

# Distribution Tight Buffer Flexi Tube Cable

Distribution Cable 36-288 Fibers, Indoor/Outdoor, Non-Jelly

Infinique's Distribution Tight Buffer Flexi Tube Cables are suitable for intra-building backbone and inter-building applications. Available from 36 to 288 cores these cables are designed not just to save space and time but also to further simplify installation and fiber management by eliminating the need for splicing the cables before entering buildings.

Being extremely flexible and metal-free, these cables are ideal for high 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.

The cable construction is composed of six sub-units of multi-core buffered cables stranded around the central strength member. Each sub-unit has aramid yarn which is longitudinally applied around the tight buffered fibers and then enclosed in a protective outer jacket. Rip Cords are

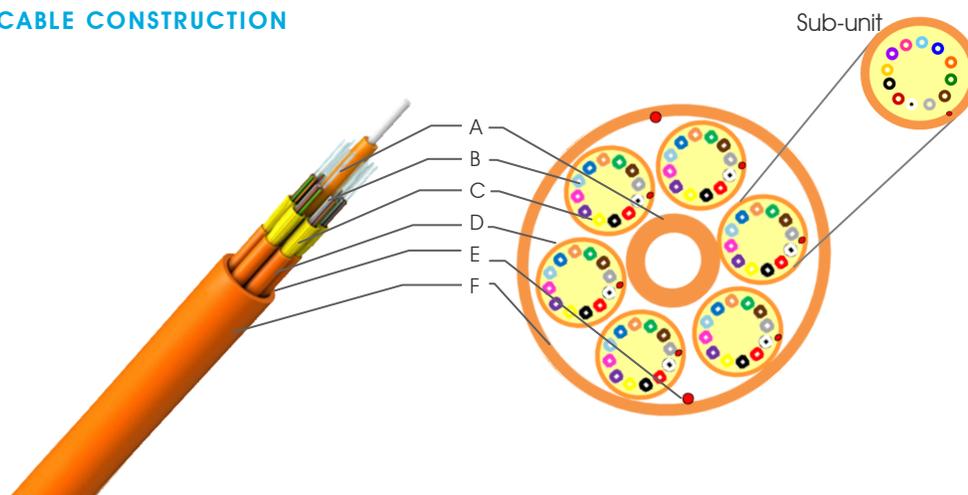
applied longitudinally to enable easy stripping of the cable during end preparation for testing and installation. For speedy installation and clear identification, the buffered fibers are distribution cable color coded in accordance with Telecordia standards. The outer jacket of the singlemode cable is yellow, OM1 and OM2 is orange, and aqua for OM3 and OM4. The cable is clearly meter marked with durable black ink. The cable can be custom made ranging from 36 to 288 fibers, and is suitable for Gigabit Ethernet and 10 Gigabit Ethernet Applications. The cable is UL Certified for OFNR standard ratings.

Both ends of the cable are capped to avoid water ingress and are accessible for testing. Cable is packed in fumigated 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**  
Aramid Yarn for high tensile strength, extremely flexible, metal free, greater crush resistance, and water ingress protection
- **Clear Identification**  
Color coded Buffered Fibers and Outer Jacket
- **Speedy Installation**  
Simple fiber management and Ripcords for easy stripping
- **Challenging Applications**  
Duct, Riser and other challenging conditions

## CABLE CONSTRUCTION



### Legend

- A. Central Strength Member
- B. Buffered Fibers
- C. Aramid Yarn
- D. Sub-unit Jacket
- E. Ripcord
- F. Outer Jacket



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## OPTICAL SPECIFICATIONS

Fiber Type		Singlemode	Singlemode Bend Insensitive	Multimode 62.5/125	Multimode 50/125	Multimode 50/125 LOF	Multimode 50/125 LOF
IEC 11801 classification		OS1/OS2	OS1/OS2	OM1	OM2	OM3	OM4
ITU-T type		G.652D	G.657A	G.651	G.651	G.651	G.651
Attenuation (dB/km max)	850 nm			≤ 3.5	≤ 2.8	≤ 2.8	≤ 2.8
	1310 nm	≤ 0.35	≤ 0.35	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
	1550 nm	≤ 0.21	≤ 0.20				
	1625 nm	≤ 0.23	≤ 0.21				
Bending Loss 1 turn Radius 20× Cable OD	850 nm-1310			≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05
	1550 nm	≤ 0.25	≤ 0.025				
	1625 nm	≤ 1.0	≤ 0.1				
Bandwidth MHz x km	850 nm			≥ 160	≥ 500	≥ 2000	≥ 3500
	1310 nm			≥ 500	≥ 500	≥ 1200	≥ 1200
Chromatic Dispersion (ps/(nm*km))	1285-1330 nm	≤ 3.5	≤ 3.0				
	1550 nm	≤ 18	≤ 18				
	1625 nm	≤ 22	≤ 22				
Zero Dispersion Wavelength (nm)		1300-1324					
Zero Dispersion Slope (ps/(nm <sup>2</sup> *km))		≤ 0.093					

## GEOMETRICAL SPECIFICATIONS

Core Diameter (µm)		9.3±5	9.3±5	62.5±2.5	50±2.5	50±2.5	50±2.5
Cladding Diameter (µm)		125 ±1.0	125 ±1.0	125 ±1.0	125 ±1.0	125 ±1.0	125 ±1.0
Coating Diameter (µm)		245 ±10	245 ±10	245 ±10	245 ±10	245 ±10	245 ±10

## APPLICABLE DISTANCES

Gigabit Ethernet Distance (m)	Sx (850 nm)	5,000	5,000	300	750	1000	1100
	Lx (1310 nm)	-	-	550	600	600	600
10 Gigabit Ethernet Distance (m)	Sx (850 nm)	10,000	10,000	33	150	300	550
	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/IEC11801, EN 50173-X, ICEA-696 Compliant Meet or exceeds IEEE 802.3 Ethernet (including 10 Gigabit Ethernet), GPON, ATM, Fibre Channel, FDDI
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
Flame Retardant / LSOH Emissions / Non-Corrosive	IEC 60332-1 and EN 50266-2-1 / IEC 61034 and EN 50268 / IEC 60754-2 and EN 50267

## TEST DATA

Test	Standard	Specified Value	Acceptance Criteria
Tension	IEC 60794-1-21	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 60794-1-21	Applied load: 500N/100mm <sup>2</sup> Duration of loading: 5 minutes	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Impact Resistance	IEC 60794-1-21	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.
Bending Radius	IEC 60794-1-21	Length: ≥ 10m Mandrel : 15 × Cable OD	PASS Attenuation change ≤ 0.05 dB The optical fiber shall have no distinct additional attenuation and strain.
Repeated Bending	IEC 60794-1-21	Sheave Diameter: 15 x Cable OD Applied Load : 0.5kg No. of Cycles: 5 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 60794-1-21	Length: 2 meters Load: 5 Kg No. of Cycles: 5 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 60794-1-22	Temperature cycling schedule -20°C → +70°C → -20°C → +70°C No. of Cycles: 2 Soak time at each temperature: 8hours	PASS Attenuation change ≤ 0.05 dB /km

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## GENERAL SPECIFICATIONS

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

## CABLE CONSTRUCTION

Cable Strength Members	Central Strength Member, Aramid Yarn
Optical Fibers	UV Colored High Grade Silica Glass Surrounded by Acrylate Coating
Fiber Count	36 –288
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
Number of Ripcords	Sub-Unit: 1, Outer Cable: 2
Cable Outer Jacket Color	Singlemode: Yellow, RAL 1018; Multimode OM1: Orange, RAL 2004; Multimode OM2: Orange, RAL 2004; Multimode OM3, Aqua RAL 6027, OM4: Violet RAL 4003
Cable Outer Jacket	PVC, LSOH, OFNP, OFNR, Diameter: 18.5 ±0.5mm, Thickness: 1.5 ±0.0.3mm
Cable Marking	Infinique Canada Distribution Tight Buffer Flexi Tube Cable Model Number SN:NNNNYYMM 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	Sub Units	Filled Units	Unit Fiber Count	Nominal OD (mm)	Nominal Wt. (kg/km)	Min Bend Radius	Max Tensile (N)	Crush Resistance N/100mm <sup>2</sup>	Drum Length (M)
36	6	3	12	18.5 ±0.5	210	10D	1300	1000	4000
48	6	4	12	18.5 ±0.5	250	10D	1300	1000	4000
72	6	6	12	18.5 ±0.5	300	10D	1300	1000	4000
96	6	6	16	18.5 ±0.5	460	10D	1300	1000	4000
144	6	6	24	18.5 ±0.5	680	10D	1300	1000	4000
192	12	12	16	32.5 ±0.5	1160	10D	1300	1000	4000
288	12	12	24	32.5 ±0.5	1160	10D	1300	1000	4000

## ORDERING INFORMATION

Part Number	Description
IFOCSMTBN	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Singlemode, NC
IFOCSMTBNL	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Singlemode, LSOH, NC
IFOCM1TBN	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM1, NC
IFOCM1TBNL	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM1, LSOH, NC
IFOCM2TBN	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM2, NC
IFOCM2TBNL	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM2, LSOH, NC
IFOCM3TBN	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM3, NC
IFOCM3TBNL	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM3, LSOH, NC
IFOCM4TBN	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM4, NC
IFOCM4TBNL	Infinique Distribution Tight Buffer Flexi Tube Cable, Non-Jelly Multimode OM4, LSOH, NC

Replace 'N' in Part Number for the number of Fiber Cores (36 to 288 Cores), NC in Description will be Number of 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](http://www.infinique.com) or email us at [sales@infinique.com](mailto:sales@infinique.com).