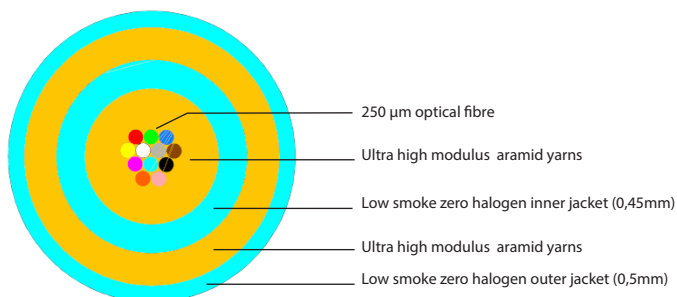


## Microcable OM3 MTP Ultra LSZH

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

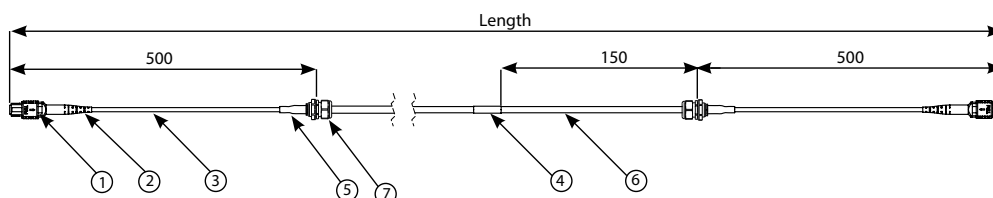
The Legrand core, ultra and quantum connectivity performances are far superior than standard. They provide the following benefits for the user :

- 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.

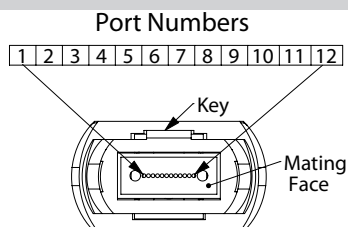
They are compatible with SAN, Fibre Channel, Parallel Optics and Infiniband applications.

### 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 suitable for systems operating at 850nm and 1300nm wavelengths. This fibre is fully compliant to the OM3 specification.

This fiber incorporates specific technology to deliver enhanced macro-bending performances. Multimode fibres are produced with Plasma Chemical Vapour Deposition (PCVD) process.

#### 8.2 Standards and normes

EC 60793-2-10 : type A1a.2  
TIA/EIA 492 AAAC  
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
Bare fiber attenuation according to IEC 60793-2-10, 850 nm	≤ 2.5 dB/km
Bare fiber attenuation according to IEC 60793-2-10, 1300 nm	≤ 0.7 dB/km
Bare fiber attenuation difference between 1380nm and 1300nm	≤ 3.0 dB/km
Point discontinuity at 850nm and 1300nm	≤ 0.1 dB/km
Fibre bending loss R=7.5 mm, 2 turns at 850/1300 nm	≤ 0.2 dB / ≤ 0.5 dB
Fibre bending loss R=15 mm, 2 turns at 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	≥ 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 ± 2.5
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
Primary coating diameter - uncolored	IEC/EN 60793-1-21	µm	242 ± 7
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	≤ 10
Proof stress level	IEC/EN 60793-1-30	Gpa	≥ 0.7 (≈1%)
Average strip force	IEC/EN 60793-1-32	N	$1 \leq F_{av. strip} \leq 3$
Strip force (peak)	IEC/EN 60793-1-32	N	$1.3 \leq F_{peak strip} \leq 8.9$
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				