

Central Loose Tube Cable

Central Loose Tube Construction 288 Cores, Indoor/Outdoor, Rodent and Termite Resistant

Infinique’s Central Loose Tube Cables are suitable for both 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 flexible and metal-free, these cables have Polyamide Outer layer over PE Jacket which protects the cable against Rodents and Termites. For singlemode cables, choice of fibers are available, which are listed in the ordering information.

The cable construction consists of an FRP (Fiber Reinforced Plastic) that is located in the center of the cable as a non-metallic strength member. The fibers are protected inside the loose tube and the loose tubes are longitudinally placed around the central strength member. To ensure water ingress Glass Yarn and Water Blocking Tape is longitudinally

applied around the loose tubes and is enclosed in a protective outer jacket. The inner cable jacket is made of UV Resistant HDPE material and the outer cable jacket is made of Polyamide.

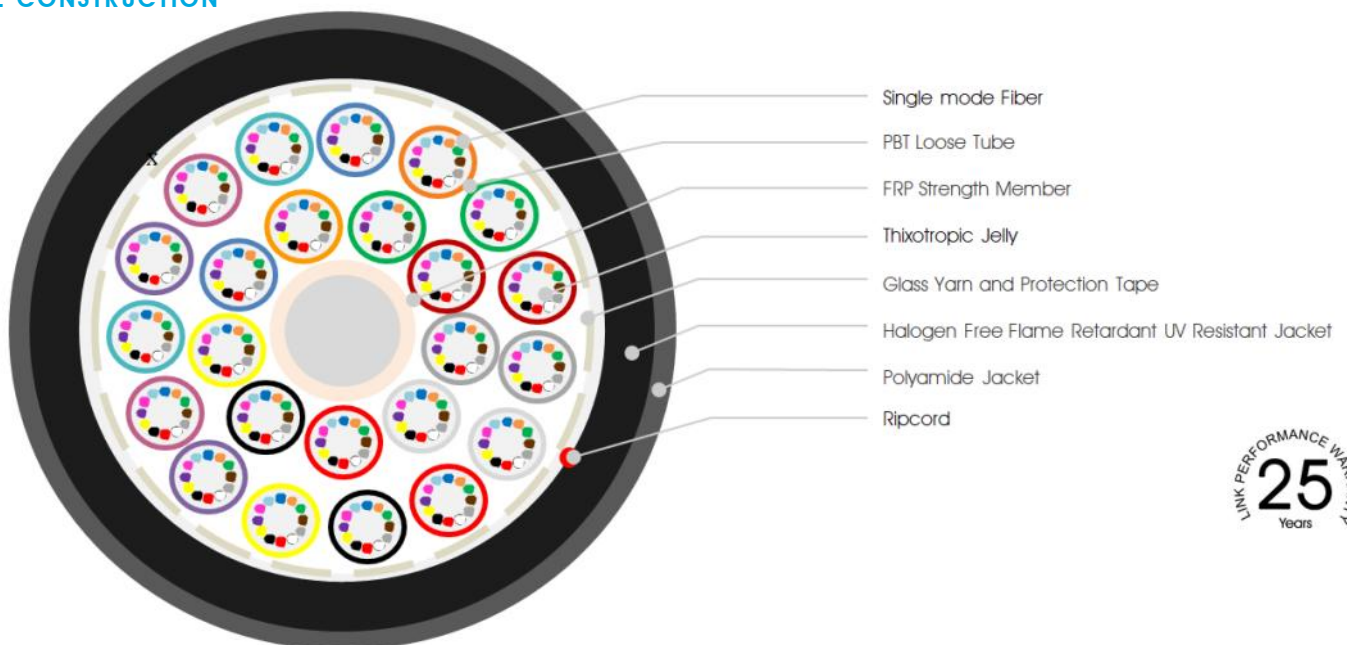
For speedy installation and clear identification, both fibers and the loose tubes are color coded in accordance with Telecordia standards. The cable is clearly meter marked with durable ink. The cable is suitable for Gigabit Ethernet and 10 Gigabit Ethernet Applications.

Both ends of the cable are capped to avoid water ingress and are accessible for testing. Cable is packed in 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**
UV Resistant Jacket, Central Strength Member, Loose Tube, Glass Yarn, Water Blocking Tape, metal free, greater crush resistance, water ingress protection
- **Rodent and Termite Resistant**
Polyethylene Outer Jacket plus Rodent and Termite protection by Polyamide Layer
- **Clear Identification**
Color coded Tubes, Fiber and Outer Jacket as per industry standards
- **Challenging Applications**
Indoor and Outdoor Applications

CABLE CONSTRUCTION



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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	Multimode 50/125 LOF
IEC 11801 classification		OS1/OS2	OS1/OS2	OM1	OM2	OM3	OM4	OM5
ITU-T type		G.652D	G.657A	G.651	G.651	G.651	G.651	G.651
Attenuation (dB/km max)	850 nm			≤ 3.5	≤ 2.8	≤ 2.8	≤ 2.8	≤ 2.8
	1310 nm	≤ 0.35	≤ 0.35	≤ 1.0	≤ 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	≤ 0.1
	1550 nm	≤ 0.25	≤ 0.025					
	1625 nm	≤ 1.0	≤ 0.1					
Bandwidth MHz x km	850 nm			≥ 160	≥ 500	≥ 2000	≥ 3500	≥ 3500
	1310 nm			≥ 500	≥ 500	≥ 1200	≥ 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 ² *km))		≤ 0.093						

GEOMETRICAL SPECIFICATIONS

Core Diameter (µm)		9±2.5	9±2.5	62.5±2.5	50±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	125 ±1.0
Coating Diameter (µm)		245 ±10	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	1100
	Lx (1310 nm)	-	-	550	600	600	600	600
10 Gigabit Ethernet Distance (m)	Sx (850 nm)	10,000	10,000	33	150	300	550	500
	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
Differential Mode Delay (DMD)	Meet or exceeds IEE 802.3 Ethernet (including 10 Gigabit Ethernet), ATM, Fibre Channel, FDDI
Water Blocking	IEC 60793-1-49 To measure Effective Modal Bandwidth (EMB)
Color Coding	IEC 60794-1-2 F5 Standards
Flame Retardant	IEC 60304 Telcordia-Bellcore, TIA-598C Standards
Flame Propagation	IEC 60331, IEC 60332-3-24 Standards
	IEC 60332-1, IEC 60754-1, IEC 60754-1, IEC 61034-2 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.
Impact Resistance	IEC 60794-1-2-E4	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 60794-1-2-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, OFNP, UV Resistant, Flame Retardant, Fire Rated, Rodent Resistant, Termite Resistant
Cable Type	Central Loose Tube

CABLE CONSTRUCTION

Cable Strength Members	Central Strength Member FRP, Central Loose Tubes
Optical Fibers	UV Colored High Grade Silica Glass Surrounded by Acrylate Coating
Fiber Count	25~288
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
Loose Tube Colors	1-Blue, 2-Orange, 3-Green, 4-Brown, 5-Grey, 6-White, 7-Red, 8-Black, 9-Yellow, 10-Violet, 11-Pink, 12-Aqua
Loose Tube Diameter	Φ 2.2 ±0.15mm Polybutylene Terephthalate (PBT)
Central Strength Members	Fiber Reinforced Plastic
Moisture Protection	Glass Yarn, Water Swellable Tape
Cable Outer Jacket Color	Black
Cable Inner Jacket	Flame Rated, LSOH, UV HDPE
Cable Outer Jacket	Polyamide Jacket
Cable Marking	Infinique Canada FO Cable Indoor Outdoor Singlemode OS2 288Core LSOH IFOCSMLT288RL SN:(Batch Number) XXXXM;

TEMPERATURE RANGE

Installation and Assembly	-20°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	Nominal OD (mm)	Min Bend Radius Dynamic/Static (mm)	Crush Resistance (N)	Tensile (N) Short/Long Term	Nominal Wt. (kg/km)	Max Drum Length (m)
288	24	12	18.4 ±0.5mm	20D/10D	1500/500	1500/500	235	2000

ORDERING INFORMATION

Part Number	Description
IFOCSMLT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode G.652.D 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCS1LT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode OS2 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCS2LT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode G.657.A1 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCS3LT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode G.657.A2 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCS4LT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode G.657.B2 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCS5LT288RL	Infinique Central Loose Tube Indoor Outdoor Singlemode G.657.B3 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCM1LT288RL	Infinique Central Loose Tube Indoor Outdoor Multimode OM1 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCM2LT288RL	Infinique Central Loose Tube Indoor Outdoor Multimode OM2 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCM3LT288RL	Infinique Central Loose Tube Indoor Outdoor Multimode OM3 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCM4LT288RL	Infinique Central Loose Tube Indoor Outdoor Multimode OM4 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable
IFOCM5LT288RL	Infinique Central Loose Tube Indoor Outdoor Multimode OM5 288C Flame Retardant, UV, Rodent, Termite Resistant LSOH Jacket Cable

Number of Cores: Replace 'N' in Part Number for the number of Fiber Cores (25 to 288 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.