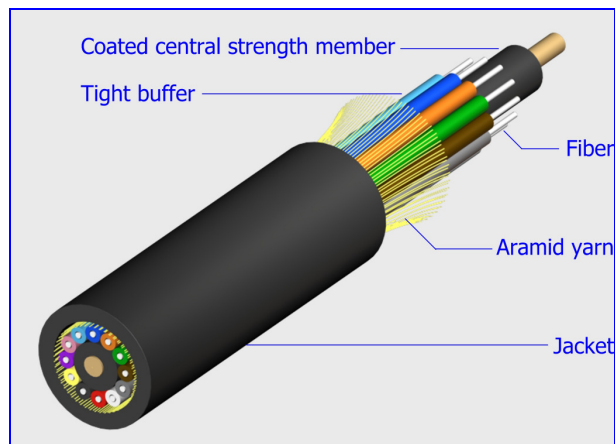


MT Series Tight Buffer Distribution Fiberoptic Cable



APPLICATIONS

- Short and medium distance, indoor and protected environments
- As a riser, plenum, or general purpose cable
- Interconnection of distribution boxes, of the distribution boxes and customer equipment, and between floors

CABLE DESCRIPTION

The cable contains 4 to 72 fibers individually buffered to 0.9 mm in a tight or semi-tight construction and coded. The cable structure depends on the number of fibers:

- The 4-to-12-fiber cables contain individual fibers without sub-units
- In 16-to-72-fiber cables the fibers are grouped in sub-units.

Fibers/sub-unit configurations are as follows:

No. of Fibers	No. of Sub-Units	No of Fibers/Unit	Central Member
4-8	--	--	No
12	--	--	Yes
16	4	4	No
24	4	6	No
36	6	6	Yes
72	12	6	No

In the 4-to-12-fiber cables, the individual fibers are stranded and protected by aramid yarn and a PVC or halogen-free flame retardant jacket. In the 16-to-72-fiber cables the fibers are grouped into sub-units which are laid helically along the cable axis. Each sub-unit contains 4 to 6 fibers, aramid yarn and a PVC or halogen-free flame-retardant sheath. The 72-fiber cable consists of twelve sub-

units, nine of them are stranded around a central element made of 3 sub-units.

A wide range of jacket options is available: PVC, halogen-free flame-retardant material, corrugated anti-rodent steel armoring, fiberglass, aramid yarn, and more. The steel armored option is available in conjunction with polyethylene or HFFR jacket. A ripcord is located under the jacket to facilitate jacket removal.

BENEFITS

- Cost efficient multi-fiber cable
- Compact and flexible construction especially suitable for indoor installations
- Available in a UL listed Riser rated construction

MECHANICAL PROPERTIES

Typical properties are given in the Mechanical Properties Table. Actual properties depend on the cable construction.

OPTICAL PROPERTIES

See the Optical Properties Table.

MATERIALS

See information about the materials used in the Teldor Fiberoptic Cables.

STANDARDS

- Cables tested according to TIA/EIA-455 and IEC-60794-1-2. For details see Test Methods Table.
- Cables ordered with HFFR jackets meet IEC-60332-1 standard.
- On request cables meeting the IEC-60332-3 can be supplied.
- Available in constructions meeting UL 1666 (Riser rating)

MT Series Tight Buffer Distribution Fiberoptic Cable

MARKING

Cables are marked as follows

Teldor - Fiberoptic Cable - Cable Code - RoHS - Length in Meters
or per customer request.

CABLE DIMENSIONS AND WEIGHTS

See list of most frequently ordered cables next page.

ORDERING

You can find the desired cable in the cable list next page or compose your own cable from the Cable Code Definition and Selection Guide.

Standard cable lengths vary with cable diameter. Other constructions, color codes and materials may be available. Please contact the Teldor Marketing Department.

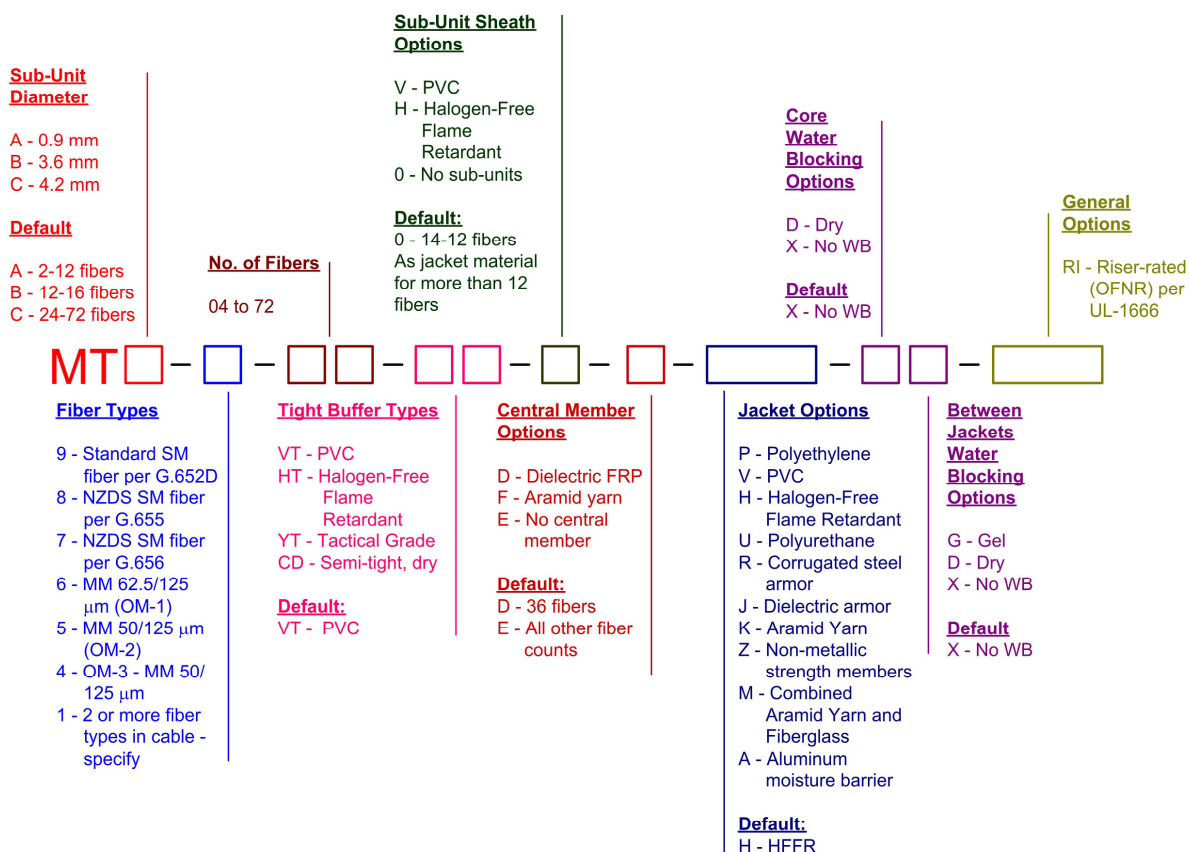
MT-Series Fiberoptic Cables Typical Mechanical Properties

Max. Pulling Load	1000 N or the equivalent of the cable weight per km, whichever is higher
Max. Operating Load	60% of the Max. Pulling Load
Max. Compressive Load	2000 N
Repeated Impact	2.9 N.m (J) 3 x 2 impacts
Minimum Bending Radius for Installation	20 times the cable O.D.
Minimum Long Term Bending Radius	20 times the cable O.D. for armored cables, 10 times the cable O.D. for unarmored cables
Twist (Torsion) — Length	180°x10 times , 125 times the cable O.D.
Cyclic Flexing	25 cycles for armored cables 300 cycles for unarmored cables
Operating Temperature Range	-10°C to +50°C
Storage Temperature Range	-20°C to +70°C

Most Frequently Ordered MT Cables Part Numbers, Codes, Dimensions and Weights

Part Number	Cable code	Dimensions (mm)	Weight (kg/km)
MTA Series			
F60040405B	MTA-6-04VT-E-JH-D	6.0	32
F60040401B	MTA-6-04VT-E-KH-D	5.0	25
F60060605B	MTA-6-06VT-E-KV-D	5.5	25
F60121202B	MTA-6-12VT-D-KVRP-DD	12.0	145
F60121203B	MTA-6-12VT-E-JH-D	7.5	50
F60060614B	MTA-6-06HT-E-KH-D	5.5	27
F60121204B	MTA-6-12HT-E-KH-D	6.0	35
MTC Series			
F60240404B	MTC-6-04X06VT\V-E-KH-X	13.5	145
F50240405B	MTC-5-04X06VT\H-E-KH	13.5	150
F90721200B	MTC-9-12X06VT\V-E-KV	19.0	305
F60240403B	MTC-6-04X06YT\H-E-KH-D	13.5	150
F50240403B	MTC-5-04X06YT\H-E-KH-D	13.5	150

MT Series Cable Code Definition and Selection Guide



Remarks

- The default jacket colors are:

	PE	PVC	HFFR
SM Fibers	Black	Yellow	Yellow
Standard MM Fibers	Black	Orange	Orange
OM-3 50/125 Fibers	Gold	Gold	Gold

Other jacket colors available please specify.

SM Optical Fiber Specifications

Single Mode Fibers - Standard Specifications⁽¹⁾

Parameter	Standard per ITU-T G.652D IEC 60793-2-50 B1.3	NZDS per ITU-T G.655 IEC 60793-2-50 B4	Bend-Insensitive ITU-T G.657A IEC 60793-2-50 B6_a	Units
Teldor Fiber Code	9	8	I	
Attenuation, Loose Tube Cables: @ 1310 nm @ 1550 nm @ 1625 nm	≤ 0.35 ≤ 0.22 ≤ 0.25	≤ 0.22 ≤ 0.26	≤ 0.35 ≤ 0.22 ≤ 0.25	dB/km
Attenuation, Tight Buffer Cables: @ 1310 nm @ 1550 nm	≤ 0.40 ≤ 0.30	- -	≤ 0.40 ≤ 0.30	dB/km
Dispersion: between 1285 and 1330 nm (O Band)	≤ 3.5	NA	≤ 3.5	ps/ (nm*km)
between 1460 and 1530 nm (S Band)	-	(2)	-	
between 1530 and 1565 nm (C Band)	≤ 18	2 – 6 ⁽³⁾	≤ 18	
between 1565 and 1625 nm (L Band)	≤ 22	4.5 – 11.2 ⁽³⁾	≤ 22	
Zero Dispersion Wavelength	1312±12	< 1520	1312±12	nm
Mode Field Diameter @ 1310 nm	9.2±0.4	NA	8.9±0.4	μm
@ 1550 nm	10.4±0.6	9.6±0.6	9.9±0.5	
Cable Cut-Off Wavelength	≤1260	≤1480	≤1260	nm
PMD (Individual fiber)	≤ 0.2	≤ 0.1	≤ 0.2	ps/km ^{1/2}
Cladding Diameter	125±0.7	125±0.7	125±0.7	μm
Core/Cladding Concentricity Error	≤ 0.5	≤ 0.5	≤ 0.5	μm
Cladding Non-Circularity	≤1.0	≤1.0	≤1.0	%
Coating Diameter (un-dyed)	245±5	245±5	245±5	μm
Proof-Test Level	0.7	0.7	0.7	GN/m ²
Induced Macrobend @ 1550nm – 1 turn around a 7.5 mm mandrel			0.5	dB

1. For other fiber types, consult the Teldor Sales Department
2. Non-standard range. Dispersion is typically negative. Consult Teldor for details
3. Tighter dispersion tolerances may be available, consult Teldor for details

MM Optical Fiber Specifications

Multi Mode Fibers - Standard Specifications ⁽¹⁾

Parameter	50/125 μ m			62.5/125 μ m	Units
Teldor Fiber Code	5	4	3	6	
ISO/IEC 11801 Performance Category	OM2 ⁽²⁾	OM3 ⁽³⁾	OM4 ⁽⁴⁾	OM1	
Attenuation, Loose Tube Cables:					
@ 850 nm	≤ 2.8			≤ 3.2	dB/km
@ 1300 nm	≤ 0.9			≤ 1.0	
Attenuation, Tight Buffer and Semi-Tight Cables:					
@ 850 nm	≤ 3.0			≤ 3.5	dB/km
@ 1300 nm	≤ 1.0			≤ 1.0	
OFL Bandwidth ⁽⁵⁾ @ 850 nm	≥ 500 ⁽⁶⁾	≥ 1500	≥ 3500	≥ 200	MHz•km
@ 1300 nm	≥ 800 ⁽⁶⁾	≥ 500	≥ 500	≥ 600	
Effective Modal Bandwidth@ 850nm		≥ 2000	≥ 4700 ⁽⁷⁾		
Numerical Aperture	0.20 \pm 0.015			0.275 \pm 0.015	
Core Diameter	50 \pm 2.5			62.5 \pm 3	μ m
Cladding Diameter	125 \pm 1			125 \pm 2	μ m
Core Non Circularity	≤ 4			≤ 5	%
Cladding Non-Circularity	≤ 0.7			≤ 1	%
Core/Cladding Offset	≤ 1.5			≤ 1.5	μ m
Coating Diameter (Un-dyed)	245 \pm 10			245 \pm 10	μ m
Proof-Test Level	0.7			0.7	GN/m ²

1. For other fiber specification, consult the Teldor Sales Department

2. As per IEC 60793-2-10 type A1a.1 and TIA 492AAAB

3. As per IEC 60793-2-10 type A1a.2 and TIA 492AAAC, link length 100 m. per 40/100 GbE (IEEE 802.3ba)

4. As per IEC 60793-2-10 type A1a.3 and TIA 492AAAD, link length 150 m. per 40/100 GbE (IEEE 802.3ba)

5. As per IEC 60794-1-41 and TIA/EIA 455-204

6. A 600/1200 MHz.km fiber is also available as a standard.

7. As per TIA 492AAAD