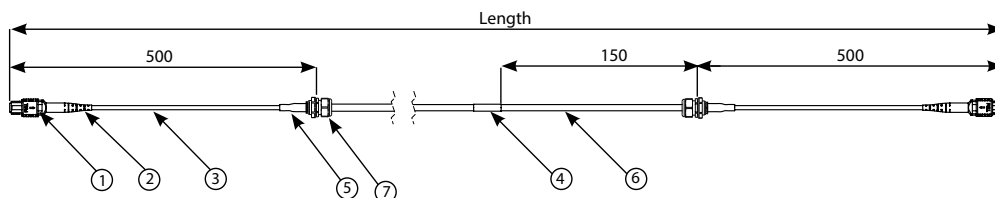
The Legrand core, ultra and quantum connectivity performances are far superior than standard. They provide the following benefits for the user :

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

MTP® Trunk assemblies facilitate rapid deployment of high density backbone cabling in Data Center and other high fiber environments. They are used to interconnect cassettes, panels or ruggedised MTP® fan outs, spanning MDA, HDA and EDA zones.

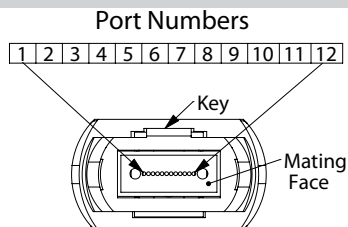
They are compatible with SAN, Fibre Channel, Parallel Optics and Infiniband applications.

### 3. ILLUSTRATION



1- MTP® 12 cores Female Connector	5- Retainer Sleeve
2- MTP® Connector Boot	6- Microcable 12 fibres
3- 12 fibres MicroCable Inner Sheat	7- Gland PG9
4- Serial Number Label	

### 4. POLARITY



Polarity A	End A Port Number	1	2	3	4	5	6	7	8	9	10	11	12
		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	End A Port Number	1	2	3	4	5	6	7	8	9	10	11	12


Other polarity on demand

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### 5. CONNECTOR MTP ULTRA 12 FIBRES

#### 5.1 Construction

Connector type	MPO type - MTP® brand Multimode	
Configuration	12 fibres	
Gender	Female	
Ferrule Material	Polyphenylene Sulfide (PPS)	
Polishing	Flat protruded flock cloth polishing	
Connector colour	Aqua	
Boot Size	Round - 3mm	

#### 5.2 Mechanical performance

Mechanical properties	Criteria	Loss increase	Standard
Mating durability	1000 cycles	During testing : not required	ANSI/TIA-455-21A
Vibration	10-55Hz	After testing : < 0.2 dB average	ANSI/TIA-455-11 (I-C)
Impact	1.5m, 8 times	< 0.3 dB single channel	ANSI/TIA-455-2C (Method A)
Operating temperature	-40°C to 80°C, 42 cycles	During testing : < 0.2 dB average	ANSI/TIA-455-3A (C-3)
Humidity	95% at 60°C, 336 hours	< 0.3 dB single channel	ANSI/TIA-455-5B (C) (Method A)
Thermal aging	85°C, 336 hours	After testing : < 0.1 dB average	ANSI/TIA-455-4B
		< 0.2 dB single channel	
Cable retention	222 N (mechanical crimp strength)		

#### 5.3 Optical performance

		Ultra Performance Multimode
IL Max./Master	0.35 dB	IEC 61300-3-4 and ANSI/TIA-455-171-D1 as tested with proposed encircled flux launch condition on 50 µm fiber and 850 nm per IEC 61280-4-1)
IL Typ./Master	0.10 dB	
Return Loss	> 20 dB	IEC 61300-3-6 and ANSI/TIA-455-107A
IL Typ./Random*	0.35 dB	IEC 61300-3-34

\* 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.

#### 5.4 Production quality control

Optical performance: 100% factory products controled.

3D endface geometry (interferometry): 100% factory tested.

#### 5.5 Standard

IEC 61754-7 ; ANSI/TIA 604-5 - Type MPO ; ANSI/TIA 568-C ; ANSI/TIA-455B ; Telcordia GR-1435-CORE  
ROHS and REACH Compliant

### 6. 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.

Fits multi fibre connectors such as the MPO® and MTP® connectors according to IEC 61754-7-1.

Following catalog numbers are available or ready to use :

Cat. No.	Designation	Dimension
0 324 41	MTP - MTP microcable OM3 Ultra LSZH	10 m
0 324 42		20 m
0 324 43		30 m
0 324 44		40 m
0 324 45		50 m

Legrand On Demand Department can offer on demand components :

- Other length
- Other performance
- Other gender or polarity
- MTP Pro connectors
- Other cable type
- Pulling and other options

## Microcable OM3 MTP Ultra LSZH

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### 7. CABLE TECHNICAL SPECIFICATIONS

#### 7.1 Standards

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

#### 7.2 Flame resistance

LSHF-FR (FRNC) : IEC 60332-1-2 ; IEC 60754-1 ; IEC 60754-2 ; IEC 61034  
EN 50399 : Class Dca s2, d2, a1, Class Eca

#### 7.3 Construction

Fibre	12 primary coated fibres nominally 242 µm
Fibre colours	According to TIA/EIA 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

#### 7.4 Physical properties

Property	IEC 60794-1-21/22 method	Value
Fibre count	-	12
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	Accordind to IEC 60794-2-50 F12 : -10°C to 70°C

### 8. FIBRES TECHNICAL SPECIFICATIONS

#### 8.1 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 550 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.

#### 8.2 Standards and normes

IEC 60793-2-10 : type A1a.2  
EN 60793-2-10 : type A1a.2  
ANSI/TIA-492 AAAC  
EN 50173-1 Category OM3  
ISO/IEC 11801-1 Category OM3

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### 8.3 Attenuation IEC 60793-1-40

Maximum attenuation value of cabled fibre at 850 nm	≤ 3.0 dB/km
Maximum attenuation value of cabled fibre 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

### 8.4 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

### 8.5 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

### 8.6 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

## 9. PACKAGING

Catalogue number	0 324 41	0 324 42	0 324 43	0 325 44	0 325 45
Length (m)	10	20	30	40	50
Packaging	Carton reel				