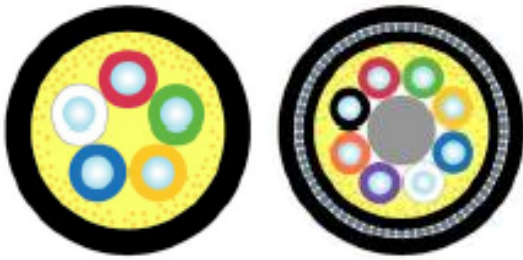




FiberOptic Cables / Multi-tight Distribution Cables



Short and medium distance, indoor and protected environments

As a riser, or general purpose cable

Interconnection of distribution boxes, of the distribution boxes and customer equipment, and between floors

The cable contains 4 to 288 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:

In the 4-to-24-fiber cables (MTA series), the individual fibers are stranded and protected by aramid yarns and a PVC or HFFR jacket.

When more than 24 fibers are required sub-units are employed which are laid helically along the cable axis. Each sub-unit contains 4 to 12 fibers, aramid yarns and a PVC or halogen-free flame-retardant sheath. The

sub-units are then stranded around a central element made either of additional sub-units or a central filler

MTA - up to 24 fibers without sub-units

MTB - 26-96 fibers in 4 fiber sub-units

MTC - 98-144 fibers in 6 fiber sub-units

MTD - 146-192 fibers in 8 fiber sub-units

MTE - 194-288 fibers in 12 fiber sub-units

A wide range of jacket and armoring options is available: PVC, HFFR, corrugated steel, fiberglass, aramid yarn, and more. The steel armored option is available in conjunction with a PE or HFFR jacket. A ripcord is located under the jacket to facilitate removal.

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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
- Cables meet or exceed Telcordia (Bellcore) requirements for indoor plant cables (GR-409)
- On request cables meeting the IEC-60332-3 can be supplied
- Available in constructions meeting UL 1666 (Riser rating)

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Specifications of Standard Singlemode Optical Fibers⁽¹⁾

Parameter	Standard per	NZDS per	Bend-Insensitive	Bend-Insensitive	Units
	ITU-T G.652D IEC 60793-2-50 B1.3 Max./Typical	ITU-T G.655 IEC 60793-2-50 B4 Max./Typical	ITU-T G.657A.1 IEC 60793-2-50 B6_a1 Max./Typical	ITU-T G.657A.2 IEC 60793-2-50 B6_a2 Max./Typical	
Teldor Fiber Code	9	8	A	7	
Attenuation ^(4,5,6) , Loose Tube Cables:					dB/km
@ 1310 nm	0.35 / 0.34	N/A	0.35 / 0.34	0.35 / 0.34	
@ 1550 nm	0.23 / 0.20	0.23 / 0.20	0.23 / 0.20	0.23 / 0.20	
@ 1625 nm	0.25 / 0.22	0.26 / 0.23	0.25 / 0.22	0.25 / 0.22	
Attenuation ⁽⁴⁾ , Tight Buffered Cables:					dB/km
@ 1310 nm	≤ 0.40	-	≤ 0.40	≤ 0.40	
@ 1550 nm	≤ 0.30	-	≤ 0.30	≤ 0.30	
Dispersion: between 1285 - 1330 nm	≤ 3.5	NA	≤ 3.5	≤ 3.5	ps/ (nm*km)
between 1460 - 1530 nm (S Band)	-	(2)	-	-	
between 1530 - 1565 nm (C Band)	≤ 18	2 – 6 ⁽³⁾	≤ 18	≤ 18	
between 1565 - 1625 nm (L Band)	≤ 22	4.5 – 11.2 ⁽³⁾	≤ 22	≤ 22	
Zero Dispersion Wavelength	1312 ± 12	< 1520	1312 ± 12	1312 ± 12	nm
Mode Field Diameter @ 1310 nm	9.2 ± 0.4	NA	New Cell	8.6 ± 0.4	μm
@ 1550 nm	10.4 ± 0.6	9.6 ± 0.6	9.8 ± 0.5	9.6 ± 0.5	
Cable Cut-Off Wavelength	≤ 1260	≤ 1480	≤ 1260	≤ 1260	nm
PMD (Individual fiber)	≤ 0.2	≤ 0.1	≤ 0.2	≤ 0.2	ps/km ^{1/2}
Cladding Diameter	125 ± 0.7	125 ± 0.7	125 ± 0.7	125 ± 0.7	μm
Core/Cladding Concentricity Error	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	μm
Cladding Non-Circularity	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	%
Coating Diameter (un-colored)	245 ± 5	245 ± 5	245 ± 5	245 ± 5	μm
Proof-Test Level	0.7	0.7	0.7	0.7	GN/m ²
Induced Macrobend @ 1550nm – 1 turn around a 7.5 mm mandrel					
Mandrel Radius			10	7.5	mm
Max. @ 1550 nm			0.5	0.4	dB
Max. @ 1625 nm			1.5	0.8	dB

Specifications of Standard Multi-mode Optical Fibers⁽¹⁾

Parameter	50/125 μm			62.5/125 μm	Units
	5	4	3	6	
Teldor Fiber Code	5	4	3	6	
ISO/IEC 11801 Performance Category	OM2 ⁽²⁾	OM3 ⁽³⁾	OM4 ⁽⁴⁾	OM1	
Attenuation ⁽⁶⁾ , Loose Tube Cables:					dB/km
@ 850 nm	≤ 2.8			≤3.2	
@ 1300 nm	≤0.9			≤1.0	
Attenuation ⁽⁶⁾ , Tight Buffer and Semi-Tight Cables:					dB/km
@ 850 nm	≤3.0			≤3.5	
@ 1300 nm	≤1.0			≤1.0	
OFL Bandwidth ⁽⁵⁾ @ 850 nm	≥ 500 ⁽⁷⁾	≥1500	≥3500	≥200	MHz?km
@ 1300 nm	≥800 ⁽⁷⁾	≥500	≥500	≥600	
Effective Modal Bandwidth@ 850nm	N/A	≥2000	≥4700 ⁽⁸⁾	N/A	
Supported Ethernet Link Lengths (max.)					
1 GbE⁽⁹⁾					
@ 850 nm (1000BASE-SX)	550	970 ⁽¹²⁾	1040 ⁽¹²⁾	220	
@ 1300 nm (1000BASE-LX)	950 ⁽¹²⁾	550 ⁽¹²⁾	600 ⁽¹²⁾	550	
10 GbE⁽¹⁰⁾					
@ 850 nm (10GBASE-SR)	82	300	550	33	
@ 1300 nm (10GBASE-LXR)	450 ⁽¹³⁾	300	300	300	
40/100 GbE⁽¹¹⁾					
@ 850 nm (40/100 GBASE-SR4/10)	N/A	100	150	N/A	
Numerical Aperture	0.20 ± 0.015			0.275 ± 0.015	
Core Diameter	50 ± 2.5			62.5 ± 3	μm
Cladding Diameter	125 ± 1			125 ± 2	μm
Core Non Circularity	≤4			≤5	%
Cladding Non-Circularity	≤0.7			≤1	%
Core/Cladding Offset	≤1.5			≤1.5	μm
Coating Diameter (Un-colored)	245 ± 10			245 ± 10	μm
Proof-Test Level	0.7			0.7	GN/m2



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