STL

Optical Fiber Cable

Product Catalogue

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STL – Building Digital Networks

Our capabilities across wireless connectivity, optical networking, software, and services, place us amongst the top 5G RAN vendors by Gartner. These capabilities are built on open-source and converged architectures helping telcos, cloud companies, citizen networks, and large enterprises deliver next-gen experiences to their customers. STL partners with service providers globally in achieving a green and sustainable digital future in alignment with UN SDG goals.

STL has a strong global presence in India, Italy, the UK, the US, China, and Brazil.

Built On Our Industry Leading Product Portfolio

Optical Networking Solutions

- Glass Preform
- Optical Fiber
- Optical and Speciality Cables
- Optical Interconnect

Access Solution

- Scalable & agile operations
- Faster time-to-market
- Better TCO
- Greener networks

Network Software Products

- Telecom Billing Operations Software
- Monetization and Engagement Software

System Integration Services

- Network Design Services
- Fiber Rollout Services
- Network Operations & Mgmt. Services
- Data Centre Network
- Private Enterprise Network

The Unique STL Advantage

25 years of experience in optical Connectivity

Expertise in integration of large scale digital networks

Disrupting with virtual edge technologies

Investing in technology development and adoption

Specializing in hyperscale infrastructure builds

Transforming everyday living across communities

Strong presence in India...

Network Modernisation for indian army

12 data Centres, 30 Telepresence studios, 44 Network Locations, 33 Civil Locations, 1500 Sites, 30K Network Elements

Large scale rural connectivity programs

19k sq. kms optical connectivity in rugged, arid and the hottest (50^{0}C) terrains of India, 750+ kms in dense forest areas

IoT driven smart city infrastructure

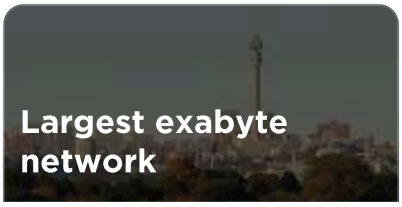
Kakinada Smart City

505 reduction in crime incidents, 1600 network elements, 13k daily wifi users, 325k lives positively impacted

Futuristic SDN ready state wide network

T-Fibre (Bharatnet Initiative)

Deployment of urban net for 140 urban centres in the state, impacting 1 Million households

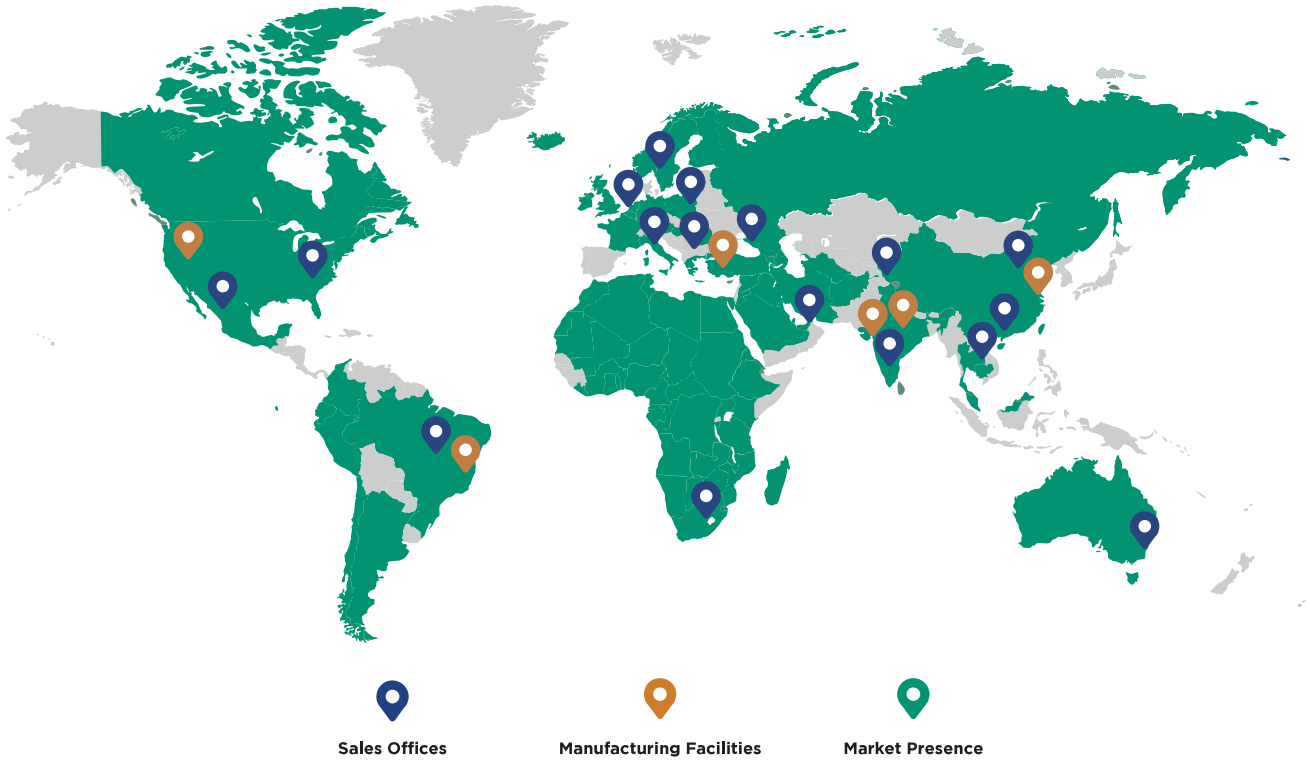


Largest exabyte network

FTTH roll out (Largest Indian Telco)

Ramp up od deployment to 75,000 Home pass per week, 30% in resource utilization, 25% increase in deployment speed

and around the Globe



Global Manufacturing Operations

Largest integrated manufacturing facilities for optical fiber and optical fiber cable

Innovation Drivers

4
Innovation Centres

OF Centre of Excellence, Aurangabad

Cable Design Lab, Silvassa

Center for Smarter Networks, Gurgaon

STL Cloud Lab, Ahmedabad

678 Global Patents Across the Network Layer

Global Academia
Partners in Innovation

MIT, USA | RUTGERS, USA | IIT, Madras

- Research on innovative Multi-Stage fiber manufacturing process
- Next-Gen fiber to improve network performance
- Research and accelerate the advancements in 5G

Committed to Sustainability & Social Responsibility

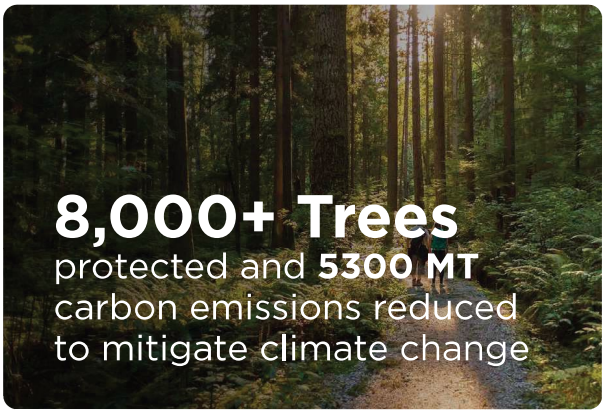
STL has been a firm believer in ensuring responsible, eco-friendly operations and maintaining a balance between the needs of shareholders and the community. Since 2018, STL has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment and anti-corruption.

World's **1st**

ZERO WASTE TO LANDFILL

Integrated Optical Fiber and Cable Manufacturer

Certified Manufacturing Locations ◆ Shendra ◆ Rakholi ◆ Dadra



United Nations Global Compact

Since 2018, Committed to doing business responsibly by aligning their strategies and operations with Ten Principles on human rights, labour, environment and anti-corruption

Product Code Nomenclature

PRODUCT CODE																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Product Type		Fiber Count 1-9999					Fiber Type		No. of Tubes/ Bundles			Core Type	Jacket Type		Running Number		Special Requirement				
A	A	0	0	1	2	F	S	N	0	1	T	F	P	1	U	S	H	1	5	0	M

Product Type(1-2)

A A	Aerial ADSS Cable
A 8	Aerial Fig-8 Cable
D T	Duct Cable
M A	Armored Cable
D B	Direct Buried Cable
M D	Micro Cable
M X	NextGen Micro Cable
F D	Flat Drop Cable
F T	Flat Tonable Cable
R D	Ribbon Duct Cable
R A	Ribbon Armored Cable
C R	Celesta Ribbon(IBR) Cable

Fiber Type

S 1	STL Bow-Lite ITU-T G.657A1
S 2	STL Bow-Lite(E) ITU-T G.657A2
S 3	STL OH-Lite ITU-T G.652 D
S 4	STL Micro Bow-Lite G.657 A1 200
S 5	STL Micro Bow-Lite (E) G.657 A2 200
S 6	STL OH-Lite NOVA (ITU-T G.657A1)

Fiber Count (3-7)

xxxxF

No of tube/ Bundle (10-11)

yy	01-24

Type of fiber group (12)

F	Loose Tube
W	Fiber Bundle

Core & Tube Filling Type (13)

F	Dry Tube/Dry Core
G	Gel Tube/Dry Core
W	Wet Tube/Wet Core

Jacket type (14-15)

P 1	Single Jacket OSP
P 2	Double Single Jacket OSP
B U	Single Armored Single Jacket OSP
B 2	Single Armored Double Jacket OSP

Running Number (16-17)

U S

Loading Condition (18)

L	NESC Light
M	NESC Medium
H	NESC Heavy

Special Customer's Requirement (19-22) [Optional]

X X X M — Span Length of Cable in Meter

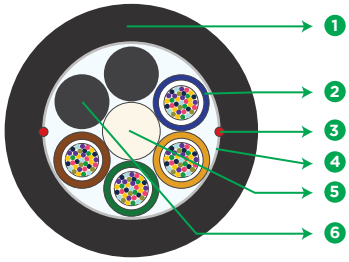
Note - This nomenclature table is for reference only.

Duct-Lite

Multitube Gel Free Single Sheath OFC

4F - 432F | Nova - G.657.A1 Single Mode Fiber

1. OUTER JACKET
2. GEL FREE LOOSE TUBE
3. RIPCORD(S)
4. WATER BLOCKING TAPE
5. STRENGTH MEMBER
6. FILLER



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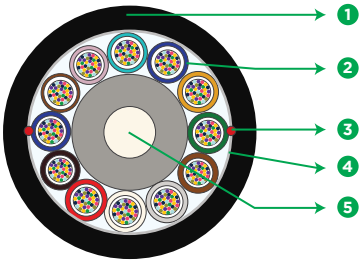

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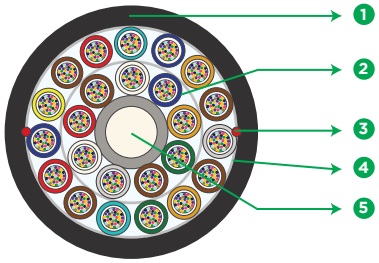

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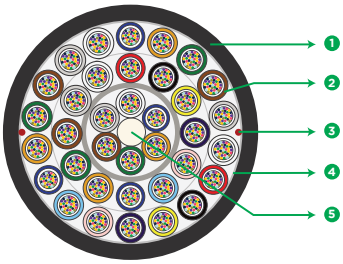


432F

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Multitube design with ripcords for easy and quick mid span access
- Easily removable rugged thermoplastic jacket
- Water-blocking technology for gel free core helps in quicker end preparation
- Flexible, light weight, easy to handle & install
- UV protected

Product Details

STL DUCT-LITE Gel Free Multitube Fiber Optic Cables are suitable for duct applications. DUCT–LITE comes with gel free technology, the buffer tubes contain water swellable yarns and the cable core is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. The cable core is surrounded with thermoplastic sheath making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” DUCT OFC LASER SYMBOL TELEPHONE SYMBOL
“YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Count	4-432
Fiber Type	STL NOVA (G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	4 | 6 | 8 | 12
Tube Material	Polypropylene (PP)
Loose tube Size	2.4 mm (typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
No. of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
DT0004FSN01TFP1US	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
DT0006FSN01TFP1US	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
DT0008FSN01TFP1US	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
DT0012FSN01TFP1US	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	78 (0.052)
DT0024FSN02TFP1US	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	10.6 (0.417)	78 (0.052)
DT0036FSN03TFP1US	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	10.6 (0.417)	74 (0.050)
DT0048FSN04TFP1US	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	10.6 (0.417)	74 (0.050)
DT0060FSN05TFP1US	60	5	Blue, Orange, Green, Brown, Slate, Filler	1	10.6 (0.417)	74 (0.050)
DT0072FSN06TFP1US	72	6	Blue, Orange, Green, Brown, Slate, White	0	10.6 (0.417)	74 (0.050)
DT0084FSN07TFP1US	84	7	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	12.5 (0.484)	88 (0.059)
DT0096FSN08TFP1US	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	12.5 (0.484)	88 (0.059)
DT0144FSN12TFP1US	144	12	Blue, Orange, Green, Brown, Slate, White Red, Black, Yellow, Violet, Rose, Aqua	0	15.7 (0.622)	145 (0.0981)
DT0192FSN16TFP1US	192	16	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Filler, Filler	2	15.7 (0.622)	140 (0.094)
DT0216FSN18TFP1US	216	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	15.7 (0.622)	135 (0.091)
DT0288FSN24TFP1US	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** - Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	18.2 (0.716)	172 (0.115)
DT0432FSN36TFP1US	432	36	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White# **3rd Layer -** Red#, Black#, Yellow#, Violet#, Rose#, Aqua#, Blue##, Orange##, Green##, Brown##, Slate##, White##, Red##, Black##, Yellow##, Violet##, Rose##, Aqua##	0	22.4 (0.881)	240 (0.161)

Note : # - denotes single black stripe marking via inkjet or co-extrusion, white stripe marking for black loose tube
- denotes double stripe marking.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term - 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	220 (125.6)	ICEA 640|FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640|FOTP-25
Torsion	±180°	ICEA 640|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640|FOTP-88
Water Penetration Test*	1m waterhead, 3m samples, 24 h	ICEA 640|FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640|FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber and </= 0.3 dB/km for Multimode Fiber.

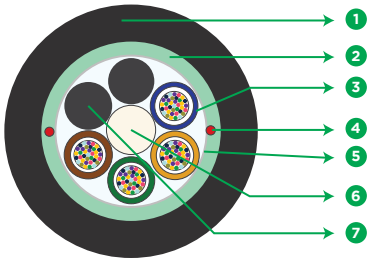
Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Armor-Lite

Multitube Gel Free Single Sheath Armored OFC
4F - 432F | Nova - G.657.A1 Single Mode Fiber

1. OUTER JACKET
2. CORRUGATED STEEL TAPE
3. GEL FREE LOOSE TUBE
4. RIPCORD(S)
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER
7. FILLER



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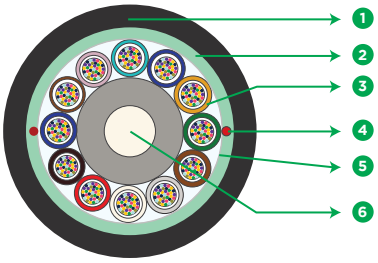

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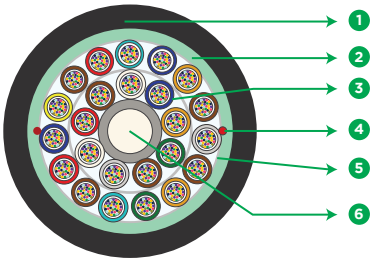

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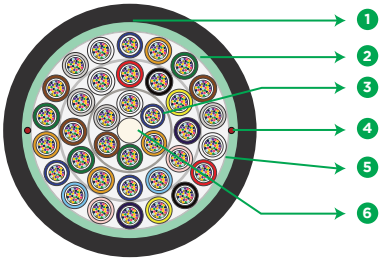


432F

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- PE outer jacket & Steel tape armor provide rodent protection along with improved crush and impact protection
- The Steel tape enables post installation cable locating
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket un-bonded with steel tape
- Flexible, light weight, easy to handle & install

Product Details

STL ARMOR-LITE Gel Free Multitube Single Jacket Steel Tape Armored Cables are suitable for direct burial as well as for duct applications. ARMOR-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and the cable core is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. A Corrugated Steel Tape armor surrounds the cable core with thermoplastic jacket placed over the armor layer making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Count	4~432
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	4 | 6 | 8 | 12
Tube Material	Polypropylene (PP)
Loose tube Size	2.4 mm (typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
Metallic Armoring	Corrugated Steel Tape (Un-bonded with Sheath)
No. of Ripcords Below Tape	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
MA0004FSN01TFBUUS	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	145 (0.095)
MA0006FSN01TFBUUS	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	145 (0.095)
MA0008FSN01TFBUUS	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	148 (0.097)
MA0012FSN01TFBUUS	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	148 (0.099)
MA0024FSN02TFBUUS	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	12.6 (0.496)	146 (0.045)
MA0036FSN03TFBUUS	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	12.6 (0.496)	146 (0.045)
MA0048FSN04TFBUUS	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	12.6 (0.496)	140 (0.094)
MA0060FSN05TFBUUS	60	5	Blue, Orange, Green, Brown, Slate, Filler	1	12.6 (0.496)	140 (0.094)
MA0072FSN06TFBUUS	72	6	Blue, Orange, Green, Brown, Slate, White	0	12.6 (0.496)	136 (0.092)
MA0084FSN07TFBUUS	84	7	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	14.3 (0.562)	160 (0.107)
MA0096FSN08TFBUUS	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	14.3 (0.562)	160 (0.107)
MA0144FSN12TFBUUS	144	12	Blue, Orange, Green, Brown, Slate, White Red, Black, Yellow, Violet, Rose, Aqua	0	17.8 (0.700)	265 (0.178)
MA0192FSN16TFBUUS	192	16	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Filler, Filler	2	17.8 (0.700)	234 (0.157)
MA0216FSN18TFBUUS	216	18	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	17.8 (0.700)	221 (0.148)
MA0288FSN24TFBUUS	288	24	**1st Layer -** Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer -** Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	20.2 (0.795)	275 (0.184)
MA0432FSN36TFBUUS	432	36	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White# **3rd Layer -** Red#, Black#, Yellow#, Violet#, Rose #, Aqua#, Blue##, Orange##, Green##, Brown##, Slate##, White##, Red##, Black##, Yellow## Violet##, Rose##, Aqua##	0	23.4 (0.921)	350 (0.228)

Note : # - denotes single black stripe marking via inkjet or co-extrusion, white stripe marking for black loose tube.
- denotes double stripe marking.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term - 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	300 (171)	ICEA 640 | FOTP-41
Impact Strength (Nm) (lbf.in)	10 (88.5)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test*	1m head, 3m samples, 24 hrs	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

Packing and Lengths

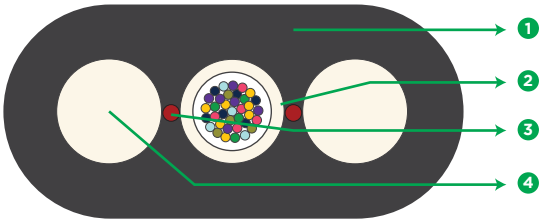
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123; 20,000 ± 5% (For All Fiber Counts)	-0%, +5%	Max 5%, Customer Approval

Drop-Lite

Flat Single Sheath OFC

12F - 24F | Nova - G.657.A1 Single Mode Fiber

1. OUTER JACKET
2. GEL FREE LOOSE TUBE
3. RIPCORD(S)
4. STRENGTH MEMBER



** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Embedded strength members for anti-buckling properties
- Longitudinal water protection is enabled by water blocking compounds in tube
- Easy access to Fiber due to its Unitube construction
- Tensile and crush resistant
- UV protected

Product Details

STL DROP-LITE Flat Drop Dielectric Fiber Optic Cable offers the ease of installation in an easy access, single-tube design. This cable has optical Fibers presented in tube filled with a thixotropic gel, and is enclosed in a thermoplastic sheath. The cables have two embedded strength members for anti-buckling property. The dielectric version eliminates any bonding and grounding requirements.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C

Printing Details

Printing : STL SM NOVA “FIBER COUNT” FLAT DROP OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Count	12~24
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	1~24
Tube Size (mm)	2.4
No. of Tubes	1
Tube Color Sequence	White
Outer Sheath Material	UV Proof Black Polyethylene
Nominal Sheath Thickness (mm)	1.1
No. of Ripcords Below Sheath	2

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua
Blue*	Orange*	Green*	Brown*	Slate*	White*	Red*	Black*	Yellow*	Violet*	Rose*	Aqua*

Note : * - denotes single black ring marking on Fibers.

Cable Characteristics			
Product Code	**Fiber Count**	**Cable Diameter mm (inch) (± 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
FD0012FSN01TGP1US	12	4.4 x 8.4 (0.173 x 0.33)	39 (0.026)
FD0024FSN01TGP1US	24	5.0 x 9.5 (0.196 x 0.374)	60 (0.040)

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	1335 (300.11)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	100 (57.101)	ICEA 640|FOTP-41
Impact Strength (Nm)(lbf.in)	5 (44.2)	ICEA 640|FOTP-25
Torsion	±180°	ICEA 640|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640|FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640|FOTP-82
Drip Test	30 cm, 70ºC, 24 h	ICEA 640|FOTP-81
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640|FOTP-3
Installation	-30°C to + 70°C	
Operation	-40°C to + 70°C	
Storage	-40°C to + 70°C	

Note : All tests shall be carried out as per IEC standards.

Packing and Lengths

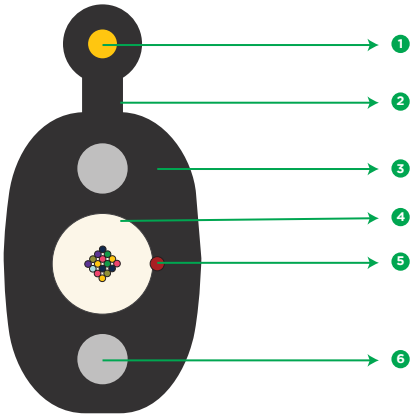
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123 , 20,000 ± 5% (For all fiber counts)	-0%, +5%	Max 5%, Customer Approval

Drop-Lite

Tonable Flat Single Sheath OFC

12F-24F | Nova - G.657.A1 Single Mode Fiber

1. 24 AWG Cu TONING WIRE
2. NECK
3. BLACK MDPE OUTER SHEATH
4. LOOSE TUBE WITH FIBERS AND GEL
5. RIPCORD
6. EMBEDDED STRENGTH MEMBER IN SHEATH



** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Embedded strength members for anti-buckling properties
- Longitudinal water protection is enabled by water blocking compounds in tube
- Available with steel wire as embedded strength member for higher tensile strengths
- Toning wire enables underground location
- Easy access to Fiber due to its Unitube construction
- Tensile and crush resistant
- UV protected

Product Details

STL DROP-LITE Flat Drop Dielectric/Toneable Fiber Optic Cable offers the ease of installation in an easy access, single-tube design. This is a central Tube Cable using optical Fibers presented in tube filled with a thixotropic gel, and is enclosed in a thermoplastic sheath. The cables have two embedded strength members for anti-buckling property. The dielectric version eliminates any bonding and grounding requirements. Toneable version adds a 24 AWG conductor that provides underground location tracing, attached by a web for easy tear-away separation from the cable – the most popular option for underground and multipurpose installation.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C

Printing Details

Printing : STL SM NOVA “FIBER COUNT” FLAT DROP Tonable OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Count	12~24
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	1~24
Tube Size (mm)	2.4
No. of Tubes	1
Tube Color Sequence	White
Outer Sheath Material	UV Proof Black Polyethylene
Nominal Sheath Thickness (mm)	1.1
No. of Ripcords Below Sheath	2
Copper wire Dimeter (mm)	0.5 (24 AWG Cu TONING WIRE)

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua
Blue*	Orange*	Green*	Brown*	Slate*	White*	Red*	Black*	Yellow*	Violet*	Rose*	Aqua*

Note : * - denotes single black ring marking on Fibers.

Cable Characteristics			
Product Code	**Fiber Count**	**Cable Diameter mm (inch) (± 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
FT0012FSN01TGP1US	12	4.2 x 10 (0.165 x 0.393)	49 (0.032)
FT0024FSN01TGP1US	24	5 x 10.8 (0.196 x 0.425)	58 (0.038)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	1335 (300.11)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	100 (57.101)	ICEA 640|FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640|FOTP-25
Torsion	±180°	ICEA 640|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640|FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640|FOTP-82
Drip Test	30 cm, 70ºC, 24 h	ICEA 640|FOTP-81
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640|FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

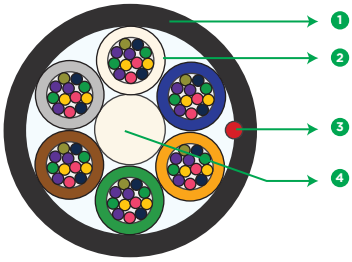
Note : All tests shall be carried out as per IEC standards.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123 ; 20,000 ± 5% (For all Fiber counts)	-0% + 5%	Max 5%, Customer Approval

Micro-Lite

Multitube Single Sheath OFC
G.657.A1 and G.657.A2 Single Mode Fiber



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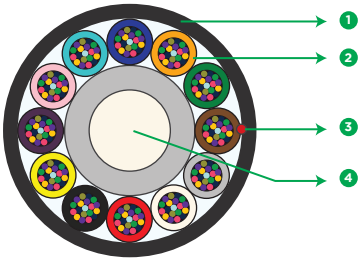

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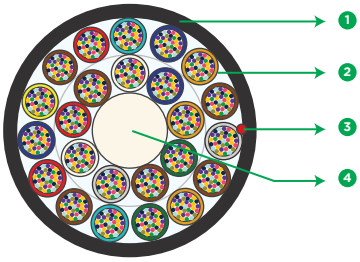


288F

1 OUTER JACKET 2 GEL FILLED TUBE 3 RIPCORD(S) 4 STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- As compared to conventional cable, Micro Cable diameter is less and thereby reducing installation costs
- Excellent solutions for new and existing duct systems
- Typically blown into micro ducts previously installed into large ducts
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- Flexible, light weight, easy to handle & install

Product Details

STL Micro-LITE Multitube Single Jacket Fiber Optic Cables are typically used in micro duct or aerial drop installation applications. This cable is a stranded micro loose tube cable with optical Fiber placed inside robust buffer tubes stranded around a Fiber reinforced plastic (FRP) central strength member. In addition to optical Fibers, the buffer tubes contain water blocking gel to prevent water ingress in the cable.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-5-10, Telcordia GR-20, ITU-T, RoHS, REACH.

Printing Details

Printing : STL SM “TYPE” “COUNT” MICRO OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	2, 4, 6, 12 or 24
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core binder	Binder and water swellable yarns
No. of Ripcords Below Outer Sheath	1
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua
Blue*	Orange*	Green*	Brown*	Slate*	White*	Red*	Black*	Yellow*	Violet*	Rose*	Aqua*

Note : * - denotes single black ring marking on Fibers

Cable Designs with G.657A1/NOVA/G.657A2 250um Fiber							
Product Code	**Fiber Count**	**Tubes**	**Tube Color Sequence**	**Cable Diameter mm (inch) (± 0.3)/ (0.01 inch)**	**Cable Weight kg/km (lbs./ft.) (±10%)**	**Max. Tensile Strength N (lbf)**	**Duct ID mm (inch)**
MD0002FSN01TGP1US	2	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	25 (0.016)	500 (112.4)	8 (0.314)
MD0004FSN01TGP1US	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	25 (0.016)	500 (112.4)	8 (0.314)
MD0006FSN01TGP1US	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0012FSN01TGP1US	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0024FSN02TGP1US	24	2	Blue, Orange, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0036FSN03TGP1US	36	3	Blue, Orange, Green, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0048FSN04TGP1US	48	4	Blue, Orange, Green, Brown, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0072FSN06TGP1US	72	6	Blue, Orange, Green, Brown, Slate, White	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
MD0096FSN08TGP1US	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	6.5 (0.255)	40 (0.026)	800 (180.4)	10 (0.393)
MB0096FSN08TGP1US	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	6.0 (0.236)	35 (0.023)	500 (112.4)	8 (0.314)
MD0144FSN12TGP1US	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	8.4 (0.330)	54 (0.036)	1000 (224.8)	12 (0.472)

Specifications

Cable Designs with G.657A1/NOVA/G.657A2 250um Fiber							
Product Code	**Fiber Count**	**Tubes**	**Tube Color Sequence**	**Cable Diameter mm (inch) (+ 0.3)/ (0.01 inch)**	**Cable Weight kg/km (lbs./ft.) (±10%)**	**Max. Tensile Strength N (lbf)**	**Duct ID mm (inch)**
MB0144FSN12TGP1US	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	8.0 (0.314)	50 (0.033)	1000 (224.8)	10 (0.393)
MD0288FSN24TGP1US	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	9.4 (0.370)	72 (0.048)	1500 (337.2)	12 (0.472)
MD0432FSN18TGP1US	432	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	12.5 (0.492)	118 (0.079)	500 (112.4)	18 (0.708)
MD0576FSN24TGP1US	576	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	13.4 (0.527)	130 (0.087)	1000 (224.8)	18 (0.708)

Cable Designs with G.657A2 200um Fiber (Cable design with G.657 A1 also available)							
Product Code	**Fiber Count**	**Tubes**	**Tube Color Sequence**	**Cable Diameter mm (inch) (± 0.3)/ (0.01 inch)**	**Cable Weight kg/km (lbs./ft.) (±10%)**	**Max. Tensile Strength N (lbf)**	**Duct ID mm (inch)**
MX0012FS801TGP1US	12	1	Blue, Filler, Filler, Filler, Filler, Filler	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
MX0024FS802TGP1US	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
MX0036FS803TGP1US	36	3	Blue, Orange, Green, Filler, Filler, Filler	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
MX0048FS804TGP1US	48	4	Blue, Orange, Green, Brown, Filler, Filler	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
MX0072FS806TGP1US	72	6	Blue, Orange, Green, Brown, Slate, White	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
MX0096FS808TGP1US	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	5.9 (0.232)	34 (0.022)	500 (112.4)	8 (0.314)
MX0144FS812TGP1US	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua	7.6 (0.299)	54 (0.036)	500 (112.4)	12 (0.472)
MX0288FS824TGP1US	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	7.9 (0.311)	70 (0.047)	800 (180.4)	12 (0.472)

Specifications

Cable Designs with G.657A2 200um Fiber (Cable design with G.657 A1 also available)							
Product Code	**Fiber Count**	**Tubes**	**Tube Color Sequence**	**Cable Diameter mm (inch) (+ 0.3)/ (0.01 inch)**	**Cable Weight kg/km (lbs./ft.) (±10%)**	**Max. Tensile Strength N (lbf)**	**Duct ID mm (inch)**
MX0432FS818TGP1US	432	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange# Green#, Brown#, Slate#, White#	8.8 (0.346)	70 (0.047)	1000 (224.8)	12 (0.472)
MX0576FS824TGP1US	576	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	10.3 (0.405)	102 (0.068)	1000 (224.8)	14 (0.551)

Note : # - denotes single black stripe marking on loose tubes.

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength	As per above table	IEC-60794-1-21-E1
Crush Resistance (N/cm) (lbf/in)	50 (28.55)	IEC-60794-1-21-E3
Impact Strength (Nm) (lbf.in)	2 (17.7)	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius (During Installation)	20 D	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	15 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5
Drip Test	30 cm, 70ºC, 24 h	IEC-60794-1-21-E14
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	IEC-60794-1-22-F1
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note : All tests shall be carried out as per IEC standards.

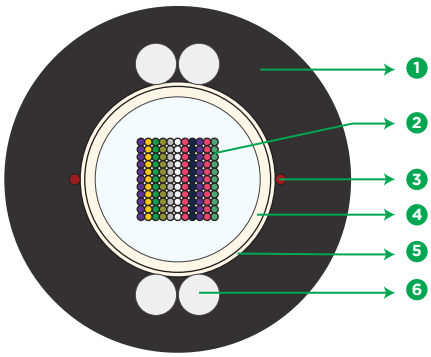
Packing and Lengths

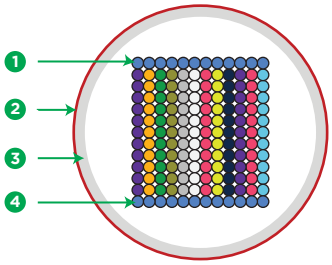
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123 , 20,000 ± 5% (For all Fiber Counts)	-0%, +5%	Max 5%, Customer Approval

Ribbon-Lite

Unitube Gel Free Single Sheath Duct OFC

12F - 144F | Nova - G.657.A1 Single Mode Fiber





1. OUTER JACKET
2. RIBBON
3. RIPCORD(S)
4. GEL FREE LOOSE TUBE
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER

1. RIBBON SAFEGUARDING
2. FIBER RIBBON AND WSM
3. WATER SWELLABLE MATERIAL
4. RIBBON SAFEGUARDING

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Ribbon cable can be prepared and spliced much more rapidly
- Precise Fiber and ribbon geometries result in excellent mass fusion splicing yields
- Fiber ribbons are individually marked for easy identification
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- UV protected, Flexible, light weight, easy to handle & install

Product Details

STL RIBBON-LITE Unitube Single Jacket Cable combines robust performance for high-count mass fusion splicing. The optical fibers are arranged into ribbon units by placing the fibers in a flat array of color-coded Fibers bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. Sheathed by thermoplastic jacket with dielectric (FRP) as embedded strength members diagonally opposite making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” RIBBON DUCT OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

	Physical Characteristics
Fiber Count	12~144
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Ribbon	12
Tube Material	White or Natural, Polypropylene (PP)
Water Blocking	Yarns and water swellable tape
No. of Ripcords Below Tape	2
Embedded Strength Member	Pair of FRPs (Fiber Reinforced Plastic) 180° apart
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics				
Product Code	**Ribbon per Tube**	**Tube Color Sequence**	**Cable Diameter mm (inch)(± 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
RD0012FSN01TFP1US	1	BSR, 1 RIBBON 1, BSR	11.8 (0.464)	136 (0.091)
RD0024FSN01TFP1US	2	BSR, 1 RIBBON 1, 2 RIBBON 2, BSR	11.8 (0.464)	138 (0.092)
RD0036FSN01TFP1US	3	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, BSR	11.8 (0.464)	140 (0.094)
RD0048FSN01TFP1US	4	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BSR	11.8 (0.464)	142 (0.095)
RD0072FSN01TFP1US	6	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, BSR	12.2 (0.480)	145 (0.097)
RD0096FSN01TFP1US	8	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON7, 8 RIBBON 8, BSR	12.6 (0.496)	150 (0.100)
RD00144FSN01TFP1US	12	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON 7, 8 RIBBON 8, 9 RIBBON 9, 10 RIBBON 10, 11 RIBBON 11, 12 RIBBON 12, BSR	13.8 (0.543)	162 (0.108)

Note : BSR- Blue Colored Safeguard Ribbon

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term - 2700 (606.9) | Long Term - 900 (202.3)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	220 (125)	ICEA 640 | FOTP-41
Impact Strength (Nm)(lbf.in)	5 (44.2)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

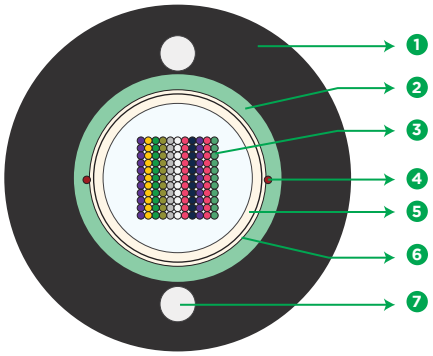
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

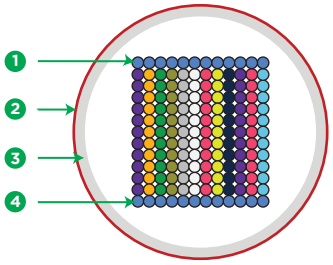
Packing and Lengths

Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Ribbon-Lite

Unitube Gel Free Single Jacket Armored OFC
12F - 144F | Nova - G.657.A1 Single Mode Fiber





1. **OUTER JACKET**
2. **CORRUGATED STEEL TAPE**
3. **RIBBON**
4. **RIPCORD(S)**
5. **GEL FREE LOOSE TUBE**
6. **WATER BLOCKING TAPE**
7. **STRENGTH MEMBER**

1. **RIBBON SAFEGUARDING**
2. **FIBER RIBBON AND WSM**
3. **WATER SWELLABLE MATERIAL**
4. **RIBBON SAFEGUARDING**

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Ribbon cable can be prepared and spliced much more rapidly
- Precise Fiber and ribbon geometries result in excellent mass fusion splicing yields
- Fiber ribbons are individually marked for easy identification
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Steel tape adds to crush resistance as well as can be used as a cable locator after installation
- Easily removable rugged thermoplastic jacket
- UV protected, Flexible, light weight, easy to handle & install

Product Details

STL RIBBON-LITE Unitube Single Jacket Steel Tape Armored Cable combines robust performance for duct as well as direct installations with the productivity of high count mass fusion splicing. The optical fibers are arranged into ribbon units by placing the fibers in a flat array of color-coded Fibers bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. A Corrugated Steel Tape armor surrounds the buffer tube, sheathed by thermoplastic jacket with embedded steel strength members diagonally opposite placed over the armor layer making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Ribbon	12
Tube Material	White or Natural, Polypropylene (PP)
Water Blocking	Yarns and water swellable tape
Metallic Armoring	Corrugated Steel Tape (Un-bonded with Sheath)
No. of Ripcords Below Tape	2
Embedded Strength Member	Steel Wire
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics				
Product Code	**Ribbon per Tube**	**Tube Color Sequence**	**Cable Diameter (mm +/- 5%)**	**Cable Weight (kg/km +/- 10%)**
RA0012FSN01TFBUUS	1	BSR, 1 RIBBON 1, BSR	12.5 (0.492)	142 (0.095)
RA0024FSN01TFBUUS	2	BSR, 1 RIBBON 1, 2 RIBBON 2, BSR	12.5 (0.492)	144 (0.096)
RA0036FSN01TFBUUS	3	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, BSR	12.5 (0.492)	146 (0.098)
RA0048FSN01TFBUUS	4	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BSR	12.5 (0.492)	152 (0.102)
RA0072FSN01TFBUUS	6	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, BSR	13.0 (0.511)	160 (0.107)
RA0096FSN01TFBUUS	8	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON7, 8 RIBBON 8, BSR	13.5 (0.531)	180 (0.120)
RA0144FSN01TFBUUS	12	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON 7, 8 RIBBON 8, 9 RIBBON 9, 10 RIBBON 10, 11 RIBBON 11, 12 RIBBON 12, BSR	14.5 (0.570)	200 (0.134)

Note : BSR - Blue Colored Safeguard Ribbon

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – 2700 (606.9) Long Term – 900 (202.3) (or 0.3*short term tensile)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	300 (171)	ICEA 640 | FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

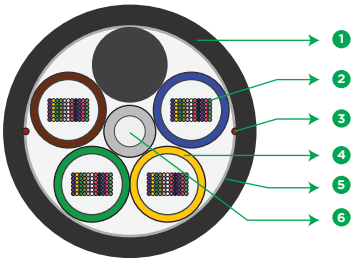
Packing and Lengths

Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	13,123; 20000 ± 5% (For all fiber counts)	-0%, +5%	Max 5%, Customer Approval

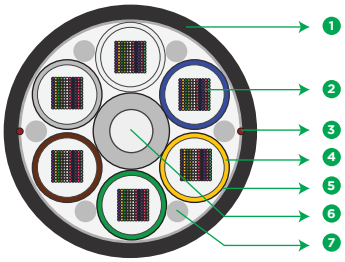
Ribbon-Lite

Multitube Gel Free Single Sheath Duct OFC

192F - 864F | Nova - G.657.A1 Single Mode Fiber



Up to 288F



432F~864

1. **OUTER SHEATH**
2. **CORRUGATED STEEL TAPE**
3. **GEL FREE LOOSE TUBE**
4. **RIBBON**
5. **RIPCORD(S)**
6. **WATER BLOCKING TAPE**
7. **STRENGTH MEMBER**
8. **FILLER**

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Multitube design with ripcords for easy and quick mid span access
- Precise Fiber and ribbon geometries result in excellent mass fusion splicing yields
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- UV Protected, Flexible, light weight, easy to handle & install

Product Details

STL RIBBON-LITE Multitube Single Jacket Cable combines robust performance for duct installations with the productivity of high count mass fusion splicing. Twelve optical Fibers are arranged into ribbon units by placing the Fibers in a flat array of color-coded Fibers bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. This cable offers an outstanding solution for demanding high-growth, high-bandwidth communications applications like data centers, equipment connections within cabinets, outside plant applications.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA 598C.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” RIBBON DUCT OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	</= 0.1
Ribbon Printing per Tube (4 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BLUE SAFETY RIBBON
Ribbon Printing per Tube (6 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, BLUE SAFETY RIBBON
Ribbon Printing per Tube (12 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON 7, 8 RIBBON 8, 9 RIBBON 9, 10 RIBBON 10, 11 RIBBON 11, 12 RIBBON 12, BLUE SAFETY RIBBON
Tube Material	Polypropylene (PP)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Water Blocking	Yarns and water swellable tape
No. of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics						
Product Code	**Fiber Count**	**Tube Color Sequence**	**No. of Fillers**	**No. of Interstitial Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
RD0192FSN04TFP1US	192	Blue, Orange, Green, Brown, Filler	1	0	21.4 (0.842)	220 (0.147)
RD0216FSN03TFP1US	216	Blue, Orange, Green, Filler, Filler	2	0	21.4 (0.842)	230 (0.154)
RD0288FSN04TFP1US	288	Blue, Orange, Green, Brown, Filler	1	0	21.4 (0.842)	235 (0.157)
RD0432FSN06TFP1US	432	Blue, Orange, Green, Brown, Slate, White	0	6	23.8 (0.937)	275 (0.184)
RD0576FSN04TFP1US	576	Blue, Orange, Green, Brown, Filler	1	5	24.4 (0.960)	306 (0.205)
RD0720FSN05TFP1US	720	Blue, Orange, Green, Brown, Slate, Filler	1	6	27.0 (1.06)	348 (0.233)
RD0864FSN06TFP1US	864	Blue, Orange, Green, Brown, Slate, White	0	6	27.0 (1.06)	365 (0.245)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	220 (125)	ICEA 640 | FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

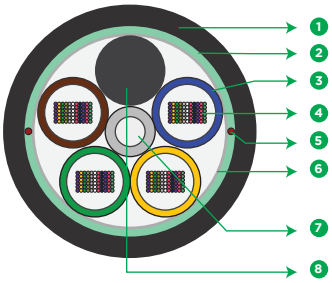
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

Packing and Lengths

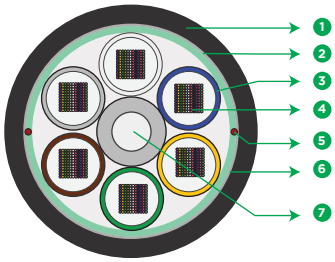
Drum Type	Fiber count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 360F	13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	432F- 864F	10,000 ± 5%		

Ribbon-Lite

Multitube Gel Free Single Sheath Armored OFC
192F - 864F | Nova - G.657.A1 Single Mode Fiber



288F



864F

1 OUTER SHEATH
2 CORRUGATED STEEL TAPE
3 GEL FREE LOOSE TUBE
4 RIBBON
5 RIPCORD(S)
6 WATER BLOCKING TAPE
7 STRENGTH MEMBER
8 FILLER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Multitube design with ripcords for easy and quick mid span access
- Precise fiber and ribbon geometries result in excellent mass fusion splicing yields
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Steel tape armor provides rodent protection along with improved crush and impact protection
- Easily removable rugged thermoplastic jacket

Product Details

STL RIBBON-LITE Multitube Steel Tape Armored Cable combines robust performance for duct installations with the productivity of high-count mass fusion splicing. Twelve optical fibers are arranged into ribbon units by placing the fibers in a flat array of color coded fibers bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. Corrugated Steel Tape armor surrounds the cable core with thermoplastic jacket placed over the armor layer making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA 598C.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” RIBBON ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Ribbon	12
Ribbon Printing per Tube (4 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BLUE SAFETY RIBBON
Ribbon Printing per Tube (6 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, BLUE SAFETY RIBBON
Ribbon Printing per Tube (12 Ribbon/Tube)	BLUE SAFETY RIBBON, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, 7 RIBBON 7, 8 RIBBON 8, 9 RIBBON 9, 10 RIBBON 10, 11 RIBBON 11, 12 RIBBON 12, BLUE SAFETY RIBBON
Tube Material	Polypropylene (PP)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Water Blocking	Yarns and water swellable tape
Metallic Armoring	Corrugated Steel Tape (Un-bonded with Sheath)
No. of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics					
Product Code	**Fiber Count**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
RA0192FSN04TFBUUS	192	Blue, Orange, Green, Brown, Filler	1	23.8 (0.937)	352 (0.236)
RA0216FSN03TFBUUS	216	Blue, Orange, Green, Filler, Filler	2	23.8 (0.937)	365 (0.245)
RA0288FSN04TFBUUS	288	Blue, Orange, Green, Brown, Filler	1	23.8 (0.937)	375 (0.251)
RA0432FSN06TFBUUS	432	Blue, Orange, Green, Brown, Slate, White	0	26.2 (1.03)	440 (0.295)
RA0576FSN04TFBUUS	576	Blue, Orange, Green, Brown, Filler	1	26.6 (1.04)	420 (0.282)
RA0720FSN05TFBUUS	720	Blue, Orange, Green, Brown, Slate, Filler	1	29.0 (1.14)	530 (0.356)
RA0864FSN06TFBUUS	864	Blue, Orange, Green, Brown, Slate, White	0	29.0 (1.14)	530 (0.356)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	300 (171)	ICEA 640 | FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

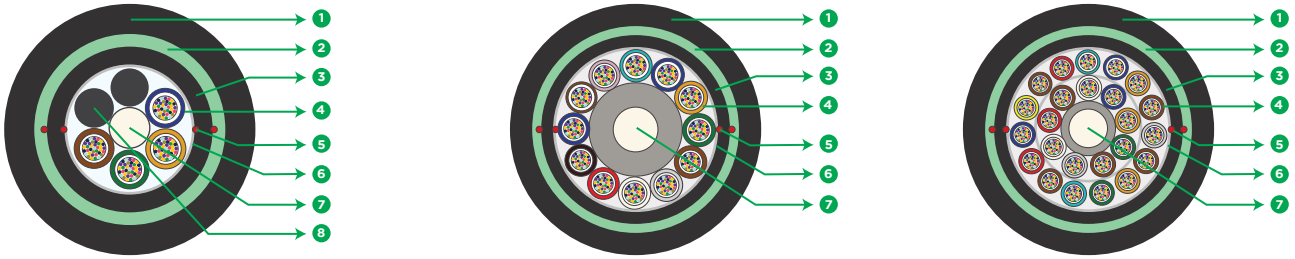
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode fiber.

Packing and Lengths

Drum Type	Fiber count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 360F	13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	432F- 864F	10,000 ± 5%		

Armor-Lite

Multitube Gel Free Double Sheath Armored OFC
4F - 288F | Nova - G.657.A1 Single Mode Fiber



1 OUTER JACKET
2 CORRUGATED STEEL TAPE
3 INNER JACKET
4 GEL FREE LOOSE TUBE
5 RIPCORD(S)
6 WATER BLOCKING TAPE
7 STRENGTH MEMBER
8 FILLER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Steel tape armor and PE jacket provide rodent protection along with improved crush and impact protection
- The Steel tape enables post installation cable locating
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- Tensile and crush resistance

Product Details

STL ARMOR-LITE Multitube Double Jacket Steel Tape Armored Cables are suitable for direct burial as well as for duct applications. ARMOR-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and the cable core is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. A Corrugated Steel Tape armor surrounds the cable core with thermoplastic jacket placed over the armor layer making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-5-10, Telcordia GR-20, ITU-T, RoHS, REACH.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	4 | 6 | 12
Tube Material	Polypropylene (PP)
Loose tube Size	2.4 mm (typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
Inner Sheath Material	Black Polyethylene
Metallic Armoring	Corrugated Steel Tape (Unbonded with Sheath)
No. of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
DB0004FSN01TFB2US	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	196 (0.131)
DB0006FSN01TFB2US	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	196 (0.131)
DB0012FSN01TFB2US	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	198 (0.133)
DB0024FSN02TFB2US	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	15.1 (0.59)	198 (0.133)
DB0036FSN03TFB2US	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	15.1 (0.59)	198 (0.133)
DB0048FSN04TFB2US	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	15.1 (0.59)	198 (0.133)
DB0072FSN06TFB2US	72	6	Blue, Orange, Green, Brown, Slate, White	0	15.1 (0.59)	198 (0.133)
DB0096FSN08TFB2US	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	16.8 (0.66)	222 (0.149)
DB0144FSN12TFB2US	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	20.2 (0.79)	312 (0.209)

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
DB0216FSN18TFB2US	216	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, **2nd Layer** - Red, Black, Yellow Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	20.2 (0.79)	306 (0.205)
DB0288FSN24TFB2US	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	22.8 (0.89)	368 (0.247)

Note : # - denotes single black stripe marking via inkjet or co-extrusion, white stripe marking for black loose tube.

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640 | FOTP-33
Crush Resistance (N/cm) (lbf/in)	400 (228.4)	ICEA 640 | FOTP-41
Impact Strength (Nm) (lbf.in)	25 (221.2)	ICEA 640 | FOTP-25
Torsion	±180°	ICEA 640 | FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640 | FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640 | FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640 | FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640 | FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

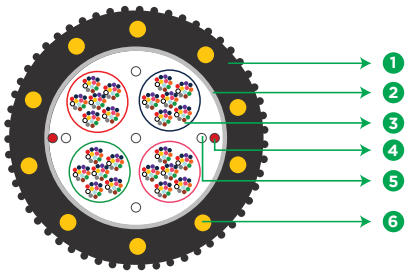
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

Packing and Lengths

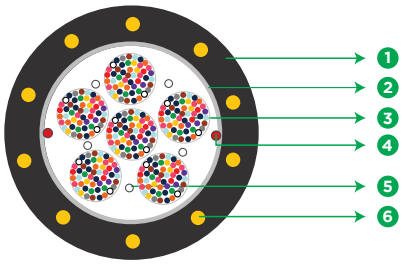
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Celesta

Intermittently Bonded Ribbon OFC
Single Sheath Duct



144F~576F



864-1728F

1. OUTER SHEATH
2. WATER BLOCKING TAPE
3. BUNDLE OF RIBBONS OF 12 FIBERS
4. RIPCORDS
5. WATER SWELLABLE YARNS
6. EMBEDDED STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Special bend insensitive fiber results in increased power budget and network serviceability
- Unique cable design allows deployment by blowing and pulling
- Innovative Color-coded bonded design for easier and faster Ribbon identification
- Precise fiber and ribbon geometries result in excellent mass fusion splicing yields
- Multiple ribbon bundles design with ripcords for easy and quick mid-span access
- Aramid reinforced plastic strength members for mitigating preferential bending
- Dry water-blocking technology for gel free core helps in quicker end preparation

Product Details

STL's Celesta Intermittent Bonded Ribbon Cable combines robust performance for duct installations with the productivity of high-count mass fusion splicing. The innovative ribbon bond design results in dense fiber packing and smaller cable diameter. This cable offers an outstanding solution for demanding high-growth, high-bandwidth communications applications like data centers, equipment connections within cabinets and outside plant applications.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-122-744, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C.

Printing Details

Printing : STL SM “FIBER COUNT” “FIBER TYPE” CELESTA IBR OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE FEET MARKING

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20, and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Type	STL Bow-Lite(E) ITU-T G.657A2
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	≤ 0.2
Ribbon Type	Intermittently Bonded Ribbon (IBR)
Fiber per IB Ribbon	12
Water Blocking Elements	Yarns and Water Swellable Tape
No. of Ripcords	2
Strength Member	Aramid Reinforced Plastic (ARP) Embedded in outer Sheath
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics						
Product Code	**No. of Fibers**	**Bundling of Ribbons (Bundle x Fiber)**	**Unit Binder Color**	**Cable Diameter mm (inch) (± 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**	**Tensile Strength N (lbf.)**
CR0144FS202BFP1US	144	2 X 72	Blue, Orange	11.7 (0.460)	78 (0.05)	1000 (224.8)
CR0288FS204BFP1US	288	4 X 72	Blue, Orange, Green, Brown	11.7 (0.460)	96 (0.06)	2500 (562)
CR0432FS206BFP1US	432	6 X 72	Blue, Orange, Green, Brown, Slate, White	12.7 (0.50)	110 (0.73)	2700 (606.9)
CR0576FS204BFP1US	576	4 X 144	Blue, Orange, Green, Brown	14.0 (0.55)	130 (0.08)	2700 (606.9)
CR0864FS206BFP1US*	864	6 x 144	Blue, Orange, Green, Brown, Slate, White	17.7 (0.69)	200 (0.13)	2700 (606.9)
CR1728FS203BFP1US*	1728	6 x 288	Blue, Orange, Green, Brown, Slate, White	23.5 (0.93)	332 (0.222)	2700 (606.9)

* 864F and 1728F shall have smooth surface.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – as per above table Long Term – 1/3rd of the short term tensile	ICEA 122-744|FOTP-33
Crush Resistance (N/cm) (lbf/in)	220 (125.62)	ICEA 122-744|FOTP-41
Impact Strength (Nm) (lb.in)	10 (88.5)	ICEA 122-744|FOTP-25
Torsion	±180°	ICEA 122-744|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 122-744|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 122-744|FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 122-744|FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 122-744|FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

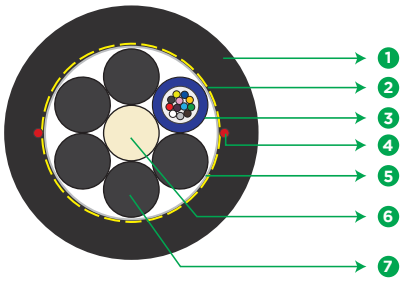
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

Packing and Lengths

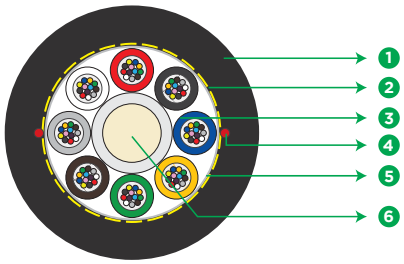
Drum Type	Length Multiple (feet)	Order Tolerance	Non-standard Length
Wooden Drums	10,000 | 20,000 ± 5%	± 5%	Max 20%, Customer Approval

Aerial Lite

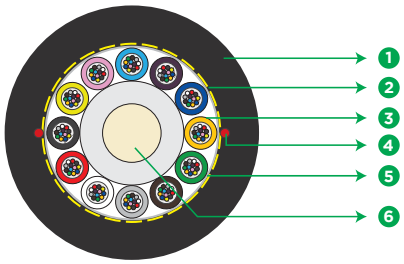
Multitube Gel Free Single Sheath OFC Single Mode Fiber



6 Elements

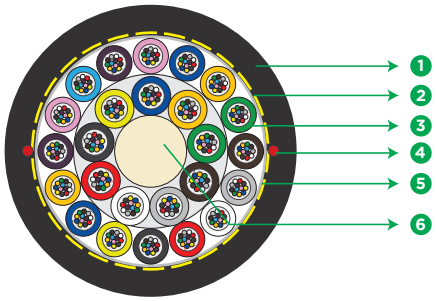


8 Elements



12 Elements

1 OUTER JACKET
2 ARAMID YARN
3 GEL FREE LOOSE TUBE
4 RIPCORDS
5 WATER BLOCKING TAPE
6 STRENGTH MEMBER
7 FILLER



24 Elements

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- This cable can be designed to suit specific requirements of span length, wind speed and other loading conditions
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- Flexible, light weight, easy to handle & install
- Tensile and crush resistant

Product Details

STL AERIAL-LITE Gel Free Multi-tube Single Jacket ADSS Cables are smaller in diameter and lighter in weight that enables them to be installed aerially in moderate field conditions. This cable is a stranded loose tube cable with optical Fibers placed inside robust buffer tubes stranded around a Fiber reinforced plastic (FRP) central strength member. In addition to optical Fibers, the buffer tubes contain water-swellable yarns, and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of cable core. High strength yarns are distributed over the core to provide the required tensile strength for aerial self-supporting applications.

Cable Performance Standards

Cable complies with the following standards IEC 60793, IEC 60794, Telcordia GR-20, IEEE, ITU-T, RoHS, and REACH.

Printing Details

Printing : STL SM NOVA “FIBER COUNT” AERIAL OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET MARKING”

Note : The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings.

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Fibers per Tube	12
Central Strength Member	FRP (Fiber Reinforced Plastic
Peripheral Strength Members	High Strength Aramid Yarns
Core Wrapping	Binder and water swellable tape
No. of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

Fiber Color Sequence (AS per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Cable Characteristics					
Product Code	**Ribbon per Tube**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch)(± 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
AA0012FSN01TFP1USH100M	1	Blue, Filler, Filler, Filler, Filler, Filler	5	11.4 (0.448)	90 (0.060)
AA0024FSN02TFP1USH100M	2	Blue, Orange, Filler, Filler, Filler, Filler	4	11.4 (0.448)	92 (0.061)
AA0036FSN03TFP1USH100M	3	Blue, Orange, Green, Filler, Filler, Filler	3	11.4 (0.448)	92 (0.061)
AA0048FSN04TFP1USH100M	4	Blue, Orange, Green, Brown, Filler, Filler	2	11.4 (0.448)	95 (0.063)
AA0072FSN06TFP1USH100M	6	Blue, Orange, Green, Brown, Slate, White	0	11.4 (0.448)	95 (0.063)
AA0096FSN08TFP1USH100M	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	13.4 (0.527)	142 (0.907)
AA0144FSN12TFP1USH100M	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	16.6 (0.653)	205 (0.137)
AA0288FSN24TFP1USH100M	12	Layer 1 : Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Layer 2: Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	19.2 (0.755)	260 (0.174)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	As mentioned in below tables	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	200 (114.20)	ICEA 640|FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.25)	ICEA 640|FOTP-25
Torsion	±180°	ICEA 640|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640|FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640|FOTP-82
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	ICEA 640|FOTP-3
Installation	-30°C to +70°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

Loading Conditions						
12-72 Fiber Count						
Operating Condition	Span Length(m)	Installation Sag	Ice Load (mm)	Wind Speed (Km/hr)	Max. Installation Tension (N)	Max. Allowable Tension (N)
NESCHeavy	10 0	1 %	12 .7	64	11 80	4880
96 Fiber Count						
Operating Condition	Span Length(m)	Installation Sag	Ice Load (mm)	Wind Speed (Km/hr)	Max. Installation Tension (N)	Max. Allowable Tension (N)
NESC Heavy	100	1%	12.7	64	16 60	6200
144 Fiber Count						
Operating Condition	Span Length(m)	Installation Sag	Ice Load (mm)	Wind Speed (Km/hr)	Max. Installation Tension (N)	Max. Allowable Tension (N)
NESC Heavy	100	1%	12.7	64	2500	7550
288 Fiber Count						
Operating Condition	Span Length(m)	Installation Sag	Ice Load (mm)	Wind Speed (Km/hr)	Max. Installation Tension (N)	Max. Allowable Tension (N)
NESC Heavy	100	1%	12.7	64	3250	9600

Note : Other Span and loading conditions are also available upon request.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

beyond tomorrow

About STL - Sterlite Technologies Ltd

STL is a global leader in end-to-end data network solutions.

We design and deploy high-capacity converged Fiber and wireless networks. With expertise ranging from optical Fiber and cables, hyper-scale network design, and deployment and network software, we are the industry's leading integrated solutions provider for global data networks. We partner with global telecom companies, cloud companies, citizen networks and large enterprises to design, build and manage such cloud native software-defined networks. STL has innovation at its core. With intense focus on end-to-end network solutions development, we conduct fundamental research in next-generation network applications at our Centres of Excellence. STL has strong global presence with next-gen optical preform, Fiber and cable manufacturing facilities in India, Italy, China and Brazil and two software-development centres.

Sterlite Technologies Inc.
1320 Main Street, Suite 300 Columbia, South Carolina - 29201 USA
Registered office: E1, MIDC Industrial Area, Aurangabad - 431 136, Maharashtra, India
CIN - L31300MH2000PLC69261

Visit our website **www.stl.tech** or contact us at **Inside.Sales@stl.tech** for more information