

Distribution Tight Buffer Singlemode Cable

Distribution Cable 2-24 Fibers, Indoor/Outdoor, Non-Jelly

Infinique’s Distribution Tight Buffer Cables are suitable for indoor and outdoor applications. They are designed not just to save space and time but also to further simplify fiber management by eliminating the need for splicing the cables before entering buildings.

Being extremely flexible and metal-free, these cables are ideal for low fiber count applications such as duct, and riser indoor spaces. For singlemode cables, choice of either ITU-T G.652D or ITU-T G.657 bend insensitive fiber is available.

To ensure water ingress, water blocking tape is applied and aramid yarn is longitudinally applied around the tight buffered fibers and then is enclosed in a protective outer jacket. Rip Cords are applied longitudinally to enable easy stripping of the cable during end preparation for testing and installation. For speedy installation and clear identification, the buffered fibers are distribution cable color coded in

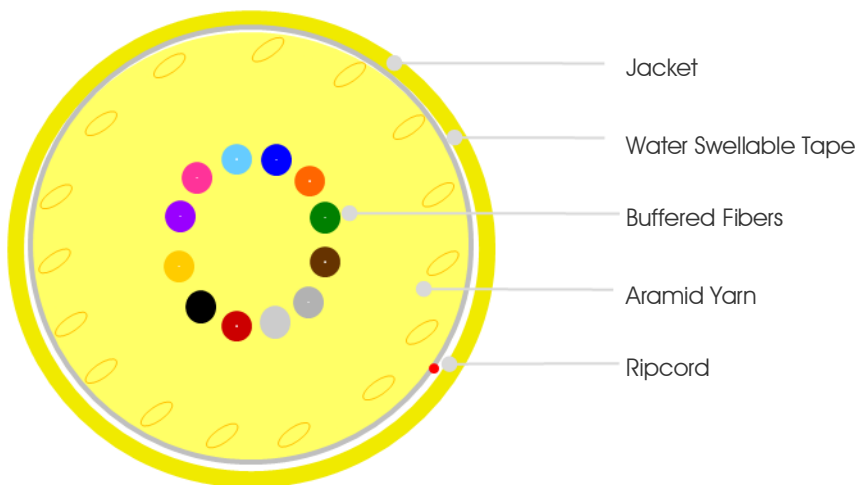
accordance with Telecordia standards. The outer jacket of the singlemode cable is yellow and the cable is clearly meter marked with durable black ink. The cable configuration can range from 2 to 24 fibers, and is suitable for Gigabit Ethernet and 10 Gigabit Ethernet Applications.

Both ends of the cable are capped to avoid water ingress and are accessible for testing. Cable is packed in wooden drums with angle rod support to take the cable load. All cable drums are accompanied with individual cable test report.

Features and Benefits

- **Reliable Performance**
Gigabit Ethernet and 10 Gigabit Ethernet Performance
- **Rugged Construction**
UL Certified, Aramid Yarn for high tensile strength, extremely flexible, metal free, greater crush resistance, and water ingress protection
- **Clear Identification**
Color coded Tubes, Fiber and Outer Jacket
- **Speedy Installation**
Simple fiber management and Ripcords for easy stripping
- **Challenging Applications**
Duct, Riser and other challenging conditions

CABLE CONSTRUCTION



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OPTICAL SPECIFICATIONS

Fiber Type		Singlemode	Singlemode	Singlemode
IEC 11801 classification		OS1/OS2	OS1/OS2	OS1/OS2
ITU-T type		G.652D	G.657A	G.655
Attenuation (dB/km max)	1310 nm	≤ 0.32	≤ 0.35	≤ 0.4
	1550 nm	≤ 0.18	≤ 0.20	≤ 0.19
	1625 nm	≤ 0.20	≤ 0.21	≤ 0.21
Bending Loss 1 turn Radius 20× Cable OD	1310 nm	≤ 0.10	≤ 0.10	≤ 0.10
	1550 nm	≤ 0.25	≤ 0.25	≤ 0.25
	1625 nm	≤ 0.30	≤ 0.30	≤ 0.30
Chromatic Dispersion (ps/(nm*km))	1285-1330 nm	≤ 3.5	≤ 3.0	≤ 3.0
	1550 nm	≤ 18.0	≤ 18	4.5-6.0
	1625 nm	≤ 22.0	≤ 22	5.8-11.2
Proof Stress (KPSI)		≥ 100	≥ 100	≥ 100
Zero Dispersion Wavelength (nm)		1304-1324	1302-1324	
Zero Dispersion Slope (ps/(nm ² *km))		≤ 0.092	≤ 0.092	

GEOMETRICAL SPECIFICATIONS

Core Diameter (µm)		9.2±0.4	9.2±0.4	9.2±0.4
Cladding Diameter (µm)		125 ±1.0	125 ±1.0	125 ±1.0
Coating Diameter (µm)		245 ±7	245 ±7	245 ±7

APPLICABLE DISTANCES

Gigabit Ethernet Distance (m)	Sx (850 nm)	5,000	5,000	
	Lx (1310 nm)	-	-	
10 Gigabit Ethernet Distance (m)	Sx (850 nm)	10,000	10,000	
	Lx (1310 nm)	40,000	40,000	

These are the applicable distances at given frequencies, distances increase for lower frequencies.

STANDARDS

Performance	TIA 568, ISO/IEC 11801, EN 50173-X, ICEA-696 Compliant, RUS PE-90 Compliant, GR-20 Compliant Meet or exceeds IEE 802.3 Ethernet (including 10 Gigabit Ethernet), ATM, Fibre Channel, FDDI
Flame Retardant	IEC 60332-1
Fire Retardant	IEC 60332-3
Fire Resistant	IEC 60331-25
Fiber Geometry	IEC 60793-1-20: 2014 Optical Fibers Part 1-20
Attenuation	IEC 60793-1-40: 2001 Optical Fibers Part 1-40
Chromatic Dispersion	IEC 60793-1-42: 2013 Optical Fibers Part 1-42
Cut-off Wavelength	IEC 60793-1-44: 2011 Optical Fibers Part 1-44
Mode Field Diameter	IEC 60793-1-45: 2001 Optical Fibers Part 1-45
Mechanical Tests	IEC 60794-1-21:2015 Optical Fibers Part 1-21
Environmental Tests	IEC 60794-7-22: 2017 Optical Fibers Part 1-22
Color Coding	IEC 60304 Telcordia-Bellcore, TIA-598C Standards

TEST DATA

Test	Standard	Specified Value	Acceptance Criteria
Tension	IEC 60794-1-2-E1	Mandrel Diameter: 30 x Cable OD Length under tension: ≥ 50 m Applied tensile load: 1500 N Duration: 5 minutes	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Crush Performance	IEC 60794-1-2-E3	Applied load: 500N/85mm Duration of loading: 5 minutes	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
		Height of impact: 0.5m Drop hammer mass: 0.5kg No. of impacts: 1	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Impact Resistance	IEC 60794-1-2-E4		
Bending Radius	IEC 60794-1-2-E11	Length: ≥ 10m Mandrel : 10 × Cable OD	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Repeated Bending	IEC 60794-1-2-E6	Sheave Diameter: 15 x Cable OD Applied Load : 0.5kg No. of Flexing Cycles: 5 Cycles Flexing Speed: 2 Seconds/Cycle	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Torsion Test	IEC 60794-1-E7	Length: 2 meters Load: 5 Kg No. of Flexing Cycles: 5 Cycles Twist Angle: ±180° , Applied Load: 0.5kg	PASS Attenuation change ≤ 0.05 dB /km The jacket has no cracking and no breakage of optical fiber
Temperature Performance	IEC 60794-1-2-F1	Temperature cycling schedule 25°C→ -40°C→ 70°C→ -40°C→ 70°C→ 25°C Soak time at each temperature: 8hours	PASS Attenuation change ≤ 0.05 dB /km
Water Penetration	IEC 60794-1-2-F5B	Length: 1 meter Water Height: 1m Test Time: 24 hrs	PASS No water leakage through the open cable end.

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GENERAL SPECIFICATIONS

Environment	Indoor, Outdoor
Applications	Aerial, Duct, Riser, UV Resistant, Flame Retardant, Fire Rated
Cable Type	Tight Buffer Distribution Cable

CABLE CONSTRUCTION

Cable Strength Members	Aramid Yarn
Optical Fibers	UV Colored High Grade Silica Glass Surrounded by Acrylate Coating
Fiber Count	2 - 24
Buffered Fibers Color	1-Blue, 2-Orange, 3-Green, 4-Brown, 5-Grey, 6-White, 7-Red, 8-Black, 9-Yellow, 10-Violet, 11-Pink, 12-Aqua, 13-Blue with Black Tracker, 14-Orange with Black Tracker, 15-Green with Black Tracker, 16-Brown with Black Tracker, 17-Grey with Black Tracker, 18-White with Black Tracker, 19-Red with Black Tracker, 20-Black with Yellow Tracker, 21-Yellow with Black Tracker, 22-Violet with Black Tracker, 23-Pink with Black Tracker, 24-Aqua with Black Tracker
Moisture Protection	Water Swellable Yarn, Water Swellable Tape
Number of Ripcords	1
Cable Outer Jacket Color	Singlemode: Yellow, RAL 1023
Cable Outer Jacket	PVC, LSOH, Thickness: 1.0 ±0.3mm, Φ 6.5 ±0.3mm
Cable Marking (24 Cores)	Infinique Canada FO Cable Distribution Tight Buffer Singlemode 24 Core LSOH IFOCSMTB24L SN:(Batch Number) XXXXM

TEMPERATURE RANGE

Installation and Assembly	-10°C to 60°C (14 °F to 140 °F)
Operation	-40°C to 70°C (-40 °F to 158 °F)
Storage	-40°C to 70°C (-40 °F to 158 °F)

MECHANICAL SPECIFICATIONS

Fiber Count	Nominal OD (mm)	Min Bend Radius (mm)	Tensile (N)	Nominal Wt. (kg/km)	Max Drum Length (m)
2	6.5 ±0.3mm	60	1500	20	4500
4	6.5 ±0.3mm	60	1500	24	4500
6	6.5 ±0.3mm	60	1500	28	4500
8	6.5 ±0.3mm	60	1500	32	4500
12	6.5 ±0.3mm	60	1500	36	4500
16	6.5 ±0.3mm	60	1500	40	4500
18	6.5 ±0.3mm	60	1500	44	4500
24	6.5 ±0.3mm	60	1500	48	4500

ORDERING INFORMATION

Part Number	Description
IFOCSMTBNL	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, LSOH, ITU-T G.652D, N Core, UL Listed
IFOCS2TBNL	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, LSOH, ITU-T G.657A, N Core, UL Listed
IFOCS3TBNL	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, LSOH, ITU-T G.655, N Core, UL Listed
IFOCSMTBN	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, ITU-T G.652D, N Core, UL Listed
IFOCS2TBN	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, ITU-T G.657A, N Core, UL Listed
IFOCS3TBN	Infinique Fiber Optic Cable, Distribution Tight Buffer Non-Jelly Singlemode, ITU-T G.655, N Core, UL Listed

Number of Cores: Replace 'N' in Part Number for the number of Fiber Cores (2 to 24 Cores).



Infinique, a Canadian company is a manufacturer of high performing end-to-end solutions in copper, fiber and video surveillance systems. For more information visit our website at www.infinique.com or email us at sales@infinique.com.