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Glass to **Gigabit Connectivity**

Product Catalogue

Optical Fibre Cable

Jan 2025

About STL

Glass to Gigabit Connectivity

We are the only company in the world to have unique capabilities across all layers of the network. From Photonics and material science-based precision manufacturing to algorithmic design, ultra-fast deployment and AI analytics. We believe in harnessing technology to create a world with next generation connected experiences that transform everyday living. With intense focus on end-to-end network solutions development, we conduct fundamental research in next-generation network applications at our Centres of Excellence. At last count, we have a global patent portfolio of 686* to our credit for optical connectivity, network services and virtual mobile edge solutions.

* Patents as on H1 of FY24

We are leading the future of networks

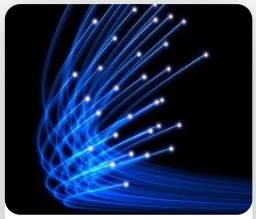
We have a strong global presence and have historically supplied to over a 100 countries!
Today, we are a $863 Mn. company (FY23 revenue), with almost 34% of our revenue being export driven. On the supply side, we have next-gen optical preform, fibre and cable manufacturing facilities in India, USA, Italy, China and Brazil. Our manufacturing facilities are world-class and we are the world's first integrated optical fibre and cable manufacturer to be Zero Waste to Landfill certified.

Customer Segments

- Telcos
- Cloud Companies
- Citizen Networks
- Large Enterprises

Business Units

Offerings



Optical Networking

- Optical Fibre
- Optical Fibre Cables
- Specialty Cables
- Optical Connectivity

Global Services

- Fibre Deployment Services
- Network Services
- Managed Services
- Cloud Services
- Data Center services
- Security Services

Digital and Technology Solutions

- Cloud & Cybersecurity
- Enterprise SaaS
- Data analytics & AI
- Product Engineering

Optical Networking Portfolio and Solutions

Optical Fibre	Optical Fibre Cable	Optical Connectivity	Enterprise Connectivity Solutions
			

30 Years of Experience in Optical Networking Solutions

End-to-end solutions with offerings across the value chain

Optical Fiber (OF)

Shendra, Aurangabad, India

Jiangsu Sterlite Tongguang Fibre Co. Limited, Haimen-City, China

Waluj, Aurangabad

Optical Fiber Cable (OFC) + Specialty Cable (SCB)

Rakholi, Silvassa, India

Metallurgica, Bresciana, Italy

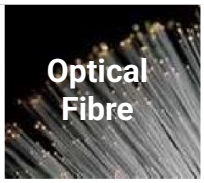
Sterlite Conduspar, Parana, Brazil

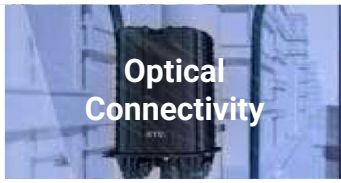
South Carolina, LugOff, USA

Optical Connectivity (OC)

Dadra & Nagar Haveli, India

Origgio, Italy





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Global Production Facilities*

Industry 4.0 Standards

Fully automated machinery with robotic operations

Efficient Supply Chain

Reduced delivery times and Supply Chain Management cost

Vertically Integrated

Shield from supply chain vulnerability

Wide product portfolio

Control over quality

Cost leadership

* Includes only fiber & cable manufacturing facilities

Index

Multi Loose Tube

Applications:

- **Aerial MLT**: Long spans between poles or buildings.
- **Direct Buried MLT**: Long-distance underground deployments without conduit.
- **Microduct MLT**: Medium to long runs in pre-installed microducts.
- **Duct MLT**: Medium to long spans within underground ducts/conduits.

Multi Loose Tube

STL's MLT cables provide high performance, flexibility, and a variety of customizations to suit your project needs.

Industries it may cater to:

Telecom

Long-distance and backbone networks for high-capacity data transmission.

Enterprise & Data Centers

High-bandwidth solutions for campus and building interconnections.

Utilities

Power grids and smart networks requiring reliable communication lines.

Transportation

Fiber deployment along railways, highways, and tunnels.

Municipal & Smart Cities

Network backbones for smart infrastructure, surveillance, and IoT applications.

Deployment Type: Suitable for **long-distance** backbone and distribution networks.

Cable Runs: Long spans (10-50 km or more).

Our MLT (Multi-Loose Tube) fiber optic cables offer superior performance and flexibility for a wide range of installations. But choosing the right cable depends on where you'll be placing it. We offer four distinct MLT cable types to perfectly match your application:

- **Aerial MLT:** Designed for suspension in air, often between poles or buildings. This cable features a strong outer jacket with UV protection to withstand harsh outdoor environments.
- **Direct Buried MLT:** Built for toughness, this cable can be placed directly underground without needing conduit protection. It has a ruggedized jacket and features that resist moisture and damage from soil conditions.
- **Microduct MLT:** Perfect for pre-installed microducts, this compact cable easily slides through narrow pathways. It's ideal for high-fiber count installations in congested spaces.
- **Duct MLT:** Designed for placement within existing underground ducts or conduits, this cable provides reliable performance with a standard outer jacket for added protection.

No matter your project requirements, we have the MLT cable solution to ensure optimal fiber optic performance.

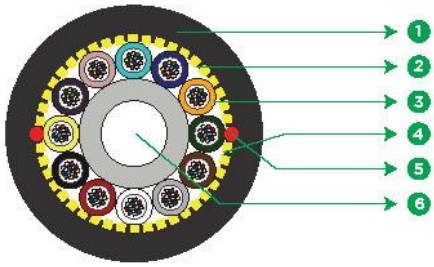
Multi Loose Tube

Aerial Cables

Product Specification

Aerial-Lite

Multitube Gel Filled ADSS OFC
12F - 144F | OH Lite - G.652.D Single Mode Fibre



1 OUTER JACKET
2 ARAMID YARNS
3 GEL FILLED TUBE
4 WATER BLOCKING TAPES
4 RIPCORD(S)
4 STRENGTH MEMBER

** 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 Filled 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 fibres placed inside robust buffer tubes stranded around a fibre reinforced plastic (FRP) central strength member. In addition to optical fibres, the buffer tubes contain thixotropic gel, and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of the 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, ITU-T, RoHS and REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE "FIBRE COUNT" ADSS OFC LENGTH LASER SYMBOL TELEPHONE SYMBOL "YEAR OF MANUFACTURE" "LENGTH CODE" "METER 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 Fibre Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12
Central Strength Member	FRP (Fibre Reinforced Plastic)
Tube Material	Thermoplastic material
Fillers (if required)	Black Thermoplastic Material
Water Blocking Elements	Water Swellable Yarns and Tape
Core Wrapping	Binder and Water Swellable Tape
Peripheral Strength Members	High Strength Aramid Yarns
No of Ripcords Below Tape	2
Outer Sheath Material	UV Proof Black Polyethylene

Fibre Color Sequence (as per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Turquoise

Cable Characteristics							
Product Code	Fibre Count	Tubes	Tube Color Sequence	No. of Fillers	Cable Diameter mm (± 0.3)	Cable Weight (Kg/km) ± 10%	Max. Tensile Strength N
A10012S301GAP100L2	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	11.0	90	3200
A10024S302GAP100L2	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	11.0	90	3200
A10048S304GAP100L2	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	11.0	90	3200
A10072S306GAP100L2	72	6	Blue, Orange, Green, Brown, Slate, White	0	11.0	90	3200
A10096S308GAP100L2	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	13.0	115	3800
A10144S312GAP100L2	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua	0	16.5	200	4800

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	As mentioned in above tables	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3A
Impact Strength(Nm)	5	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius	20 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-E11
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-21-E11
Installation	-10° 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 fibre.

Loading Condition				
Loading Conditions	**Installation Sag**	**Span Length (mm)**	**Wind Speed (km/hr)**	**Ice Load (mm)**
NESC Light	1%	150	97	0

** Cables with other span length and loading conditions can also be configured. Contact our sales representative for details.

Packing and Lengths

Drum Type	Length Multiple (in km)	Tolerance	Short Lengths
Wooden Drums	4 ± 5%	±5%	Max 5%, Customer Approval

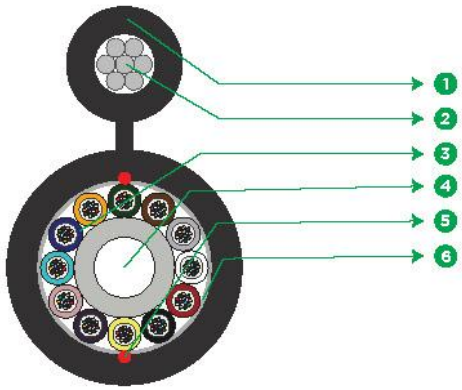
For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

Product Specification

Aerial-Lite

Multitube Gel Filled Figure - 8 OFC
12F - 144F | OH Lite - G.652.D Single Mode Fibre



1 OUTER JACKET
2 MESSENGER WIRE
3 GEL FILLED TUBE
4 STRENGTH MEMBER
5 RIPCORD(S)
6 WATER BLOCKING TAPE

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Fig 8 cable design provides easy and economical one step installation
- Multi tube design with ripcords for easy and quick mid span access
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- Tensile and crush resistant

Product Details

STL AERIAL-LITE Multitube Single Jacket Figure-8 cable is designed for outside plant (OSP) aerial self-supported applications in distribution as well as local and campus network loop architectures These cables are used in aerial applications for short to medium span lengths including deployment along existing aerial Rights-of-way. Once detached from the steel messenger wire, cable is suitable for aerial-to-duct / underground transitions. This design provides easy and economical one-step installation and stable performance over a wide temperature range and is compatible with any local distribution telecommunication network.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM "FIBRE TYPE" "FIBRE COUNT" SJ FIG-8 OFC LASER SYMBOL TELEPHONE SYMBOL "YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note: 1. 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.
2. Any other cable printing can be customized based on customer request and agreement

Specifications

Physical Characteristics	
Fibre Type	STL Fibre ITU-T G.652.D
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12
Tube Material	Thermoplastic Material
Central Strength Member	FRP (Fibre Reinforced Plastic)
Filler (if required)	Black Thermoplastic Material
Outer Sheath Material	UV Proof Black Polyethylene
No of Ripcords Below Outer Sheath	2
Messenger Wire (Nominal)	1.03 mm x 7 Nos

Fibre Color Sequence (as per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Turquoise

Cable Characteristics						
Product Code	Fibre Count	Tubes	Tube Color Sequence	No. of Fillers	Cable Diameter mm (± 1.0)	Cable Weight (Kg/km) ± 10%
A20012S301GAP100W4	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	9.5 X 17.5	140
A20024S302GAP100W4	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	9.5 X 17.5	140
A20048S304GAP100W4	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	9.5 X 17.5	140
A20072S306GAP100W4	72	6	Blue, Orange, Green, Brown, Slate, White	0	9.5 X 17.5	140
A20096S308GAP100W4	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	11.0 X 20	170
A20144S312GAP100W4	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua	0	13.5 X 21.5	215

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	3000	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	5	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius	20 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +70° C	
Operation	-40° C to +70° C	
Storage	-40° C to +70° C	

Note: Change in attenuation after and before testing shall be ≤ 0.05 dB/km.

Packing and Lengths

Drum Type	Length Multiple (in km)	Tolerance	Short Lengths
Wooden Drums	4 ± 5%	±5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

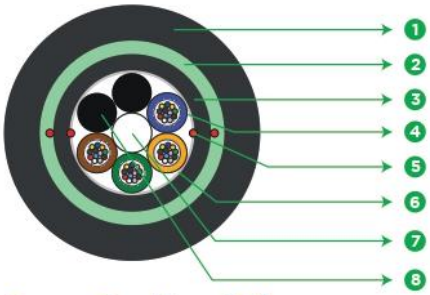
Multi Loose Tube

Direct Buried Cables

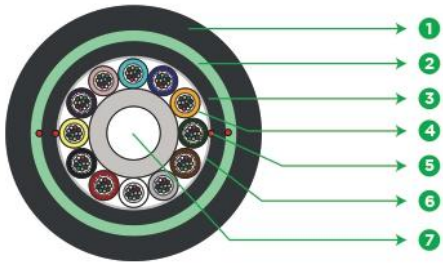
Product Specification

ARMOR -LITE

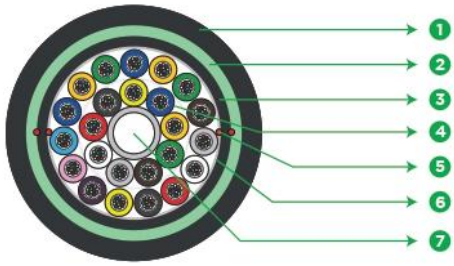
Out-Side Plant, Double Jacket, corrugated Steel Tape armoured, Gel filled Multi-Loose Tube Optical Fibre Cables 12F – 288F



Cross Section 48f



Cross Section 144f



Cross Section 288f

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Steel Tape armour and 2 HDPE jackets provide rodent protection along with improved crush and impact protection.
- The Steel Tape armour provides excellent rodent protection and enables post installation cable locating
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle & install

Product Details

STL ARMOR -LITE Out-Side Plant, Double Jacket, corrugated Steel Tape armoured, Gel filled Multi-Loose Tube Optical Fibre Cables are suitable for direct burial as well as for duct applications. These cables are based on a loose tube structure with optical fibres placed inside robust buffer tubes stranded around a fibre-glass reinforced plastic (FRP) central strength member. In addition to optical fibres, the buffer tubes contain water blocking gel, and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of cable core. A corrugated Steel Tape armour surrounds the inner jacket and the outer jacket of thermoplastic material is extruded over the armouring bonded to is thus making the cable robust and installation friendly.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

STERLITE SM FIBRE TYPE FIBRE COUNT F ARMOR LITE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method : Ink-Jet

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/√km)	≤ 0.1
Fibres per Tube	12
Central Strength Member	FRP (Fibre Reinforced Plastic)
Fillers (if required)	Thermoplastic material, Black colour
Core binder	Binders and water swellable yarns and tape
No of Ripcords Below Inner Sheath	2
Inner Jacket Thickness (mm)	1.0 (nominal)
Inner Sheath Material	Black HDPE
Metallic Armouring	Corrugated Steel Tape
No of Ripcords Below Outer Sheath	2
Outer Jacket Thickness (mm)	1.5 (nominal)
Outer Jacket Material	UV Proof Black, HDPE

Fibres and Tubes Colour Sequence (as per DIN/VDE 0888)[1,2]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Notes: [1]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking), the tubes above 12, when present, have a longitudinal black stripe ink-jet marked or co-extruded (black tube with white stripe).
[2]Other fibres and tubes colour sequences are available on demand, prior approval.

Cable Designs with Double Jacket							
Fibre count	**Fibre type**	**Fibre count**	**Tubes/Fillers**	**Buffer tube size (mm) ±0.1**	**Cable Diameter (mm) ±0.5mm**	**Cable Weight (kg/km) ± 10%**	**Tensile Strength Short Term (N)**
B10012S301GDB20000	G.652 D	12	1/5	2.4	13.4	170	3000
B10024S302GDB20000	G.652 D	24	2/4	2.4	13.4	170	3000
B10048S304GDB20000	G.652 D	48	4/2	2.4	13.4	170	3000
B10072S306GDB20000	G.652 D	72	6/0	2.4	13.4	170	3000
B10096S308GDB20000	G.652 D	96	8/0	2.4	14.2	205	3000
B10144S312GDB20000	G.652 D	144	12/0	2.4	17.0	265	3000
B10192S316GDB20000	G.652 D	192	(6+10)[3]/2	2.4	17.4	260	3000
B10216S318GDB20000	G.652 D	216	(6+12)[3]/0	2.4	17.4	260	3000
B10288S324GDB20000	G.652 D	288	(9+15)[3]/0	2.4	19.2	330	3000
B10012S101GDB20000	G.657 A1	12	1/5	2.4	13.4	170	3000
B10024S102GDB20000	G.657 A1	24	2/4	2.4	13.4	170	3000
B10048S104GDB20000	G.657 A1	48	4/2	2.4	13.4	170	3000
B10072S106GDB20000	G.657 A1	72	6/0	2.4	13.4	170	3000
B10096S108GDB20000	G.657 A1	96	8/0	2.4	14.2	205	3000
B10144S112GDB20000	G.657 A1	144	12/0	2.4	17.0	265	3000
B10192S116GDB20000	G.657 A1	192	(6+10)[3]/2	2.4	17.4	260	3000
B10216S118GDB20000	G.657 A1	216	(6+12)[3]/0	2.4	17.4	260	3000
B10288S124GDB20000	G.657 A1	288	(9+15)[3]/0	2.4	19.2	330	3000

Notes: [3]Cable core having 2 layers of loose tubes: first addendum in brackets = number of active tubes in inner layer, second addendum in brackets = number of active tubes in outer layer

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength Short term (N)	IEC-60794-1-21-E1	As per above tables
Crush Resistance (N/10cm)	IEC-60794-1-21-E3A	3000
Impact Strength (N·m)	IEC-60794-1-21-E4	20
Torsion	IEC-60794-1-21-E7	±180°
Repeated Bending	IEC-60794-1-21-E6	20 x OD
Bend	IEC-60794-1-21-E11A	20 x OD
Min. Bend Radius (During Installation)		20 x OD
Min. Bend Radius (After Installation)		15 x OD
Water Penetration Test	IEC-60794-1-21-F5B	1m waterhead, 3m samples, 24 h
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 h
Temperature Performance	IEC-60794-1-22-F1	
Installation		-5° C to +50° C
Operation		-30° C to +70° C
Storage		-40° C to +70° C

Note :
All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in feet)
Wooden Drums	4 ± 5% (For all Fibre Counts)

Ordering Information

Please create the desired Product Code following the instructions below:

Product type		Fibre count (0004 – 0288)				Fibre type		No. of active tubes/bundles (01-24)		Tube/ Core type	Fibres/tubes colour code	Jacket type		Running number		Special requirement	
		1				2		3			4						
B	1	-	-	-	-	-	-	-	-	G	-	B	2	0	0	0	0

1. Fibre count by indicating the corresponding number from 0004 to 0288

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	3	G.652D	OH-LITE
S	1	G.652D/G.657A1	BOW-LITE
S	N	G.657A1adv./G.652D	OH-LITE NOVA
S	5	G.655	DOF LITE LEA

3. Select number of active tubes/bundles by indicating the corresponding number from 01 to 24

4. Fibres and tubes colour sequence available options[4]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland[5]
I	Italy
L	Hungary
M	Poland

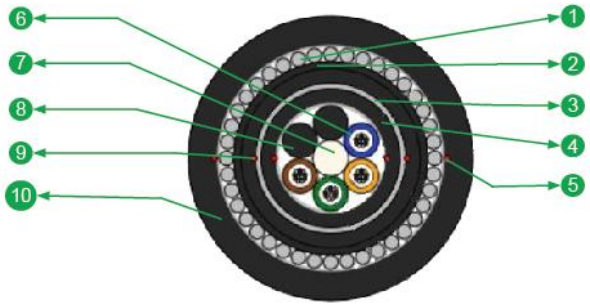
Note: [4]other colour codes are available on demand, prior STL approval
[5]The standard Swiss colour code includes also the Black jacket with 2 longitudinal Orange stripes

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

ArmorLite®

OSP QJ Wire Armored G.652 D Gel Filled OFC



Steel Wire Armored Design

1 STEEL WIRE	2 SEPARATION SHEATH	3 LAMINATED ALUMINIUM TAPE	4 INNER JACKET	4 WATER BLOCKING TAPE
5 GEL FILLED TUBE	6 RIPCORD(S)	7 STRENGTH MEMBERS	8 FILLER	8 OUTER JACKET

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Steel wire armour provide rodent protection improved crush and impact protection
- Jelly filled tube and dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged thermoplastic jacket
- Flexible, easy to handle & install
- Tensile and crush resistant
- Harsh Hydrocarbon environment resistant

Product Details

STL ARMOR-LITE® Multitube Quadruple Jacket Steel Wire Armored Cables are suitable for direct buried applications. In addition to optical fibres, the buffer tubes contain water blocking gel, and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of the cable core.

Cable Performance Standards

Cable complies to the following standards IEC 60793,IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Sterlite sm “fiber count” g652d armor laser symbol telephone symbol year of manufacture length code meter marking

Note : Printing shall be done with white hot foil. 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	
Fibre Type	Sterlite Fibre ITU-T G.652 D
Maximum Cabled Attenuation (dB/km)	1310nm : 0.36 & 1550nm : 0.23
PMD/LDV (ps/sqrt.km)	</= 0.1
Fibre Color Sequence	Blue,Orange,Green,Brown,Slate,White,Red,Black,Yellow,Violet,Pink,Aqua
Tube Material	PBT & Filling gel
Central Strength Members	FRP (Fibre Reinforced Plastic)
Water Blocking	Black
Metallic Armoring (For Armored Design)	Black Thermoplastic Flame Retardant Polyolefin (1.0mm nominal thickness)
No of Ripcords Below Aluminium Tape	2
Moisture Barrier	Aluminium Tape
Intermediate sheath- 1	Black HDPE (1.0mm nominal thickness)
Intermediate sheath- 2	Black Nylon (0.5mm nominal thickness)
No of Ripcords Below Intermediate Sheath-1	2
Metallic Armoring	Steel Wire Armoring
No of Ripcords Below Outer Sheath	2
Outer Sheath	UV Proof Black Thermoplastic Flame Retardant Polyolefin Sheath

Optical Characteristics	
ITU-T Standards	STL NOVA 250 (ITU-T G.657.A1/G.652.D)
Mode Field Diameter at 1310nm	9.1 ± 0.4 µm
Mode Field Diameter at 1550nm	10.3 ± 0.5 µm
Cladding Diameter	125 ±0.7 µm
Coating Diameter (Uncolored)	242 ± 5 µm
Cutoff Wavelength	≤1260 nm
Max Core Concentricity Error	0.50µm
Cladding Non-circularity	0.70%
Chromatic Dispersion at 1285-1330nm	3.5 ps/(nm x km)
Chromatic Dispersion at 1550nm	17.5 ps/(nm x km)
Macro Bend Loss	1 turn 10mm radius : ≤0.5dB @1550nm & ≤1.5 dB@1625nm 10 turns 15mm radius : ≤0.1dB @1550nm & ≤ 0.3 dB@1625nm 1 turn 16mm radius : ≤ 0.03dB@1550nm

Cable Characteristics					
Fibre Count	Fibre Per Tube	No. of Tubes/Filler	Tubes Color Sequence	Cable Diameter (+/- 2.0 mm)	Cable Weight (kg/km +/- 10%)
4	4	1/5	Blue, Filler, Filler, Filler, Filler, Filler	20.0	600
24	12	2/4	Blue, Orange, Filler, Filler, Filler, Filler	20.0	600
48	12	4/2	Blue, Orange, Green, Brown, Filler, Filler	20.0	600
72	12	6/0	Blue,Orange,Green,Brown,Slate,White	20.0	600

Mechanical & Environmental Characteristics		
Cable Characteristics	Testing Standard	Cable Performance
Tensile Strength(N)	IEC-60794-1-21-E1	5000
Crush Resistance (N/100mmX100mm)	IEC-60794-1-21-E3	4000
Impact Strength(Nm)	IEC-60794-1-21-E4	20
Torsion	IEC-60794-1-21-E7	±180º
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	20 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	12.5 D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24 h
Drip Test	IEC-60794-1-21-E14	30 cm, 70ºC, 24 h
Temperature Performance	IEC-60794-1-22-F1	
Installation		-10ºC to +70ºC
Operation		-40ºC to +70ºC
Storage		-40ºC to +70ºC
Flame Retardant Test Standards	IEC 60332-3-22	

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 fibre.

Packing and Lengths

Drum Type	Length Multiple (in KM)	Order Tolerance	Short Lengths
Wooden Drums	4 ± 5%	± 5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

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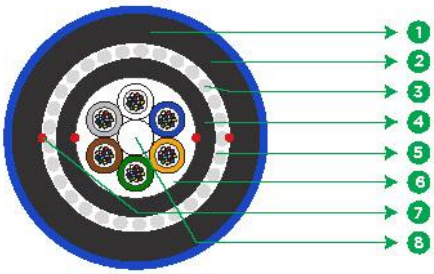
You can also visit our website at **www.stl.tech**

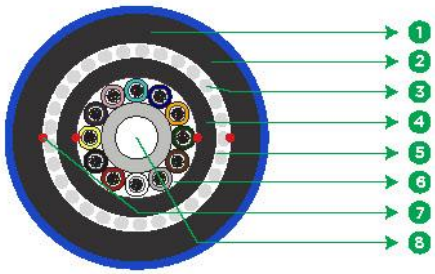
Product Specification

Armor Lite

Multitube Gel Filled Double Jacket FRP Armored OFC
12F - 144F | OH-Lite - G.652.D Single Mode Fiber



Cross Section 72F



Cross Section 144F

1. OUTER PA JACKET
2. OUTER PE SHEATH
3. FLAT FRP
4. INNER JACKET
5. WATER BLOCKING TAPE
6. GEL FILLED TUBE
7. RIPCORDS
8. STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Flat FRP dielectric armoring provides additional protection against crush, impact and rodent attacks
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged UV stabilized thermoplastic jackets
- Resistant to termite attacks
- Ripcords for easy and quick mid span access

Product Details

STL ARMOR-LITE OSP DJ Flat FRP Armored Multitube Double Jacket Fiber Optic Cables are typically used for outside plant (OSP) applications. Suitable for directly buried by cable plough and open trench installation methods in harsh environments. This cable comes with loose tubes containing optical fiber & water blocking gel, loose tube is S-Z stranded over FRP, surrounded with water-swellable tape to prevent water ingress in the cable. An inner sheath of polyethylene is extruded over stranded core and Flat FRPs are helically wrapped over the inner sheath forming a rodent protected dielectric armoring. A thermoplastic dual jacket of polyethylene & polyamide is extruded over the FRP armor layer making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-1-21/22, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBER TYPE FIBER COUNT F DIRECT BURIED FRP ARMOR OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "METER" 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 OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.22 ; 1625 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibers per Tube	12
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
Inner Sheath Material	Black Polyethylene
No of Ripcords Below Inner Sheath	2
Peripheral Strength Members	Flat FRP
No of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene
Outer Jacket Material	UV Stabilized Blue Nylon (bonded to PE Sheath)

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 (± 1.0)	Cable Weight Kg/Km (± 10%)
B30012S301GAP40000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.5	210
B30024S302GAP40000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	15.5	210
B30036S303GAP40000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	15.5	210
B30048S304GAP40000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	15.5	210
B30072S306GAP40000	72	6	Blue, Orange, Green, Filler, Filler, Filler	0	15.5	210
B30096S308GAP40000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	17.0	260
B30144S312GAP40000	144	12	Blue, Orange, Green, Brown, Slate, White, Red,Black, Yellow, Violet, Rose, Aqua	0	19.5	335

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	6000	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	6000	IEC-60794-1-21-E3
Impact Strength (Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius	30 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +70° C	
Operation	-20° C to +70° C	
Storage	-30° C to +70° C	

Note: All tests shall be carried out as per IEC standards. Change in attenuation after test shall be ≤ 0.1 dB/ km for Single Mode Fiber.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	4/6 ± 5%	±5%	Max 20%, Customer Approval

For additional information please contact your sales representative.

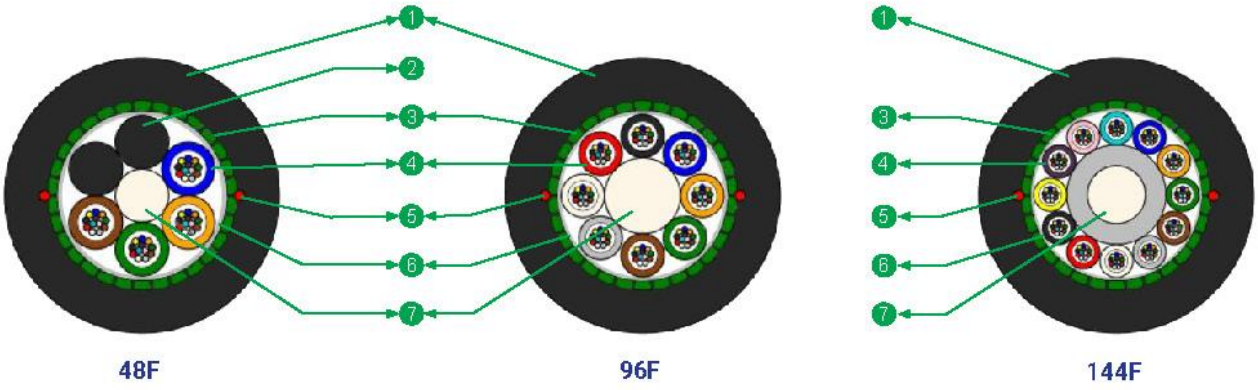
You can also visit our website at www.stl.tech

Product Specification

DuctLite™

Multiloose Tube LSZH Duct Lite OFC

48,96 & 144F SM G.652 D/G.657 A1/OM1/OM2/OM3/OM4



1 OUTER JACKET
2 FILLER
3 GLASS ROVING YARNS
4 GEL FILLED TUBE
5 RIPCORD(S)
6 WATER BLOCKING TAPE
7 STRENGTH MEMBER

**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
- Rodent resistant
- Flexible, light weight, easy to handle & install
- Tensile and crush resistant
- UV protected

Product Details

Sterlite Tech™ DUCT-LITE® Multitube Single Jacket Fibre Optic Cables are suitable for duct applications. This cable is a stranded loose tube cable with optical fibres placed inside robust buffer tubes stranded around a fibre reinforced plastic (FRP) central strength member. In addition to optical fibres, the buffer tubes contain water blocking gel and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of cable core.

Fibres and Cable Performance Standards

Cable complies to the following standards IEC 60793,IEC 60794, Telecordia GR-20, ITU-T, RoHS, Reach.

Printing Details

Printing : STERLITE SM 48F/96F/144F G652 D/G.657 A1/OM1/OM2/OM3/OM4 DUCT LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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	48	96	144
Fiber Type	Sterlite Fibre ITU-T G.652 D/G.657 A1/OM1/OM2/OM3/OM4		
Maximum Cabled Attenuation (dB/km)	G.652 D/G.657A1: 1310nm : 0.35 & 1550nm : 0.23 OM1/OM2/OM3/OM4:850 nm :<= 3.0 & 1300 nm : <= 1.5		
Link Design PMD (ps/sqrt.km)	≤ 0.1		
Fibres per tube	12		
Tube size (mm)	2		
Central Strength Members	FRP (Fibre Reinforced Plastic)		
No of Tubes in Layer 1	4	8	12
Tube Color Sequence	Blue, Orange, Green, Brown, Filler, Filler	Blue, Orange, Green, Brown, Slate, White, Red, Black	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua
No of Fillers	2	0	0
Filler Color	Black	NA	NA
Peripheral Strength Members	Glass Roving Yarns		
Outer Sheath Material	UV Proof Black LSZH		
Nominal Sheath Thickness (mm)	1.6		
No of Ripcords Below Outer Sheath	2		
Nominal Cable Dimensions (mm)	10.2+/- 0.5	11.8+/- 0.5	14.2+/- 0.5
Nominal Cable Weight (kg/km)	104+/- 10%	139+/- 10%	194+/- 10%

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

Specifications

Mechanical & Environmental Characteristics [2]		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	48F - 2700 | 96F - 3500 | 144F - 4500	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	5	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius (During Installation)	15 D	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	20 D	IEC-60794-1-21-E11
Water Penetration Test	1m head, 3m samples, 24 hrs	IEC-60794-1-22-F5
Drip Test	30 cm, 70°C, 24 hr	IEC-60794-1-21-E14
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +70° C	
Operation	-40° C to +70° C	
Storage	-40° C to +70° C	

Note 2: 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 fibre and </= 0.3 dB/km for Multimode fibre.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	4 +/- 5%	+/- 5%	Max 5%, Customer Approval

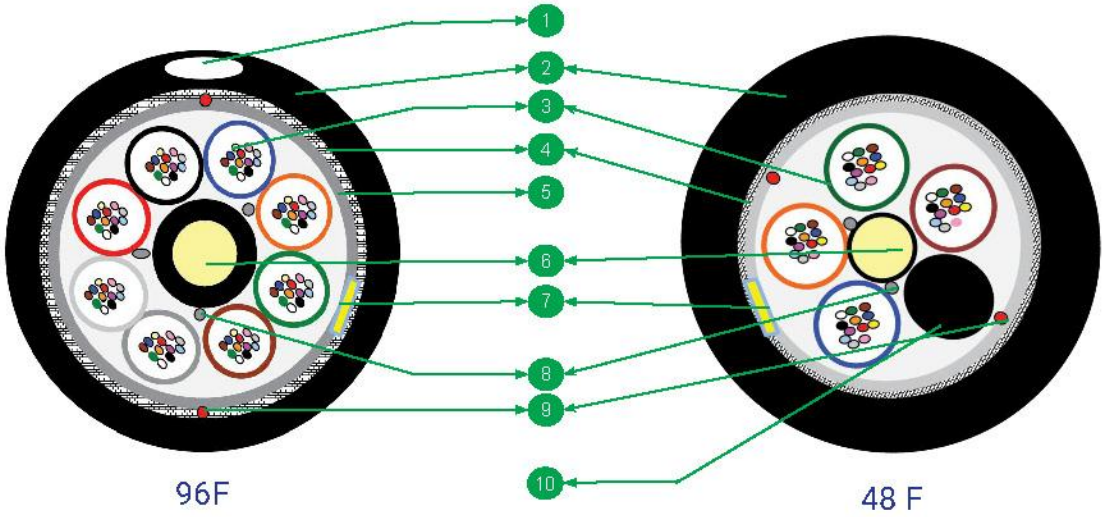
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

ARMOUR-LITE-96F-48 F SM (G657A1 NOVA)

Multitube Single Sheath Armor Lite Optical Fibre Cable



1 WHITE STRIPE MARKING
2 BLACK HDPE OUTER SHEATH
3 LOOSE TUBE WITH FIBER & JELLY
4 CORRUGATED STEEL TAPE
5 BINDER & WATER SWELLABLE TAPE
6 CENTRAL STRENGTH MEMBER(FRP)
7 IDENTIFICATION TAPE
8 WATER SWELLABLE YARNS
9 RIPCORD(s)
10 FILLER

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
- Wet water-blocking technology helps to avoid in water ingress
- Easily removable rugged thermoplastic jacket
- Tensile and crush resistant

Product Details

STL™ ARMOUR-LITE® Multitube Single Jacket Fibre Optic Cables are typically used for outside plant (OSP) applications. This cable can be installed in ducts with either pulling or blowing techniques.

Cable Performance Standards

The cables comply to the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

STERLITE 48F G657A1 NOVA ARMOUR OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE BHARTI AIRTEL LIMITED BATCH ID METER MARKING

Note: The accuracy of marking shall be +0.5%,-0%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supersedes the earlier markings..

Specifications

Physical Characteristics		
Fibre Count	96	48
Fibre Type	Sterlite Fiber, ITU.T - G.657A1 or Superior	
Maximum Cabled Attenuation (dB/km)	1310nm : 0.34 & 1550nm : 0.20 & 1625nm : 0.23	
Fibres per Tube | Fibre Color Sequence	12 | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua.	
Tube Material	Thermoplastic Material (PBTP/PP)	
Tube Size (mm)	2.1± 0.2 mm Nominal Diameter	
Central Strength Member	Fiber Reinforced Plastic (Bare FRP or upjacketed FRP) for tensile strength & anti buckling properties	
No of Tubes in Layer	8 Nos.	4 Nos.
Tube Color Sequence	Blue, Orange, Green, Brown, Slate, White, Red, Black.	Blue, Orange, Green, Brown.
Water blocking compound	Water Swellable Yarns are added to cable core to prevent water ingress in cable core.	
Core wrapping	Binder and Water Swellable Tape	
Metallic Armoring	Corrugated Steel Tape 0.125+0.005 mm Nominal Thickness	
No of Ripcords Below Steel Tape	2	
Outer Sheath Material	UV Proof Black High Density Polyethylene	
Minimum Sheath Thickness (mm)	2.4	
Nominal Cable Dimensions (mm)	12.5 ± 5%	11.2± 5%
Nominal Cable Weight (kg/km)	135 ± 10%	110 ±10%

Mechanical & Environmental Characteristics			
Cable Characteristics	Testing Standard	96F	48F
		Cable Performance	
Tensile Strength (N)	IEC-60794-1-21-E1	1.3 W @ 0.25% Fiber Strain	
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	4000 N / 100*100 mm, No Fiber Break, No Jacket Damage	
Impact Strength(Nm)	IEC-60794-1-21-E4	50 N, 0.5m, No Fiber Break, No Jacket Damage	
Torsion	IEC-60794-1-21-E7	±180°, 100N, 2m	
Cable Bending Radius	IEC-60794-1-21-E11	20D, No FRP Break, No Tube Kink, No Jacket Damage	
Repeated Bending	IEC-60794-1-21-E6	20 D 30 cycle (D is cable diameter)	
Kink	IEC-60794-1-21-E10	10 times Min Bending Radius (20D)	
Water Penetration Test	IEC-60794-1-22-F5	1m head, 3m samples, 24 hrs.	
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr	
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km	
Installation		-20°C to +70°C	
Operation		-20°C to +70°C	
Storage		-20°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 fibre and </= 0.3 dB/km for Multimode fibre.

Specifications

Drum Type	Length Multiple (in feets)	Order Tolerance	Short Lengths
Wooden Drums	4 Km + 5%,2 Km + 5%	± 5%	Max 5%, Customer Approval

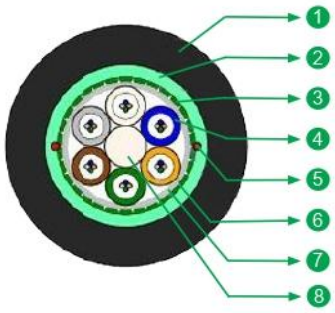
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

ARMOUR-LITE

Multitube Single Jacket Fibre Optic Cables



1 OUTER JACKET
2 CORRUGATED STEEL TAPE
3 GLASS ROVING YARNS
4 GEL FILLED TUBE
5 RIPCORD(S)
6 WATER BLOCKING TAPE
7 POLYFILM
8 STRENGTH MEMBER

** 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
- Wet water-blocking technology helps to avoid in water ingress
- Easily removable rugged thermoplastic jacket
- Tensile and crush resistant

Product Details

STL™ ARMOUR-LITE® Multitube Single Jacket Fibre Optic Cables are typically used for outside plant (OSP) applications. This cable can be installed in ducts with either pulling or blowing techniques.

Cable Performance Standards

The cables comply to the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

STERLITE TELEPHONE SYMBOL LASER SYMBOL BSNL BSNL LOGO 24F G652D SM LT ARMOUR YEAR OF MANUFACTURE LENGTH CODE METER 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	
Fibre Count	24
Fibre Type	Sterlite Fibre ITU-T G.652 D
Maximum Cabled Attenuation (dB/km)	1310nm : 0.36 ,1550nm : 0.23 & 1625nm : 0.26
Fibres per Tube & Fibre Color Sequence	4 & Blue,Orange,Green,Natural
Tube Material	PBT & Thixotropic gel to prevent water ingress in loose tube
Tube Size (mm)	Tube OD 1.9 +/- 0.1, ID 1.2mm Min
Central Strength Member	FRP (Fibre Reinforced Plastic) 2.0 + 0.1,-0.0 mm (Nominal) to provide tensile strength and ant buckling properties.
No of Tubes in Layer	6
Tube Color Sequence	Blue,Orange,Green,Brown,Slate,White
Water blocking compound	Cable flooding gel is added in interstices of core to prevent water ingress in cable core
Core wrapping	Binder and Polyester Tape & Water Swellable Tape
Peripheral Strength Members	Glass Yarns to meet the required tensile strength (>5.41 Kg/Km)
Metallic Armoring	Corrugated ECCS Tape (0.15+0.01 mm for steel tape & 0.05+0.01 mm for co-polymer)
No of Ripcords Below Steel Tape	2
Outer Sheath Material	UV Proof Black HDPE
Minimum Sheath Thickness (mm)	1.8
Nominal Cable Dimensions (mm)	11.5+/- 0.5
Nominal Cable Weight (kg/km)	130±10%

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard**	**Cable Performance**
Tensile Strength (N)	IEC-60794-1-21-E1	2.5xWx9.81 N or 2700N whichever is lower(W=1Km cable weight in Kg)
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	2000N 100x100 mm
Impact Strength(Nm)	IEC-60794-1-21-E4	50N, 0.5 m, 10 impacts
Torsion	IEC-60794-1-21-E7	2m,100N
Cable Bend Test (mm)	IEC-60794-1-21-E11	20 D (D is cable diameter)
Repeated Bending	IEC-60794-1-21-E6	20 D 30 cycle (D is cable diameter)
Kink	IEC-60794-1-21-E10	10 times Min Bending Radius (20D)
Water Penetration Test	IEC-60794-1-22-F5	1m head, 3m samples, 24 hrs
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10°C to +60°C
Operation		-20°C to +70°C
Storage		-20°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 fibre and </= 0.3 dB/km for Multimode fibre.

Specifications

Drum Type	Length Multiple (in feets)	Order Tolerance	Short Lengths
Wooden Drums	2 ± 5%	± 5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Multi Loose Tube

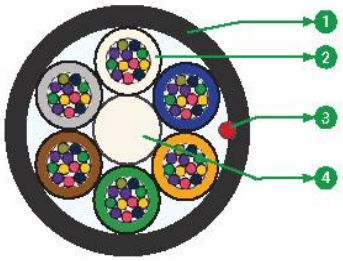
Microduct Cables

Product Specification

Micro-Lite

Multitube Single Sheath OFC

G.657.A1 and G.657.A2 Single Mode Fiber



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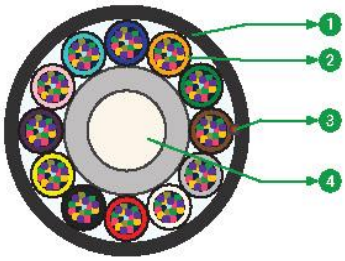

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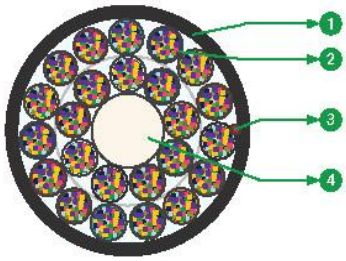

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1 OUTER JACKET 2 GEL FILLED TUBE 3 RIPCORD(S) 4 STRENGTH MEMBER

** 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*	Natural*	Yellow*	Violet*	Rose*	Aqua*

Note : * - denotes single black ring marking on Fibers

Cable Designs with STL Nova Fiber G.657.A1 250um (Also available in G.657.A2 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)**
C10002SN01GAP10000	2	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	25 (0.016)	500 (112.4)	8 (0.314)
C10004SN01GAP10000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	25 (0.016)	500 (112.4)	8 (0.314)
C10006SN01GAP10000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10012SN01GAP10000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10024SN02GAP10000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10036SN03GAP10000	36	3	Blue, Orange, Green, Filler, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10048SN04GAP10000	48	4	Blue, Orange, Green, Brown, Filler, Filler	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10072SN06GAP10000	72	6	Blue, Orange, Green, Brown, Slate, White	5.7 (0.224)	28 (0.018)	500 (112.4)	8 (0.314)
C10096SN08GAP10000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	6.0 (0.236)	40 (0.026)	800 (180.4)	10 (0.393)
C10144SN06GAP10001	144	6	Blue, Orange, Green, Brown, Slate, White	7.600 (0.299)	35 (0.023)	500 (112.4)	8 (0.314)
C10144SN12GAP10001	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	8.000 (0.314)	54 (0.036)	1000 (224.8)	12 (0.472)

Specifications

Cable Designs with STL Nova Fiber G.657.A1 250um (Also available in G.657.A2 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)
C10288SN24GAP10001	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)
C10432SN18GAP10000	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)
C10576SN24GAP10000	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)

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

Cable Designs with G.657A1 200um Fiber (Also available in G.657.A2 200um 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)
C20048S804GAP10000	48	4	Blue, Orange, Green, Brown, Filler, Filler	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
C20072S806GAP10000	72	6	Blue, Orange, Green, Brown, Slate, White	4.6 (0.181)	20 (0.013)	500 (112.4)	8 (0.314)
C20096S808GAP10000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	5.9 (0.232)	34 (0.022)	500 (112.4)	8 (0.314)
C20144S812GAP10000	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)
C20288S824GAP10000	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.657A1 200um Fiber (Also available in G.657.A2 200um 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)
C20432S818GAP10000	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)
C20576S824GAP10000	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)
C20864S924GAP10000	864	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#	11.4 (0.448)	130 (0.087)	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, 70°C, 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	

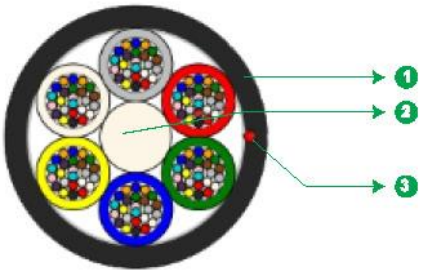
Note : All tests shall be carried out as per IEC standards.

Packing and Lengths

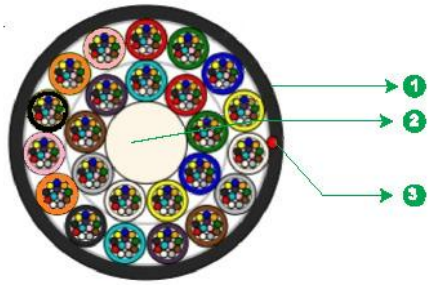
Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Micro-Lite High Density

Multitube Gel Filled OFC 144F - 576F



Cross Section 144F



Cross Section 288F

1 OUTER JACKET 2 STRENGTH MEMBER 3 RIPCORD(S)

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- As compared to conventional cable, Micro Cable diameter is smaller thereby reducing transportation and 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 and install

Product Details

STL Micro-LITE High Density Multitube Single Jacket Optical Fibre Cables are typically used in micro duct applications. This cable is a stranded micro loose tube cable with optical fibres placed inside robust buffer tubes stranded around a Fibre Reinforced Plastic (FRP) central strength member. In addition to optical Fibres, the buffer tubes contain water blocking gel to prevent water propagation along the cable.

Fibres and Cable Performance Standards

The fibres and cables are compliant with the following standards: IEC 60793, IEC 60794-5-10, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT F MICRO OFC MARKING LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-jet / laser

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/√km)	≤ 0.1
Fibres per Tube	12 or 24
Central Strength Member	FRP (Fibre Reinforced Plastic)
Fillers (if required)	Thermoplastic material, natural colour
Core binder	Binder and water swellable yarns
No of Ripcords Below Outer Sheath	1
Outer Jacket Material	UV Proof Black HDPE[1]

Fiber Color Sequence (AS per EIA/TIA 598C)[2]											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Note: [1]PA jacket and/or other jacket colours are available on demand, prior approval
[2]The fibres 13 to 24, when present, have a black ring marking (the black fibre is replaced by a natural fibre with black ring marking), the tubes follow the same sequence as the fibres and the tubes above 12, when present, have a longitudinal black stripe ink-jet marked or co-extruded (black tube with white stripe).

Cable Designs with G.657 A1/G.652 D 200µm Fibres							
Product Code	**Fibre count**	**Fibre Type**	**Tube/ Fillers**	**Duct ID mm**	**Cable Diameter (mm) ±0.3**	**Cable Weight (kg/km) ±10%**	**Max. Tensile Strength (N)**
C30144N206GAP10000	144	G.657 A1/G.652 D 200	6/0	8	5.5	30	500
C30192N208GAP10000	192	G.657 A1/G.652 D 200	8/0	8	6.3	42	500
C30216N209GAP10000	216	G.657 A1/G.652 D 200	9/0	10	6.8	50	1000
C30288N224GAP10000	288	G.657 A1/G.652 D 200	(9+15)/0	10	7.4	55	1000
C30432N218GAP10000	432	G.657 A1/G.652 D 200	(6+12)/0	12	8.2	65	800
C30576N224GAP10000	576	G.657 A1/G.652 D 200	(9+15)/0	14	9.5	84	1000

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/10cm)	500	IEC-60794-1-21-E3A
Impact Strength (N-m)	2	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 D	
Min. Bend Radius (After Installation)	15 D	
Water Penetration Test	1 m waterhead, 3 m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70°C, 24 h	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5°C to +50°C	
Operation	-30°C to +70°C	
Storage	-40°C to +70°C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-5-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	4|6 km (13,123|20,000 ft) ± 5%	±5%	Max 5%, upon customer approval

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0144 – 0864)				Fibre type		No. of active tubes (06-24)		Cable core type	Fibres/tubes colour code	Jacket type		Running number		Special requirement	
1		2				3		4			5						
C	3	-	-	-	-	N	2	-	-	G	-	P	1	0	0	0	0

1. Product code

Code	Cable Design
C3	Micro-Lite HD cable with 200µm fibres

2. Fibre count by indicating the corresponding number from 0144 to 0576

3. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name	Mode Field Diameter (MFD) @1310 nm (µm)
N	2	G.657 A1/G.652 D 200µm	Nova 200 LMB	9.2 ± 0.4

4. Number of active tubes : 06 to 24

5. Fibres and tubes colour sequence available options[5]

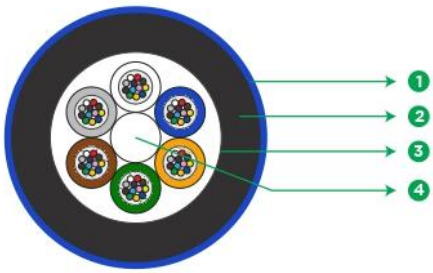
Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [5]other colour codes are available on demand prior approval	

For additional information please contact your sales representative.
You can also visit our website at **www.stl.tech**

Product Specification

Micro-Lite

Multitube Gel Filled Double Jacket OFC
12F - 288F | Single Mode Fiber



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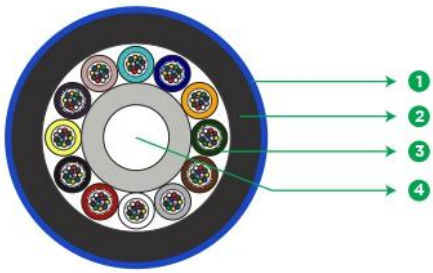
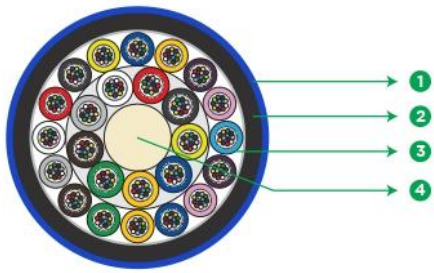


Cross Section 144F



Cross Section 288F

1 OUTER PA JACKET
2 OUTER PE SHEATH
3 GEL FILLED TUBE
4 STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Micro loose tube & dual jacket PE& PA offer easy handling light weight cable
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged UV stabilized thermoplastic jackets
  Resistant to termite attacks
- Ripcords for easy and quick mid span access

Product Details

STL MICRO-LITE Multitube PE/PA Jacket Fiber Optic Cables are typically used for outside plant (OSP) applications. Suitable for external underground installations in (micro) ducts by pulling, blowing or floating techniques. This cable comes with loose tubes containing optical fiber & water blocking gel, loose tube is S-Z stranded over FRP, surrounded with water-swellable yarns to prevent water ingress in the cable. A thermoplastic dual jacket of polyethylene & polyamide is extruded over the cable core making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-1-21/22, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBER TYPE FIBER COUNT F MICRO OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "METER" 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	12~288
Fiber Type	STL OH LITE (ITU-T G.652.D) / STELLAR (ITU-T G.657.A2)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibers per Tube	12
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable yarns
No of Ripcords Below Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene
Outer Jacket Material	UV Stabilized Blue Nylon (bonded to PE Sheath)

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

Cable Designs with G.657.A2 Fiber | STL Stellar Fiber							
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (±0.3)**	**Cable Weight Kg/ Km (±10%)**	**Max. Ten Streng (N)**
C10012C101GAPN0000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	7.0	42	1000
C10024C102GAPN0000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	7.0	42	1000
C10036C103GAPN0000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	7.0	42	1000
C10048C104GAPN0000	48	4	Blue,Orange,Green,Brown,Filler, Filler	2	7.0	42	1000
C10072C106GAPN0000	72	6	Blue,Orange,Green,Brown,Slate, White	0	7.0	42	1000
C10096C108GAPN0000	96	8	Blue,Orange,Green,Brown,Slate, White, Red, Black	0	7.0	45	1000
C10144C112GAPN0000	144	12	Blue,Orange,Green,Brown,Slate, White,Red,Black,Yellow,Violet, Rose,Aqua	0	8.8	70	2000
C10288C124GAPN0000	288	24	**Ist Layer** : Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, **IInd Layer** : Violet, Pink, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Pink# and Aqua#	0	10.2	90	2000

Cable Designs with G.652.D Fiber							
Product Code	Fiber Count	No. of Tubes	Tube Color Sequence	No. of Fillers	Cable Diameter mm (±0.3)	Cable Weight Kg/ Km (±10%)	Max. Ten Streng (N)
C10012S301GAPN0000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	7.0	42	1000
C10024S302GAPN0000	24	2	Blue, Orange, Green, Filler, Filler, Filler	4	7.0	42	1000
C10036S303GAPN0000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	7.0	42	1000
C10048S304GAPN0000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	7.0	42	1000
C10072S303GAPN0000	72	6	Blue,Orange,Green,Brown,Slate, White.	0	7.0	42	1000
C10096S308GAPN0000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	7.0	45	1000
C10144S312GAPN0000	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	8.8	70	2000
C10288S324GAPN0000	288	24	**Ist Layer** : Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, **IInd Layer** : Violet, Pink, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Pink# and Aqua#	0	10.2	90	2000

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	As per Above Table	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	2000	IEC-60794-1-21-E3
Impact Strength (Nm)	5	IEC-60794-1-21-E4
Torsion	±180º	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-E18
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10º C to +70º C	
Operation	-40º C to +70º C	
Storage	-40º C to +70º C	

Note: All tests shall be carried out as per IEC standards. Change in attenuation after test 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	6 ± 5%	±5%	Max 5%, Customer Approval

se contact your sales representative.

You can also visit our website at www.stl.tech

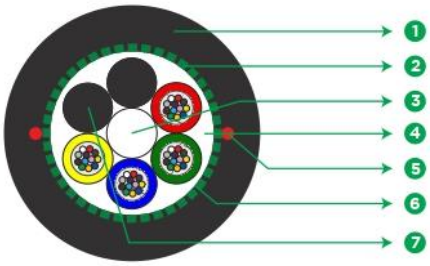
Multi Loose Tube

Duct Cables

Product Specification

Duct-Lite

Multitube Gel Filled OFC with Glass Roving Yarn
12F - 288F



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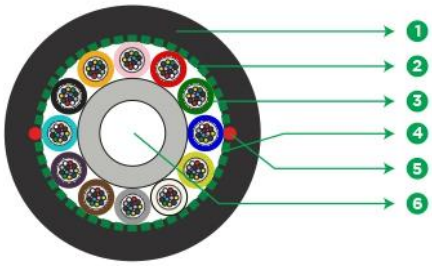

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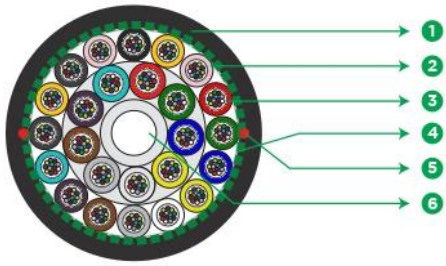


Cross Section 288F

1. OUTER PA JACKET
2. GLASS ROVING YARNS
3. STRENGTH MEMBER
4. GEL FILLED TUBE
5. RIPCORD(S)
6. SWELLABLE TAPES
7. FILLERS

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Duct cables with glass roving yarns are ideal for installation by pulling or air-blowing in conventional ducts, they can also be direct buried in clean sand bed.
- The glass roving yarns armouring provides enhanced rodent protection
- Dry water-blocking technology for gel free core helps in quicker end preparation
- No earthing needed thanks to fully dielectric construction
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL Duct-LITE Out-Side Plant, Single Jacket with Glass Roving Yarns Fibre Optic Cables are suitable for installation in conventional ducts by means of pulling or air-blowing techniques. These cables are based on a loose tube structure with optical fibres placed inside robust buffer tubes stranded around a fibre-glass reinforced plastic (FRP) central strength member. In addition to the optical fibres, the buffer tubes are gel filled, and water swellable yarns and tape are added to the core to ensure longitudinal water protection. A layer of glass roving yarns provides additional tensile strength and enhanced rodent protection. An outer jacket of thermoplastic material is extruded over the cable core as a mechanical and environmental protection.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT F DUCT LITE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-Jet/Hot Foil

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12 or 24
Central Strength Member	FRP (Fibre Reinforced Plastic)
Fillers (if required)	Thermoplastic material, natural colour
Core binder	Binder and water swellable yarns
Peripheral Strength Elements	Glass Roving Yarns
No of Ripcords Below Outer Sheath	2
Outer Jacket Thickness (mm)	1.5 (nominal)
Outer Jacket Material	UV Proof Black, HDPE

Fibres Colour Sequence (as per DIN/VDE 0888)[2,3]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]Other jacket colours are available on demand, prior approval
[2]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking)
[3]Other fibres colour sequences are available on demand, prior approval.

Cable Designs with 3000 N Tensile strength							
Product Code	**Fibre count**	**Fibre Type**	**Tube/ Fillers**	**Buffer tube size (mm) Nom.**	**Cable Diameter (mm) ±5%**	**Cable Weight (kg/km) ±10%**	**Tensile Strength Short Term (N)**
D10012S301GDP100T3	12	G.652D	1/5	2.0	10.0	72	3000
D10024S302GDP100T3	24	G.652D	2/4	2.0	10.0	72	3000
D10048S304GDP100T3	48	G.652D	4/2	2.0	10.0	72	3000
D10072S306GDP100T3	72	G.652D	6/0	2.0	10.0	72	3000
D10096S308GDP100T3	96	G.652D	8/0	2.0	11.2	105	3000
D10144S312GDP100T3	144	G.652D	12/0	2.0	13.9	185	3000
D10288S324GDP100T3	288	G.652 D	(9+15)[3]/0	2.0	16.5	245	3000

Cable Designs with 3000 N Tensile strength							
Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
D10012S101GDP100T3	12	G.652D	1/5	2.0	10.0	72	3000
D10024S102GDP100T3	24	G.652D	2/4	2.0	10.0	72	3000
D10048S104GDP100T3	48	G.652D	4/2	2.0	10.0	72	3000
D10072S106GDP100T3	72	G.652D	6/0	2.0	10.0	72	3000
D10096S108GDP100T3	96	G.652D	8/0	2.0	11.2	105	3000
D10144S112GDP100T3	144	G.652D	12/0	2.0	13.9	185	3000
D102881324GDP100T3	288	G.652 D	$(9+15)^3/0$	2.0	16.5	245	3000

Cable Designs with 6000 N Tensile strength							
Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
D10012S301GDP100T6	12	G.652D	1/5	2.4	11.7	110	6000
D10024S302GDP100T6	24	G.652D	2/4	2.4	11.7	110	6000
D10048S304GDP100T6	48	G.652D	4/2	2.4	11.7	110	6000
D10072S306GDP100T6	72	G.652D	6/0	2.4	11.7	110	6000
D10096S308GDP100T6	96	G.652D	8/0	2.4	14.0	150	6000
D10144S312GDP100T6	144	G.652D	12/0	2.4	16.9	220	6000
D10288S324GDP100T6	288	G.652 D	$(9+15)^3/0$	2.4	19.1	270	6000

Cable Designs with 6000 N Tensile strength							
Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) Nom.	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
D10012S101GDP100T3	12	G.652D	1/5	2.4	11.7	110	6000
D10024S102GDP100T3	24	G.652D	2/4	2.4	11.7	110	6000
D10048S104GDP100T3	48	G.652D	4/2	2.4	11.7	110	6000
D10072S106GDP100T3	72	G.652D	6/0	2.4	11.7	110	6000
D10096S108GDP100T3	96	G.652D	8/0	2.4	14.0	150	6000
D10144S112GDP100T3	144	G.652D	12/0	2.4	16.9	220	6000
D102881324GDP100T3	288	G.652 D	$(9+15)^3/0$	2.4	19.1	270	6000

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	Cable Performance	Testing Standard Method
Tensile Strength Short term	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/10cm) For 3kN cable	2000	IEC-60794-1-21-E3A
Crush Resistance (N/10cm) For 6kN cable	2200	IEC-60794-1-21-E3A
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° C to +70° C	
Storage	-40° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)
Wooden Drums	4 ± 5% (For all Fibre Counts)

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0004 – 0864)				Fibre type		No. of active tubes (01-24)		Cable core type	Fibres/tubes colour code	Jacket type		Running number		Special requirement	
		1				2		3			4	5				6	
D	1	-	-	-	-	-	-	-	-	G	-	P	1	0	0	-	-

1. Fibre count by indicating the corresponding number from 0004 to 0864

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	3	G.652D	OH-LITE
S	1	G652D/G657.A1	BOW-LITE
S	N	G657A1 adv/G652D	OH-LITE NOVA
S	5	G.655	DOF LITE LEA

3. Number of active tubes : 01 to 24

4. Fibres colour sequence available options[4]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [4]other colour codes are available on demand prior STL approval	

5. Outer sheath type- P1: Polyethylene , Single Jacket

6. Special requirement[5]

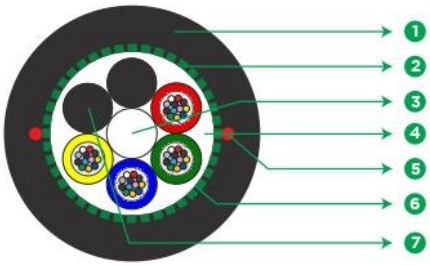
Code	Special requirement
T3	3000 N
T6	6000 N
T9	9000 N
Note: [5]other colour codes are available on demand prior STL approval	

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Duct-Lite

Multitube Gel Filled LSZH OFC with Glass Roving Yarn
12F - 288F



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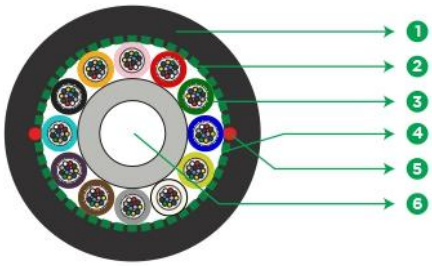

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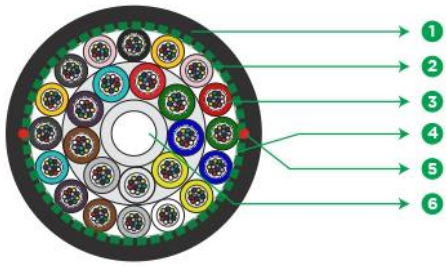


Cross Section 288F

1. OUTER PA JACKET
2. GLASS ROVING YARNS
3. STRENGTH MEMBER
4. GEL FILLED TUBE
5. RIPCORD(S)
6. SWELLABLE TAPES
7. FILLERS

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Duct cables for Indoor/Outdoor applications with glass roving yarns are ideal for installation by pulling in conventional ducts, they can also be direct buried in clean sand bed
- The glass roving yarns armouring provides enhanced rodent protection
- Dry water-blocking technology for gel free core helps in quicker end preparation
- No earthing needed thanks to fully dielectric construction
- Easily removable rugged thermoplastic jacket, with UV resistant
- Flexible, light weight, easy to handle and install
- Class Eca rated according to CPR

Product Details

STL Duct-LITE Indoor/Outdoor, Single Jacket with Glass Roving Yarns Fibre Optic Cables are suitable for installation in conventional ducts by means of pulling techniques. These cables are based on a loose tube structure with optical fibres placed inside robust buffer tubes stranded around a fibre-glass reinforced plastic (FRP) central strength member. In addition to the optical fibres, the buffer tubes are gel filled, and water swellable yarns and tape are added to the core to ensure longitudinal water protection. A layer of glass roving yarns provides additional tensile strength and enhanced rodent protection. An outer jacket of LSZH thermoplastic material is extruded over the cable core as a mechanical and environmental protection. Class Eca rated to CPR.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT F DUCT-LITE I/O OFC Eca LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-Jet/Hot Foil

Note: The accuracy of marking shall be + 0.5%.

Specifications

Physical Characteristics	
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12
Central Strength Member	FRP (Fibre Reinforced Plastic)
Fillers (if required)	Thermoplastic material (Natural Coloured)
Core binder	Binder and water swellable yarns
Peripheral Strength Elements	Glass Roving Yarns
No of Ripcords Below Outer Sheath	2
Outer Jacket Thickness (mm)	1.5 (nominal)
Outer Jacket Material	UV Resistant Black, LSZH

Fibres Colour Sequence (as per DIN/VDE 0888)[1,2]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking), the tubes above 12, when present, have a longitudinal black stripe ink-jet marked or co-extruded (black tube with white stripe).
[2]Other fibres and tubes colour sequences are available on demand, prior approval.

Cable Designs with 3000 N Tensile strength							
Product Code	**Fibre count**	**Fibre Type**	**Tube/ Fillers**	**Buffer tube size (mm) ±0.05**	**Cable Diameter (mm) ±5%**	**Cable Weight (kg/km) ±10%**	**Tensile Strength Short Term (N)**
D10012S301GDL101E0	12	G.652D	1/5	2.0	10.0	118	3000
D10024S302GDL101E0	24	G.652D	2/4	2.0	10.0	118	3000
D10048S304GDL101E0	48	G.652D	4/2	2.0	10.0	118	3000
D10072S306GDL101E0	72	G.652D	6/0	2.0	10.0	118	3000
D10096S308GDL101E0	96	G.652D	8/0	2.0	11.2	150	3000
D10144S312GDL101E0	144	G.652D	12/0	2.0	13.9	210	3000
D10288S324GDL101E0	288	G.652 D	(9+15)³/0	2.0	16.5	275	3000

Cable Designs with 3000 N Tensile strength							
Product Code	Fibre count	Fibre Type	Tube/ Fillers	Buffer tube size (mm) ±0.05	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Tensile Strength Short Term (N)
D10012S101GDL101E0	12	G.657 A1	1/5	2.0	10.0	118	3000
D10024S102GDL101E0	24	G.657 A1	2/4	2.0	10.0	118	3000
D10048S104GDL101E0	48	G.657 A1	4/2	2.0	10.0	118	3000
D10072S106GDL101E0	72	G.657 A1	6/0	2.0	10.0	118	3000
D10096S108GDL101E0	96	G.657 A1	8/0	2.0	11.2	150	3000
D10144S112GDL101E0	144	G.657 A1	12/0	2.0	13.9	210	3000
D10288S124GDL101E0	288	G.657 A1	(9+15)[3]/0	2.0	16.5	275	3000

Note: [3]Cable core having 2 layers of loose tube 9 tube the inner layer and 15 tubes in outer layers.
Please note that Cable Designs with 6000 N Tensile strength is available on available on demand, prior approval.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength Short term	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3A
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° C to +70° C	
Storage	-40° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)
Wooden Drums	4, 6, 8 ± 5% (For all Fibre Counts)

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0004 – 0288)				Fibre type		No. of active tubes (01-24)		Cable core type	Fibres colour code	Jacket type		Running number (00-99)		Special requirement	
		1				2		3			4						
D	1	-	-	-	-	-	-	-	-	G	-	L	1	0	1	E	0

1. Fibre count by indicating the corresponding number from 0004 to 0288

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	3	G.652D	OH-LITE
S	1	G652D/G657.A1	BOW-LITE
S	N	G657A1 adv/G652D	OH-LITE NOVA
S	2	G.657A2	BOW-LITE (E)

3. Number of active tubes : 01 to 24

4. Fibres colour sequence available options[4]

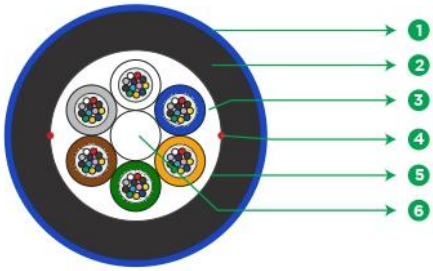
Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [4]other colour codes are available on demand prior STL approval	

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

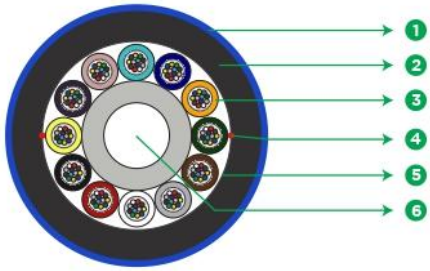
Product Specification

Duct-Lite

Multitube Gel Filled Double Jacket High Strength OFC
12F - 144F | OH-Lite - G.652.D Single Mode Fiber



Cross Section 72F



Cross Section 144F

1. OUTER PA JACKET
2. OUTER PE SHEATH
3. GEL FILLED TUBE
4. RIPCORD(S)
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Robust loose tube & dual jacket PE& PA high crush and impact
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged UV stabilized thermoplastic jackets
- Resistant to termite attacks
- Ripcords for easy and quick mid span access

Product Details

STL DUCT-LITE Multitube High Strength PE/PA Jacket Fiber Optic Cables are typically used for outside plant (OSP) applications. Suitable for directly buried by cable plough and open trench installation methods in harsh environments. This cable comes with loose tubes containing optical fiber & water blocking gel, loose tube is S-Z stranded over FRP, surrounded with water-swellable tape to prevent water ingress in the cable. A thermoplastic dual jacket of polyethylene & polyamide is extruded over cable core making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-1-21/22, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBER TYPE FIBER COUNT F DUCT OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "METER" 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 OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.22 ; 1625 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibers per Tube	12
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
No of Ripcords Below Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene
Outer Jacket Material	UV Stabilized Blue Nylon (bonded to PE Sheath)

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 (± 1.0)**	**Cable Weight Kg/Km (± 10%)**
D10012S301GAPN01T6	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.5	185
D10024S302GAPN01T6	24	2	Blue, Orange, Green, Filler, Filler, Filler	4	15.5	185
D10036S303GAPN01T6	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	15.5	185
D10048S304GAPN01T6	48	4	Blue, Orange, Green, Filler, Filler, Filler	2	15.5	185
D10072S306GAPN01T6	72	6	Blue, Orange, Green, Filler, Filler, Filler	0	15.5	185
D10096S308GAPN01T6	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	17.5	225
D10144S312GAPN01T6	144	12	Blue, Orange, Green, Brown, Slate, White, Red,Black, Yellow, Violet, Rose, Aqua	0	23.0	380

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	6000	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	6000	IEC-60794-1-21-E3
Impact Strength (Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius (During Installation)	30 D	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	20 D	IEC-60794-1-21-E18
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +70° C	
Operation	-20° C to +70° C	
Storage	-30° C to +70° C	

Note: All tests shall be carried out as per IEC standards. Change in attenuation after test shall be ≤ 0.1 dB/ km for Single Mode Fiber.

Packing and Lengths

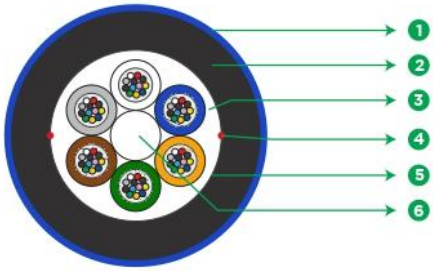
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	4/6/8/10 ± 5%	±5%	Max 20%, Customer Approval

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Duct-Lite

Multitube Gel Filled Double Jacket OFC
12F - 144F | OH-Lite - G.652.D Single Mode Fiber



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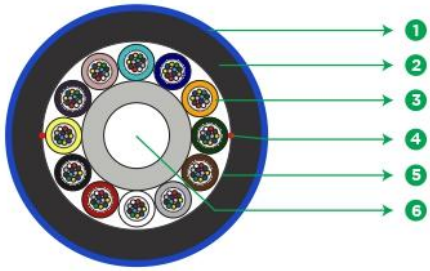


Cross Section 144F

1. OUTER PA JACKET
2. OUTER PE SHEATH
3. GEL FILLED TUBE
4. RIPCORD(S)
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Loose tube & dual jacket PE and PA offer easy handling of the lightweight cable
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged UV stabilized thermoplastic jackets
  Resistant to termite attacks
- Ripcords for easy and quick mid span access

Product Details

STL DUCT-LITE Multitube PE/PA Jacket Fiber Optic Cables are typically used for outside plant (OSP) applications. Suitable for duct applications. This cable comes with loose tubes containing optical fiber & water blocking gel, loose tube is S-Z stranded over FRP, surrounded with water-swellable tape to prevent water ingress in the cable. A thermoplastic dual jacket of polyethylene & polyamide is extruded over the cable core making the cable robust and installation friendly.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-1-21/22, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBER TYPE FIBER COUNT F DUCT OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "METER" 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 OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.22
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibers per Tube	12
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
No of Ripcords Below Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene
Outer Jacket Material	UV Stabilized Blue Nylon (bonded to PE Sheath)

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 (± 1.0)**	**Cable Weight Kg/Km (± 10%)**
D10012S301GAPN00J2	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	9.5	75
D10024S302GAPN00J2	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	9.5	75
D10036S303GAPN00J2	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	9.5	75
D10048S304GAPN00J2	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	9.5	75
D10072S306GAPN00J2	72	6	Blue, Orange, Green, Filler, Filler, Filler	0	9.5	75
D10096S308GAPN00J2	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	11	100
D10144S312GAPN00J2	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	12.2	120

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	2000	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	2000	IEC-60794-1-21-E3
Impact Strength (Nm)	5	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-E18
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° 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 test shall be ≤ 0.1 dB/ km for Single Mode Fiber.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	4/6/8/10 ± 5%	±5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

UniTube/Central Fibre Core

Applications:

- **Fiber Core**: Medium-distance backbones and campus networks.
- **CFC Drop**: Short-distance drop cables for FTTH connections.
- **UT Microduct**: Medium-distance runs in microduct pathways.
- **UT Drop**: Short-distance last-mile connectivity for residential and business premises.
- **UT Direct Buried**: Medium-length underground installations.

Uni Tube/Central Fiber Core

This advanced cable features a single, central core tube safeguarding multiple optical fibers. The core tube's high-strength, low-friction material ensures smooth cable handling and protects the fibers from external pressure. UT cables are ideal for applications requiring a balance of protection and compactness.

Industries it may cater to:

Telecom

Backbone networks, access networks, and last-mile connectivity.

Residential FTTH

Compact, lightweight solutions for fiber-to-the-home deployments.

Enterprise

Indoor and outdoor connectivity for small to medium enterprises.

Broadcasting

Reliable transmission of signals for media and entertainment networks.

Government

Secure communication networks for public institutions and services.

Deployment Type: Ideal for **short to medium-distance** runs where compact design is required.

Cable Runs: Typically 2-15 km.

Our innovative Unitube (UT) and Central Filled Cable (CFC) designs offer exceptional performance and versatility for diverse fiber optic installations. We offer four distinct Unitube/CFC cable types to perfectly match your application:

- **UT Microduct Cable:** Designed for seamless deployment within pre-installed microducts. Its compact size ensures easy gliding through narrow pathways, making it perfect for high-fiber count installations in space-constrained environments.
- **UT Drop Cable:** Built for aerial installations, this cable boasts a UV-protected, self-supporting outer jacket for superior weather resistance. It's the perfect choice for connecting poles or other structures to buildings or homes.
- **CFC Drop Cable:** Ideal for aerial installations, this cable offers the combined strength of a central filled core and a UV-protected outer jacket, making it a reliable choice for harsh outdoor environments.
- **UT Direct Buried Cable:** This cable eliminates the need for conduit protection. Its robust central core tube and outer jacket are specifically designed to withstand the rigors of direct burial, including moisture, soil pressure, and potential rodent damage.

Our wide range of UT and CFC cables caters to various project requirements. Contact our sales team to discuss your specific needs and find the perfect cable solution for your network.

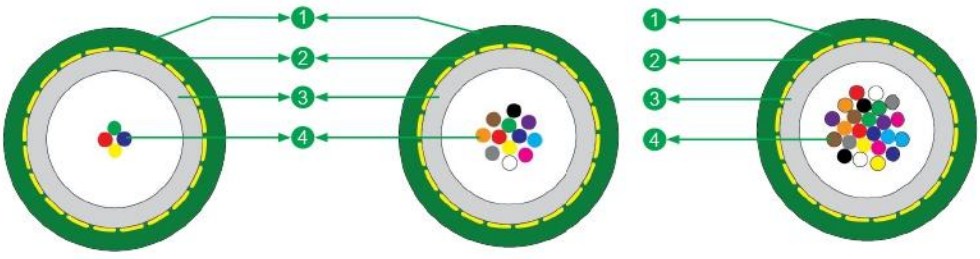
UniTube/Central Fibre Core

UT Microduct Cables

Product Specification

UT Microduct

4F/12F/24F SM G.657.A1 Unitube Single Jacket Miniature OFC



1 OUTER JACKET
2 ARAMID YARNS
3 GEL FILLED TUBE
4 FIBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Unitube design allows minimised weight and eases cable installation
- Small size, fast cable termination and easy cable management
- Optimum solution for last mile application
- Easily removable rugged jacket
- Longitudinal water protection is enabled by water blocking compounds in tube
- UV protected

Product Details

STL DROP-LITE Unitube Single Jacket Miniature Fibre Optic Cable is used for outdoor applications in cable trays or ducts or aerial drop for access inside campus and within buildings.

Fibres and 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

STERLITE SM 4F G657 A1 FTTH LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER

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			
Fibre Count	4/12/24	12	24
Fibre Type	Sterlite ITU-T G.657 A1		
Maximum Cabled Attenuation (dB/km)	1310nm: 0.35 & 1550nm: 0.23		
Fibres per Tube	4	12	24
Fibre Color Sequence	Red, Green, Blue, Yellow	Red, Green, Blue, Yellow, White, Slate, Brown, Violet, Aqua, Black, Orange, Pink	Red, Green, Blue, Yellow, White, Slate, Brown, Violet, Aqua, Black, Orange, Pink, Red*, Green*, Blue*, Yellow*, White*, Slate*, Brown**, Violet**, Aqua**, Black**, Orange**, Pink**
Peripheral Strength Members	High Strength Aramid Yarns		
Outer Sheath Material	UV Proof Green HDPE		
Nominal Cable Diameter (mm)	3.8+/- 0.3	3.8+/- 0.3	4.2+/- 0.3
Nominal Cable Weight (kg/km)	12+/- 5%	12+/- 5	18+/-5%

Mechanical & Environmental Characteristics		
Cable Characteristics	Testing Standard Method	Cable Performance
Tensile Strength (N)	IEC-60794-1-21-E1	150
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	500
Impact Strength (Nm)	IEC-60794-1-21-E4	5
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	15 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	10 D
Water Penetration Test	IEC-60794-1-22-F5	1m head, 3m samples, 24 hrs
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
***Temperature Performance**	IEC-60794-1-22-F1	
Installation		-10°C to +60°C
Operation		-30°C to +70°C
Storage		-40°C to +70°C

Note 2: Cable shall be tested as per IEC Standard. Max. change in attenuation after and before test shall be <= 0.3 dB/km for Multimode fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Plastic Spools	2 +/- 5%	+/- 5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Nano-Lite

Unitube Gel Filled OFC 2F - 24F **A-DQ(ZN)2Y 1 x ff E9/125** (ff = 02 to 24)

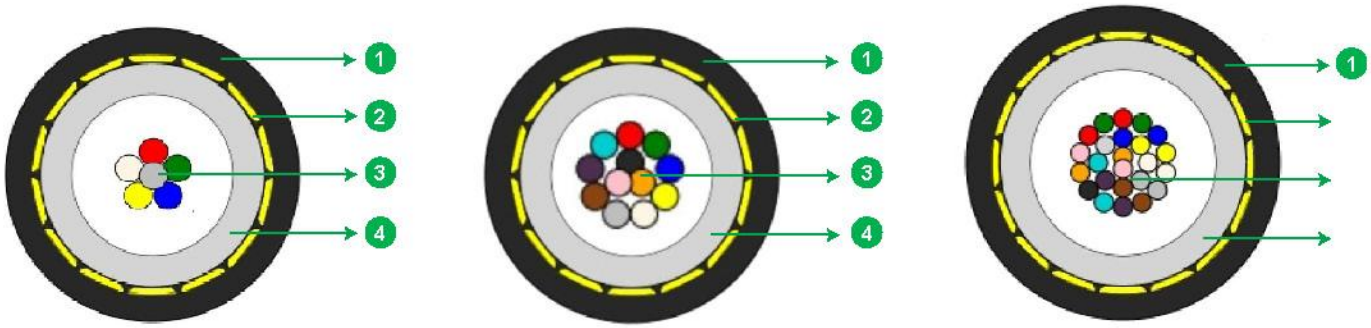


Diagram 6F *Diagram 12F* *Diagram 24F*

1 Outer sheath 2 Aramid yarns water swellable 3 Optical fibres 4 Loose tube Gel Filled

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Optimized for blowing in 7/4 mm and 10/6 mm micro-ducts
- Unitube design allows size and weight to be minimised, and cable installation, termination and management to be simplified
- High tensile strength by means of high strength aramid yarns
- Longitudinal water protection by means of water blocking aramid yarns and gel filling compound in the loose tube
- UV Resistant
- Flexible, light weight, easy to handle and install
- Class Fca rated according to CPR

Product Details

STL Nano Lite Out-Side Plant Fibre Optic Cable is generally used in the drop section of FTTx networks based on micro-ducts.They feature light weight and small diameter and are designed for optimum blowing performances in single or bundled 7/4mm and 10/6mm micro-ducts. The single jacket, gel-filled unitube construction with aramid yarns meets high tensile strength requirements and offers best-in-class fibre protrusion requirements.

Fibres and Cable Performance Standards

The fibres and cables comply to the following standards IEC 60793, IEC 60794-5-10, ITU-T, RoHS, REACH.

Specifications

Physical Characteristics	
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/√km)	≤ 0.1
Loose Tube Colour	Natural
Peripheral Strength Members	High Strength, Water-blocking Aramid Yarns
Outer Sheath Material	UV Resistant Black[1], High Density Polyethylene
Outer Sheath Thickness (mm)	0.4 (nominal value)

Fibres Colour Sequence (as per DIN/VDE 0888)[2,3]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Orange	Pink

[1]Other jacket colours are available on demand, prior approval

[2]The fibres 13 to 24, when present, have a black ring marking (the black fibre is replaced by a natural fibre with black ring marking)

[3]Other fibres colour sequences are available on demand, prior approval.

Cable Designs with G.657 A1/G.652 D fibres[4]					
Product Code	**Fibre count**	**Fibre Type**	**Loose Tube Diameter (mm) ±0.05**	**Cable Diameter[5] (mm) ±0.1**	**Cable Weight (kg/km) ±10%**
E20002SN01GDP10000	2	G.657 A1/G.652 D	1.55	2.5	6
E20004SN01GDP10000	4	G.657 A1/G.652 D	1.55	2.5	6
E20006SN01GDP10000	6	G.657 A1/G.652 D	1.55	2.5	6
E20008SN01GDP10000	8	G.657 A1/G.652 D	1.65	2.5	6
E20012SN01GDP10000	12	G.657 A1/G.652 D	1.65	2.5	6
E20024N101GDP10000	24[6]	G.657 A1/G.652 D 200µm	1.85	2.7	8

Notes: [4]Selection of available fibres in the respective Product Ordering Information sections, other fibre types are available on demand prior approval.

[5]The maximum value of cable diameter is determined according to the ASTM D4565-20 standard

[6]The 24 fibre design is available only based on 200µm fibres.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength - short term (N)	200	IEC-60794-1-21-E1
Crush Resistance - short term (N/10cm)	500	IEC-60794-1-21-E3A
Impact Strength (N·m)	1	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending (Radius)	20 x OD	IEC-60794-1-21-E6
Bend (Radius)	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1 m waterhead, 3 m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70°C, 24 h	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5°C to +50°C	
Operation	-20°C to +60°C	
Storage	-30°C to +70°C	
Fibre Protrusion	Grade 1	IEC-60794-1-22-F17

Notes: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-5-10 standard.
Fibre protrusion graded according to the IEC TR 62959 : long sample under OP+ conditions.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Plywood Drums	2, 4 ± 5%	-0/+5%	Max 5%, upon customer approval

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT-F NANO-LITE-OFC CE-MARKING-Fca LASER-SYMBOL TELEPHONE-SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING.

Printing method: Ink-Jet

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.

Ordering Information

Other fibre counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0002 – 0024)				Fibre type		No. of active tubes (01)		Cable core type	Fibres colour code	Jacket type		Running number		Special requirements	
		1				2		3			4					5	
E	2	-	-	-	-	-	-	0	1	G	-	P	1	0	0	0	0

1. Fibre count by indicating the corresponding number from 0002 to 0024

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name	Mode Field Diameter (MFD) @1310 nm (µm)
S	N	G.657.A1/G.652 D	Nova 250[1]	9.2 ± 0.4
C	1	G.657 A2/G.652 D	Stellar 250[1]	9.1 ± 0.4
S	2	G.657 A2	HD A2 250[1]	8.6 ± 0.4
N	1	G.657 A1/G.652 D 200µm	Nova 200[2]	9.2 ± 0.4
C	2	G.657 A2/G.652 D 200µm	Stellar 200[2]	9.1 ± 0.4
S	9	G.657 A2 200µm	HD A2 200[2]	8.6 ± 0.4
Notes: 1 only for cable designs with 2 to 12 fibres; 2 only for cable design with 24 fibres				

3. Number of active tubes : 01

4. Fibres colour sequence available options[3]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [3]other colour codes are available on demand prior approval	

5. Number of active tubes : 01

Code	Special requirements
00	Black Colour Jacket
J1	Orange Colour Jacket

For additional information please contact your sales representative.

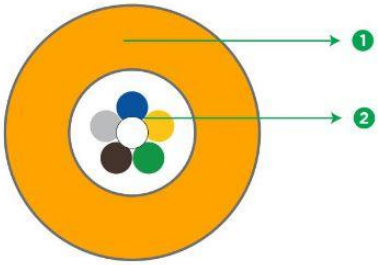
01/102024

You can also visit our website at **www.stl.tech**

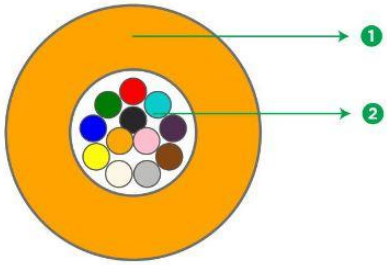
Product Specification

Atlas-Lite

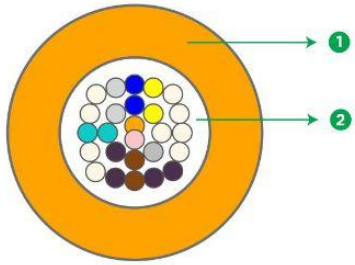
Unitube Gel Filled OFC
2F - 24F | G.652.A1 Single Mode Fibre



Cross Section 6F



Cross Section 12F



Cross Section 24F

1 OUTER SHEATH

2 FIBRE AND GEL FILLING

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Optimized for blowing in 7/4 mm and 10/6 mm micro-ducts
- Double layer wall with high modulus material in the inner layer and low friction material in the outer layer for high mechanical resistance and optimum blowing performances
- UV Resistant
- Flexible, light weight, easy to handle and install

Product Details

STL Atlas Lite Out-Side Plant Fibre Optic Cable is generally used in the drop section of FTTx networks based on micro-ducts. Zhey feature light weight and small diameter and are designed for optimum blowing performances in single or bundled 7/4mm and 10/6mm micro-ducts. The double layer construction of the buffer tube wall provides high mechanical resistance and optimum blowing performances paired with small outer diameter and light weight.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-5-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT ATLAS-LITE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING.

Printing method: Ink-Jet

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Outer Sheath Material	UV Resistant Orange[1], double layer: high modulus inner/low friction outer

Fibres Colour Sequence (as per DIN/VDE 0888)[2,3]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]Other jacket colours are available on demand, prior approval
[2]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking)
[3]Other fibres colour sequences are available on demand, prior approval.

Cable Designs[4]					
Product Code	**Fibre count**	**Fibre Type**	**Cable Diameter (mm) ±0.1**	**Cable Weight (kg/km) ±10%**	**Tensile Strength Short Term (N)**
E30002S101GACN00J1	2	G.657 A1	2.0	6	70
E30004S101GACN00J1	4	G.657 A1	2.0	6	70
E30006S101GACN00J1	6	G.657 A1	2.0	6	70
E30008S101GACN00J1	8	G.657 A1	2.3	6	70
E30012S101GACN00J1	12	G.657 A1	2.3	6	70
E30024S801GACN00J1	24[5]	G.657 A1	2.5	6	80

Note: [4]Selection of available fibres in the respective Product Ordering Information sections, other fibre type are also available on demand prior approval.
[5]The 24 fibre design is based on 200µm Fibres.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength Short term	As per above table	IEC-60794-1-21-E1
Crush Resistance (N/cm)	800	IEC-60794-1-21-E3A
Impact Strength(Nm)	1	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	15 x OD	
Min. Bend Radius (After Installation)	10 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70°C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° C to +70° C	
Storage	-30° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-5-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)
Wooden Drums	4 ± 5% (For all Fibre Counts)

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0002 – 0024)				Fibre type		No. of active tubes (01)		Cable core type	Fibres colour code	Jacket type		Running number		Special requirement	
		1				2		3			4					5	
E	3	-	-	-	-	-	-	0	1	G	-	C	N	0	0	J	1

1. Fibre count by indicating the corresponding number from 0002 to 0024

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	1	G657.A1	BOW-LITE
S	8	G.657 A1 200um	MICRO BOW-LITE
S	2	G657.A2	BOW-LITE (E)
S	9	G.657 A2 200um	MICRO BOW-LITE(E)
S	N	G657A1 adv /G652D	OH-LITE NOVA

3. Number of active tubes : 01

4. Fibres colour sequence available options[6]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [6]other colour codes are available on demand prior STL approval	

5. Special requirement:

Code	Special requirement
J1	Orange Colour Jacket
00	Black Colour Jacket

For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

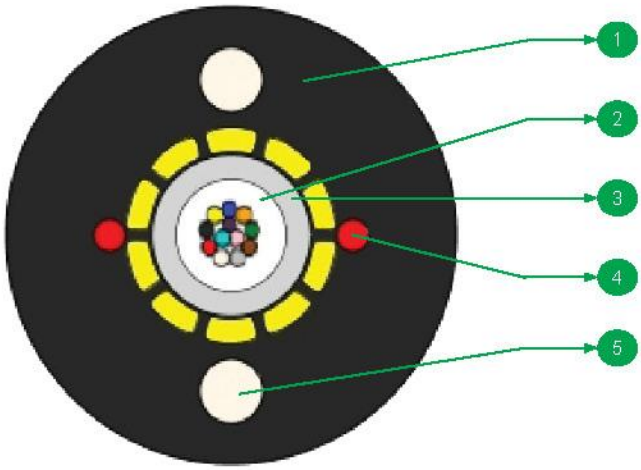
UniTube/Central Fibre Core

UT Drop Cables

Product Specification

Aerial Drop Lite

12F G652D Unitube Single Jacket



1 OUTER JACKET 2 ARAMID YARNS 3 GEL FILLED TUBE 4 RIP CORD(S) 5 STRENGTH MEMBERS

Features & Benefits

- This cable can be designed to suit specific requirements of span length, wind speed and other loading conditions.
- Easily removable rugged thermoplastic jacket
- Flexible, light weight, easy to handle & install
- Tensile and crush resistant

Product Details

STL Uni-tube Single Jacket ADSS cable can be installed in short to medium span applications. High strength yarns are evenly distributed over the core & Embedded FRP to provide the required tensile strength for aerial self-supporting applications. An overall thermoplastic jacket provides the cable with both mechanical and environmental protection.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ITU-T.

Printing Details

STL SM 2F G652D AERIAL LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTHCODE METER 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	
Fibre Count	2~12F
Fibre Type	STL Fibre ITU-T G.652.D
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: 0.36 & 1550nm: 0.23
Individual PMD (ps/sqrt.km)	</= 0.2
PMD LDV (ps/sqrt.km)	</= 0.1
Fibres per Tube	2-12
Peripheral Strength Members	High Strength Aramid Yarns
Outer Sheath Material	UV Stabilized Black Polyethylene
No of Ripcords Below Outer Sheath	2
Embedded Strength Member	FRP (Fibre Reinforced Plastic)
Nominal Cable Dimensions (mm)	5.5±0.2
Nominal Cable Weight (kg/km)	25±10%

Fiber Color Sequence (to be defined)[1]												
Blue	Orange	Green	Brown	Slate	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N)	IEC-60794-1-21-E1	500
Crush Resistance (N/mm)	IEC-60794-1-21-E3	1000
Impact Strength (Nm)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	20 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	10 D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24 h (Over the Loose Tube)
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 h
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-20°C to +50°C
Operation		-30°C to +60°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 fibre.

Packing and Lengths

Packing Type	Length Multiple (km)	Order Tolerance	Short Lengths
Coil Packing	2km ± 5%	± 5%	Max 5%, Customer Approval

Note: Change in attenuation after and before testing shall be </= 0.1 dB/km.

Loading Conditions								
	SAG TENSION CHART ROUND DROP AERIAL CABLE							
	NESC Light		NESC Medium		NESC Heavy		STL Proposal	
	Ice Thickness	Wind Speed	Ice Thickness	Wind Speed	Ice Thickness	Wind Speed	Ice Thickness	Wind Speed
	0 mm	97 KMPH	6.35 mm	64 KMPH	12.7 mm	64 KMPH	0 mm	65 KMPH
Installation Sag	2.0%	2.5%	2.50%	3.0%	2.5%	3.0%	1.50%	2.0%
Span length(m)	< 25	< 30	< 20	< 25	< 12	< 15	< 40	< 50
Operation Sag	2.5%	3.0%	3.5%	4.0%	4.0%	5.0%	2.5%	3.0%

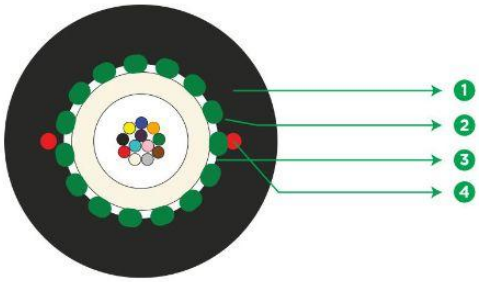
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Drop-Lite

Unitube Gel Filled OFC with Glass Roving Yarn
2F - 24F



Cross Section 12F

1 OUTER PA JACKET 2 GLASS ROVING YARNS 3 GEL FILLED TUBE 4 RIPCORD(S)

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Duct cables with glass roving yarns are ideal for installation by pulling or air-blowing in conventional ducts, they can also be direct buried in clean sand bed
- The glass roving yarns armouring provides enhanced rodent protection
- Dry water-blocking technology for gel free core helps in quicker end preparation
- No earthing needed thanks to fully dielectric construction
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL Unitube Outside Plant, Single Jacket with Glass Roving Yarns Fibre Optic Cables are suitable for installation in conventional ducts by means of pulling or air-blowing techniques. These cables are based a loose tube structure with optical fibres placed inside a robust central buffer tube. In addition to the optical fibres, the buffer tubes are gel filled, and water swellable glass yarns are placed around it to ensure longitudinal water protection. The glass roving yarns layer provides the required tensile strength and enhanced rodent protection. An outer jacket of thermoplastic material is extruded over the cable core as a mechanical and environmental protection.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT DROP-LITE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-Jet/Hot Foil

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Central Strength Member	FRP (FIbre Reinforced Plastic)
Fillers (If required)	Thermoplastic material, natural colour
Peripheral Strength Elements	Glass Roving Yarns
No of Ripcords Below Outer Sheath	1
Outer Jacket Thickness (mm)	1.1 (nominal)
Outer Jacket Material	UV Resistant Black[1], LSZH

Fibres Colour Sequence (as per DIN/VDE 0888)[2,3]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]Other jacket colours are available on demand, prior approval
[2]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking)
[3]Other fibres colour sequences are available on demand, prior approval.

Cable Designs					
Product Code	**Fibre count**	**Fibre Type**	**Buffer tube size (mm) ±0.05**	**Cable Diameter (mm) ±5%**	**Cable Weight (kg/km) ±10%**
F20002S301GAP10000	2	G.652D	3.0	7.4	50
F20004S301GAP10000	4	G.652D	3.0	7.4	50
F20006S301GAP10000	6	G.652D	3.0	7.4	50
F20008S301GAP10000	8	G.652D	3.0	7.4	50
F20012S301GAP10000	12	G.652D	3.0	7.4	50
F20024S301GAP10000	24	G.652D	3.4	7.8	52
F20002S101GDP10000	2	G.657 A1	3.0	7.4	50

Cable Designs					
Product Code	Fibre count	Fibre Type	Buffer tube size (mm) ±0.05	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%
F20004S101GDP10000	4	G.657 A1	3.0	7.4	50
F20006S101GDP10000	6	G.657 A1	3.0	7.4	50
F20008S101GDP10000	8	G.657 A1	3.0	7.4	50
F20012S101GDP10000	12	G.657 A1	3.0	7.4	50
F20024S101GDP10000	24	G.657 A1	3.4	7.8	52

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength Short term	1500	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3A
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-20° C to +60° C	
Storage	-25° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1-2 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)
Wooden Drums	4 ± 5% (For all Fibre Counts)

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0002 – 0024)				Fibre type		No. of active tubes (01)		Cable core type	Fibres colour code	Jacket type		Running number		Special requirement	
		1				2		3			4						
F	2	-	-	-	-	-	-		1	G	-	P	1	0	0	0	0

1. Fibre count by indicating the corresponding number from 0002 to 0024

2. Fibre code corresponding to requested fibre type among following options

Fibre code	Fibre type (ITU-T)	STL's Fibre Name
S1	G.652D/G.657 A1	BOW-LITE
S2	G.657 A2	BOW-LITE (E)
S3	G.652D	OH-LITE
SN	G.657 A1 adv/G652D	OH-LITE NOVA

3. Number of active tubes : 01

4. Fibres colour sequence available options[4]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [4]other colour codes are available on demand prior STL approval	

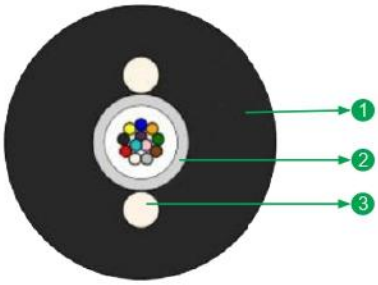
5. Outer sheath type- P1: Polyethylene, Single Jacket.

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

DROP-LITE OSP

Unitube Gel Filled Round Drop SJ OFC



1 OUTER JACKET 2 GEL FILLED TUBE 3 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 fibre due to its Unitube construction
- The construction with PE jacket.
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL DROP-LITE Round Drop Dielectric Fiber Optic Cable offers the ease of installation in an easy access, single-tube design. This cable has optical fibres 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.

Fibres and Cable Performance Standards

The cables performances comply with or exceed the requirements from the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

STERLITE SM "FIBER TYPE" "FIBER COUNT" ROUND DROP OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note

1. 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.
2. Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics	
Maximum Cabled Attenuation (dB/km)	1310nm: 0.35 & 1550nm: 0.23
Tube Material	Polybutylene Terephthalate (PBT)
Tube Color	Natural/White
No of Tubes	1
Embedded Strength Member	FRP (Fibre Reinforced Plastic)
Outer Sheath Material	UV Stabilized Black Polyethylene

Fiber Color Sequence (to be defined)[1]											
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Notes [1]: Other fibres colour sequences are available on demand, prior approval.

Cable Designs				
Product Code	**Fiber Count**	**Fiber Color**	**Cable Diameter +/- 0.3mm**	**Cable Weight Kg/Km(± 10%)**
F30004S301GUP10000	4	Blue, Orange, Green, Brown	6	30
F30006S301GUP10000	6	Blue, Orange, Green, Brown, Slate, White	6	30
F30012S301GUP10000	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua	6	30

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength	IEC-60794-1-21-E1	350
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	1000
Impact Strength (Nm)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	20 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	10 D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24 h
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 h
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10°C to +50°C
Operation		-20°C to +60°C
Storage		-20°C to +60°C

Note : Change in attenuation after and before testing shall be </= 0.05 dB/km for Single mode.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums/COIL	2/4 ± 5%	± 5%	Max 5%, Customer Approval

Ordering Information

Optical fiber cable in other fiber types may be available on request, please create product code from the table below. Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.

Product type		Fibre count (0004 – 0024)				Fibre type		No. of active tubes/bundles (01-24)		Tube/Bundle	Tube/Core type	Jacket type		Running number		*Special Requirement				
		1				2		3								4				
F	3	-	-	-	-	-	-	0	1	G	U	P	1	X	X	X	X	X	-	-

Create the desired Product Code following the instructions below:

1. Select fibre count by indicating the corresponding number from 0002 to 0012
2. Fibre code corresponding to requested fibre type among following options

Fibre code		Product Type (ITU-T)	STL's Fibre Name*
S	3	G.652.D	OH-LITE
S	1	G.657.A1	BOW-LITE
S	N	G.657.A1/G.652.D	OH-LITE NOVA
S	2	G.657.A2	BOW-LITE (E)
C	1	G.657.A2/G.652.D	STELLAR

**Click on fiber name to view fiber specs.*

3. Select number of active tubes/bundles by indicating the corresponding number from 01
4. Special Requirement

Code					Core Type
					Standard Black Sheath
-	-	-	-	-	

**Special code for special requirement shall be defined by STL as per customer requirement*

Examples

Round Drop-OSP 12 G.652.D 12F x 1 Filled Tube Unitube OFC (Standard)

F	3	0	0	1	2		S	3	0	1	G	U	P	1	X	X	X	X			

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

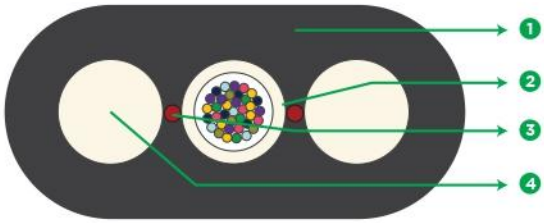
Product Specification

Drop-Lite

Flat Single Sheath OFC

2F - 24F | Nova - G.657.A1 Single Mode Fiber

1. OUTER JACKET
2. GEL FILL 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	2~24
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%)**
F50002SN01GAP10000	2	4.4 x 8.4 (0.173 x 0.33)	38 (0.025)
F50004SN01GAP10000	4	4.4 x 8.4 (0.173 x 0.33)	38 (0.025)
F50006SN01GAP10000	6	4.4 x 8.4 (0.173 x 0.33)	38 (0.025)
F50008SN01GAP10000	8	4.4 x 8.4 (0.173 x 0.33)	39 (0.026)
F50012SN01GAP10000	12	4.4 x 8.4 (0.173 x 0.33)	39 (0.026)
F50024SN01GAP10000	24	5.0 x 9.5 (0.196 x 0.374)	60 (0.040)

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

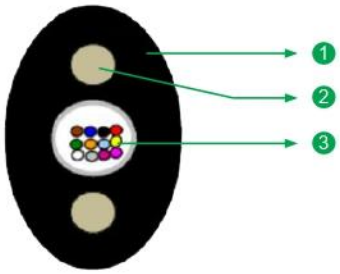
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20000 ± 5% (For all Fiber Counts)	-0%, +5%	Max 5%, Customer Approval

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Drop-Lite

Unitube Gel Filled Oval Drop SJ OFC



1 BLACK PE OUTER SHEATH

2 EMBEDDED STRENGTH MEMBER (FRP)

3 LOOSE TUBE WITH FIBERS AND JELLY

** 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 fibre due to its Unitube construction
- The construction with PE jacket.
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL DROP-LITE Oval Drop Dielectric Fiber Optic Cable offers the ease of installation in an easy access, single-tube design. This cable has optical fibres 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.

Fibres and Cable Performance Standards

The cables performances comply with or exceed the requirements from the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

STERLITE SM "FIBER TYPE" "FIBER COUNT" ROUND DROP OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note

1. 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.
2. Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics	
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: 0.35 & 1550nm: 0.23
Tube Material	Polybutylene Terephthalate (PBT)
Tube Color	Natural/White
No of Tubes	1
Embedded Strength Member	FRP (Fibre Reinforced Plastic)
Outer Sheath Material	UV Stabilized Black Polyethylene

Fiber Color Sequence (to be defined)[1]											
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Notes [1]: Other fibres colour sequences are available on demand, prior approval.

Cable Designs				
Product Code	**Fiber Count**	**Fiber Color**	**Cable Diameter +/- 1.0 mm**	**Cable Weight Kg/Km(± 10%)**
F60004S201GUP10300	4	Blue, Orange, Green, Brown	4.0 x 6.4	25
F60006S201GUP10300	6	Blue, Orange, Green, Brown, Slate, White	4.0 x 6.4	25
F60012S201GUP10300	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua	4.0 x 6.4	25

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N)	IEC-60794-1-21-E1	500
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	1000
Impact Strength (Nm)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	20 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	10 D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24 h
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 h
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10° C to +50°C
Operation		-20°C to +60°C
Storage		-20°C to +60°C

Note: Change in attenuation after and before testing shall be </= 0.05 dB/km for Single mode.

Packing and Lengths

Drum Type	Length Multiple (km)	Order Tolerance	Short Lengths
Wooden Drums/COIL	2/4 ± 5%	± 5%	Max 5%, Customer Approval

Ordering Information

Optical fiber cable in other fiber types may be available on request, please create product code from the table below. Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.

Product type		Fibre count (0004 – 0024)				Fibre type		No. of active tubes/bundles (01-24)		Tube/ Bundle	Tube/Core type	Jacket type		Running number		*Special Requirement				
		1				2		3												
F	6	-	-	-	-	-	-	0	1	G	U	P	1	X	X	X	X	-	-	-

Create the desired Product Code following the instructions below:

1. Select fibre count by indicating the corresponding number from 0004 to 0012
2. Select fibre code corresponding to requested fibre type among following options.

Fibre code		Product Type (ITU-T)	STL's Fibre Name*
S	3	G.652.D	OH-LITE
S	1	G.657.A1	BOW-LITE
S	N	G.657.A1/G.652.D	OH-LITE NOVA
S	2	G.657.A2	BOW-LITE (E)
C	1	G.657.A2/G.652.D	STELLAR

**Click on fiber name to view fiber specs.*

3. Select number of active tubes/bundles by indicating the corresponding number from 01
4. Special Requirement

Code					Core Type
					Standard Black Sheath
-	-	-	-	-	

*Special code for special requirement shall be defined by STL as per customer requirement

Examples

Round Drop- OSP 12 G.657.A2 12F x 1 Filled Tube Unitube Oval Drop OFC (Standard)

F	6	0	0	1	2		S	2	0	1	G	U	P	1	X	X	X	X		

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

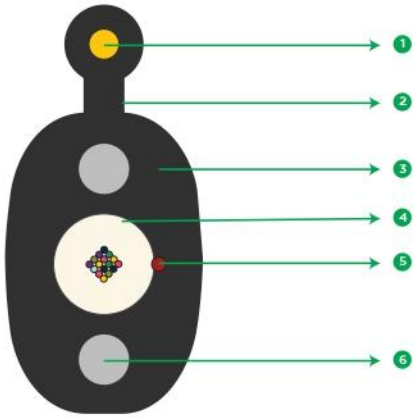
Product Specification

Drop-Lite

Tonable Flat Single Sheath OFC

2F-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	2~24
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%)**
F70002SN01GAP10000	2	4.2 x 10 (0.165 x 0.393)	48 (0.032)
F70004SN01GAP10000	4	4.2 x 10 (0.165 x 0.393)	48 (0.032)
F70006SN01GAP10000	6	4.2 x 10 (0.165 x 0.393)	48 (0.032)
F70008SN01GAP10000	8	4.2 x 10 (0.165 x 0.393)	49 (0.032)
F70012SN01GAP10000	12	4.2 x 10 (0.165 x 0.393)	49 (0.032)
F70024SN01GAP10000	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

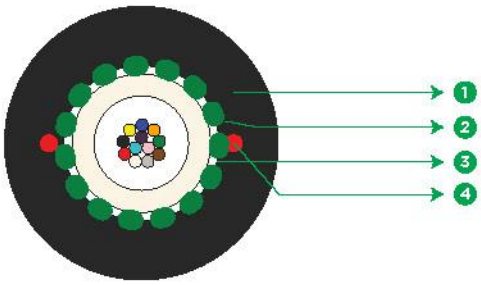
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20000 ± 5% (For all Fiber Counts)	-0% + 5%	Max 5%, Customer Approval

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Drop-Lite

Unitube Gel Filled LSZH OFC with Glass Roving Yarn
2F - 24F



Cross Section 12F

1 OUTER PA JACKET 2 GLASS ROVING YARNS 3 GEL FILLED TUBE 4 RIPCORD(S)

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Duct cables with glass roving yarns are ideal for installation by pulling in conventional ducts, they can also be direct buried in clean sand bed.
- The glass roving yarns armouring provides enhanced rodent protection
- Dry water-blocking technology for gel free core helps in quicker end preparation
- No earthing needed thanks to fully dielectric construction
- Easily removable rugged thermoplastic jacket, with UV resistant
- Flexible, light weight, easy to handle and install
- Class Eca rated according to CPR

Product Details

STL Unitube Out-Side Plant, Single Jacket with Glass Roving Yarns Fibre Optic Cables are suitable for installation in conventional ducts by means of pulling techniques. These cables are based on a loose tube structure with the optical fibres placed inside a robust central buffer tube. In addition to the optical fibres, the buffer tubes are gel filled, and water swellable glass yarns are placed around it to ensure longitudinal water protection. The glass roving yarns layer provides the required tensile strength and enhanced rodent protection. The outer jacket made of LSZH thermoplastic material is extruded over the cable core as a mechanical and environmental protection. Class Eca rated to CPR.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-3-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT DROP-LITE I/O OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING

Printing method: Ink-Jet/Hot Foil

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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23; 1625nm: 0.26
PMD LDV (ps/sqrt.km)	≤ 0.1
Peripheral Strength Elements	Glass Roving Yarns
No of Ripcords Below Outer Sheath	1
Outer Jacket Thickness (mm)	1.1 (nominal)
Outer Jacket Material	UV Resistant Black[1], LSZH

Fibres Colour Sequence (as per DIN/VDE 0888)[2,3]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]Other jacket colours are available on demand, prior approval
[2]The fibres 13 to 24, when present, have a black ring marking (the back fibre is replaced by a natural fibre with black ring marking)
[3]Other fibres colour sequences are available on demand, prior approval.

Cable Designs					
Product Code	Fibre count	Fibre Type	Buffer tube size (mm) ±0.05	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%
F80002S301GDL100E0	2	G.652D	3.0	7.4	60
F80004S301GDL100E0	4	G.652D	3.0	7.4	60
F80006S301GDL100E0	6	G.652D	3.0	7.4	60
F80008S301GDL100E0	8	G.652D	3.0	7.4	60
F80012S301GDL100E0	12	G.652D	3.0	7.4	60
F80024S301GDL100E0	24	G.652D	3.4	7.8	62
F80002S101GDL100E0	2	G.657 A1	3.0	7.4	60

Cable Designs					
Product Code	Fibre count	Fibre Type	Buffer tube size (mm) ±0.05	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%
F80004S101GDL100E0	4	G.657 A1	3.0	7.4	60
F80006S101GDL100E0	6	G.657 A1	3.0	7.4	60
F80008S101GDL100E0	8	G.657 A1	3.0	7.4	60
F80012S101GDL100E0	12	G.657 A1	3.0	7.4	60
F80024S101GDL100E0	24	G.657 A1	3.4	7.8	62

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	Cable Performance	Testing Standard Method
Tensile Strength Short term	1500	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3A
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Bend	20 x OD	IEC-60794-1-21-E11A
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-20° C to +60° C	
Storage	-25° C to +70° C	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-3-10 standard.

Packing and Lengths

Drum Type	Length Multiple (in km)
Wooden Drums	4 ± 5% (For all Fibre Counts)

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0004 – 0024)				Fibre type		No. of active tubes (01)		Cable core type	Fibres colour code	Jacket type		Running number		Special requirement	
		1				2					3						
F	8	-	-	-	-	-	-	0	1	G	-	L	1	0	0	0	0

1. **Fibre count by indicating the corresponding number from 0002 to 0024**

2. Fibre code corresponding to requested fibre type among following options

Fibre code	Fibre type (ITU-T)	STL's Fibre Name
S1	G.652D/G.657 A1	BOW-LITE
S2	G.657 A2	BOW-LITE (E)
S3	G.652D	OH-LITE
SN	G.657 A1 adv/G652D	OH-LITE NOVA

3. Fibres colour sequence available options[4]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland

Note: [4]other colour codes are available on demand prior STL approval

For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

UniTube/Central Fibre Core

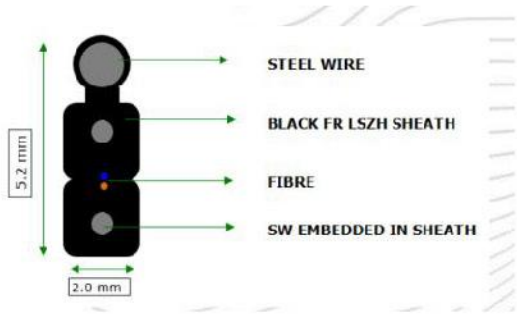
CFC Drop Cables

Product Specification

Flat Drop cable

Easy-Strip Fig 8

1~2FO Outdoor/Indoor Easy-Strip Fig 8 Flat drop cable-ARP/FRP/SW



1 EMBEDDED STRENGTH MEMBER 2 OPTICAL FIBER UNIT 3 LSZH OUTER SHEATH

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Novel flute design, easily strip and splice, simplify the installation and maintenance
- The construction with LSZH jacket.
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL Easy Strip Fig.8 flat drop Indoor/Outdoor Fibre Optic Cable is an enhanced performance FTTH solution for the drop network segment. It consists of 1 or 2 bend insensitive fibres protected by two Aramid Reinforced Plastic (ARP)/ Fiber Reinforced / Steel Wire strength elements and a steel messenger wire. The 2 ARP and the fibres are embedded in an outer jacket made of LSZH material indented at the fibre's location, and the messenger wire is jointed to the small side of the cable in a typical figure 8 constructions.

Fibres and Cable Performance Standards

The cables performances comply with or exceed the requirements from the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

STERLITE SM "FIBER TYPE" "FIBER COUNT" EASY STRIP FIG 8 OUTDOOR OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note

1. 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.
2. Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics			
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: ≤ 0.40 & 1550nm: ≤ 0.30 & 1625nm: ≤ 0.35		
PMD Individual (ps/√km)	≤ 0.02		
Embedded Strength Elements	Aramid Reinforced Plastic (FRP) x 2 Numbers	Fiber Reinforced Plastic (FRP) x 2 Numbers	Steel Wire (SW) x 2 Numbers
Messenger Wire	Steel wire x 1 Numbers		
Outer Jacket Material	UV Proof Black, LSZH		

Fiber Color Sequence (to be defined)[1]											
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Notes [1]: Other fibres colour sequences are available on demand, prior approval.

Cable Designs(ARP)				
Product Code	Fiber Count	Fiber Color	Cable Diameter (Height X Width) +/- 0.2 mm	Cable Weight Kg/Km(± 10%)
FA0001S201NTL10100	1	Blue	2.0 x 5.2	16
FA0002S201NTL10100	2	Blue, Orange	2.0 x 5.2	16

FRP Cable Designs(FRP)				
Product Code	Fiber Count	Fiber Color	Cable Diameter (Height X Width) +/- 0.2 mm	Cable Weight Kg/Km(± 10%)
FA0001S201NTL10000	1	Blue	2.0 x 5.2	16
FA0002S201NTL10100	2	Blue, Orange	2.0 x 5.2	16

Cable Designs(SW)				
Product Code	Fiber Count	Fiber Color	Cable Diameter (Height X Width) +/- 0.2 mm	Cable Weight Kg/Km(± 10%)
FA0001S201NTL10200	1	Blue	2.0 x 5.2	20
FA0001S201NTL10200	2	Blue, Orange	2.0 x 5.2	20

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N)	IEC-60794-1-21-E1	600
Crush Resistance (N/mm)	IEC-60794-1-21-E3	500 N/100 mm
Impact Strength (Nm)	IEC-60794-1-21-E4	5Nm @ 1 impact
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius	IEC-60794-1-21-E11	15 D (15 x 5.2) mm
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10° C to +60° C
Operation & Storage		-30°C to +70°C

Note: Change in attenuation after and before testing shall be </= 0.1 dB/km.

Packing and Lengths

Packing Type	Length Multiple (km)	Order Tolerance	Short Lengths
Ply Spool on Pallet	1 ± 5% (For All Fiber Counts)	± 5%	Max 5%, Customer Approval

Product Ordering Information for Cables

Product type		Fibre count (0004 – 0024)				Fibre type		No. of active tubes/bundles (01-24)		Tube/Bundle	Tube/Core type	Jacket type		Running number		*Special Requirement			
		1				2		3								4			
F	A	-	-	-	-	-	-	0	1	N	T	L	1	X	X	X	X	-	-

**Special code for special requirement shall be defined by STL as per customer requirement*

Create the desired Product Code following the instructions below:

1. Select fibre count by indicating the corresponding number from 0001 to 0002
2. Select fibre code corresponding to requested fibre type among following options.
3. Select number of active tubes/bundles by indicating the corresponding number from 01
4. Special Requirement

Code					Core Type
					Standard Black Sheath
-	-	-	-	-	

Fibre code		Product Type (ITU-T)	STL's Fibre Name*
S	3	G.652.D	OH-LITE
S	1	G.657.A1	BOW-LITE
S	N	G.657.A1/G.652.D	OH-LITE NOVA
S	2	G.657.A2	BOW-LITE (E)
C	1	G.657.A2/G.652.D	STELLAR

**Click on fiber name to view fiber specs.*

Examples

1F Easy Strip Fig.8 I/O <G657A2> 2F OFC

F	A	0	0	0	1		S	2	0	0	N	T	L	1	X	X	X	X			

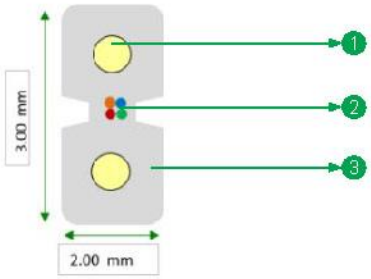
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Drop-Lite ™

Easy Strip Flat Cable
1~4FO Indoor Flat drop cable -FRP



1 EMBEDDED STRENGTH MEMBER 2 OPTICAL FIBER UNIT 3 LSZH OUTER SHEATH

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Novel flute design, easily strip and splice, simplify the installation and maintenance
- The construction with LSZH jacket.
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

Sterlite Tech™ Drop-LITE™ Easy Strip Flat Cable is an enhanced performance FTTH solution, construct with single mode /bend sensitive fibres, protected by two strength members and covered with outer sheath which makes the cable robust and installation friendly. This cable is very light and easy to install and strip. Industry standard connectors can be used for direct termination because of standard 250µm fibre size. Low Smoke Zero Halogen Compound Jacket is appropriate for indoor use.

Fibres and Cable Performance Standards

The cables performances comply with or exceed the requirements from the following standards IEC 60793-2-50, IEC 60794-3-10, ITU-T G652 and/or G657, RoHS, REACH, ANSI/TIA-492 Series, ANSI/TIA-568.3-E.

Printing Details

STERLITE SM "FIBER TYPE" "FIBER COUNT" EASY STRIP INDOOR OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note

1. 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.
2. Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics			
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: ≤ 0.40 & 1550nm: ≤ 0.30 & 1625nm: ≤ 0.35		
Embedded Strength Elements	Fibre Reinforced Plastic (FRP) x 2 Numbers	Steel Wire (SW) x 2 Numbers	Aramid Reinforced Plastic (ARP) x 2 Numbers
Outer Jacket Material	UV Protected White, LSZH		

Fiber Color Sequence (to be defined)[1]											
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Notes [1]: Other fibres colour sequences are available on demand, prior approval.

Cable Designs FRP				
Product Code	**Fiber Count**	**Fiber Color**	**Cable Diameter (Height X Width) +/- 0.2 mm**	**Cable Weight Kg/Km(± 10%)**
FB0001S201NTL10000	1	Blue	2.0 x 3.0	8
FB0002S201NTL10000	2	Blue, Orange	2.0 x 3.0	8
FB0004S201NTL10000	4	Blue, Orange, Green, Brown	2.0 x 3.0	8

Cable Designs SW				
Product Code	**Fiber Count**	**Fiber Color**	**Cable Diameter (Height X Width) +/- 0.2 mm**	**Cable Weight Kg/Km(± 10%)**
FB0001S201NTL10200	1	Blue	2.0 x 3.0	8
FB0002S201NTL10200	2	Blue, Orange	2.0 x 3.0	8
FB0002S201NTL10200	4	Blue, Orange, Green, Brown	2.0 x 3.0	8

Cable Designs SW				
Product Code	Fiber Count	Fiber Color	Cable Diameter (Height X Width) +/- 0.2 mm	Cable Weight Kg/Km(± 10%)
FB0001S201NTL10100	1	Blue	2.0 x 3.0	8
FB0002S201NTL10100	2	Blue, Orange	2.0 x 3.0	8
FB0002S201NTL10100	4	Blue, Orange, Green, Brown	2.0 x 3.0	8

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	Testing Standard Method	Cable Performance
Tensile Strength (N)	IEC-60794-1-21-E1	100N
Crush Resistance (N/mm)	IEC-60794-1-21-E3	500 N/100 mm
Impact Strength (Nm)	IEC-60794-1-21-E4	1Nm @ 1 impact
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius	IEC-60794-1-21-E11	15 D (15 x 3) mm
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	10 D
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10° C to +60° C
Operation & Storage		-20°C to +70°C

Note: Change in attenuation after and before testing shall be </= 0.1 dB/km.

Packing and Lengths

Packing Type	Length Multiple (km)	Order Tolerance	Short Lengths
Cable reel shall be taken on plywood spool & Packing details shall be attached to spool outer side	1 ± 5% (For All Fiber Counts)	± 5%	Max 5%, Customer Approval

Ordering Information

Optical fiber cable in other fiber types may be available on request, please create product code from the table below. Cable complies to the following standards IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.

Product type		Fibre count (0004 – 0024)					Fibre type		No. of active tubes/bundles (01-24)		Tube /Bundle	Tube /Core type	Jacket type		Running number		*Special Requirement					
		1					2		3								4					
F	B	-	-	-	-		-	-	0	1	N	T	L	1	X	X	X	X	X	-	-	-

Create the desired Product Code following the instructions below:

1. Select fibre count by indicating the corresponding number from 0001 to 0004
2. Select fibre code corresponding to requested fibre type among following options.

Fibre code		Product Type (ITU-T)	STL's Fibre Name*
S	3	G.652.D	OH-LITE
S	1	G.657.A1	BOW-LITE
S	N	G.657.A1/G.652.D	OH-LITE NOVA
S	2	G.657.A2	BOW-LITE (E)
C	1	G.657.A2/G.652.D	STELLAR

**Click on fiber name to view fiber specs.*

3. Select number of active tubes/bundles by indicating the corresponding number from 01
4. Special Requirement

Code					Core Type
					Standard Black Sheath
-	-	-	-	-	

**Special code for special requirement shall be defined by STL as per customer requirement*

Examples

2F Easy Strip Indoor <G657A2> 2F OFC (Standard)

F	B	0	0	0	2		S	2	0	1	N	T	L	1	X	X	X	X			

Unitube/Central Fiber Core CFC Drop

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

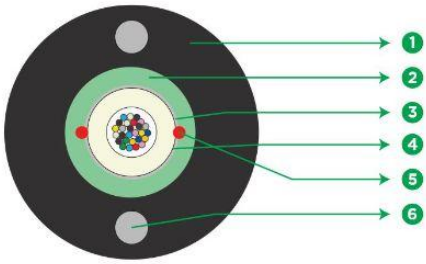
UniTube/Central Fibre Core

UT Direct Buried Cables

Product Specification

Drop-Lite

Unitube Gel Free Single Jacket Armored OFC
4F - 24F | Nova - G.657.A1 Single Mode Fiber



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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Steel tape adds to crush resistance as well as can be used as a cable locator after installation
- Cables are rodent protected
- Easy access to Fiber due to its Unitube construction
- Tensile and crush resistant
- UV protected

Product Details

STL Drop-Lite Gel Free Unitube 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 tube contains water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. 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 with the following standards IEC 60793, IEC 60794, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH, and 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 : 0.35 & 1550nm : 0.23
PMD LDV (ps/sqrt.km)	</= 0.1
No of Tubes	1
Tube Color	White
Tube Material	Polypropylene (PP)
Metallic Armoring	Corrugated Steel Tape (Un-bonded with Sheath)
Outer Sheath Material	UV Proof Black Polyethylene
No of Ripcords Below Sheath	2

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

Note: * - denotes single black ring marking on Fibers

Cable Designs			
Product Code	**Fiber Count**	**Cable Diameter mm (+ 5%)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
G10004SN01GABU0000	4	8.3 (0.32)	86 (0.057)
G10006SN01GABU0000	6	8.3 (0.32)	86 (0.057)
G10008SN01GABU0000	8	8.3 (0.32)	88 (0.059)
G10012SN01GABU0000	12	8.8 (0.34)	96 (0.063)
G10024SN01GABU0000	24	9.3 (0.36)	102 (0.068)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	2000 (449.6)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	200 (114.2)	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.

Packing and Lengths

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

Micromodule

Applications:

- **Duct Micromodule**: Medium to long runs within underground ducts.
- **Direct Buried Micromodule**: Long spans underground without conduit.
- **Microduct Micromodule**: Medium to long runs within pre-installed microducts.
- **Aerial Micromodule**: Long spans in aerial installations between poles.
- **Retractable Micromodule**: Short to medium spans with flexible, on-demand fiber deployment.

Micromodule

STL's Micromodule cables offer a future-ready, modular solution for high-density and flexible installations.

Industries it may cater to:

Telecom & Broadband

High-density fiber networks in urban and suburban regions.

Data Centers

Scalable and modular connectivity for hyperscale and edge data centers.

Smart Cities

Compact solutions for congested urban environments with microducts.

Transportation

High-density fiber deployments in rail, tunnels, and subways.

FTTH

Future-ready networks for fiber-to-the-premises (FTTP) installations.

Deployment Type: Suitable for **medium to long-distance** high-density deployments.

Cable Runs: Typically 5-30 km.

Variants available of Micromodule Cables:

- **Duct Micromodule**: Engineered for placement in underground ducts, providing efficient fiber management and ease of splicing.
- **Direct Buried Micromodule**: Built tough for direct underground installations, offering superior protection against harsh soil and moisture.
- **Microduct Micromodule**: Compact and lightweight cables, perfect for tight spaces and pre-installed microduct networks.
- **Aerial Micromodule**: UV-resistant and durable, these cables are ideal for aerial deployments between poles and buildings.
- **Retractable Micromodule**: Designed for on-demand fiber deployment, providing unmatched flexibility for future scalability.

With lightweight construction and modular fiber management, STL's Micromodule cables enable seamless installations with optimal performance.

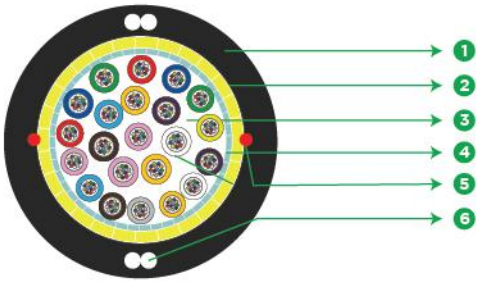
Micromodule

Duct Cables

Product Specification

Yoga-Lite

Multitube Gel Filled Duct OFC
12F - 144F | Bow Lite(E) - G.657.A2 Single Mode Fibre



1 OUTER JAKET
2 ARAMID YARNS
3 GET FILLED TUBE
4 WATER BLOCKING TAPE
5 RIPCORD(S)
6 STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Reduced diameter micro- modules manufactured from soft and flexible elastomeric material
- Diametrically opposed embedded strength members provides excellent crush protection performance
- Fibre micro-modules are kink resistant and easily removed without the need for tools
- Fast and easy midspan access

Product Details

YogaLite Single Jacket Cable by STL is based on micro-module technology to create an optimized design suitable for use in Duct/Aerial scenarios. The micro module unit consist of groups of fibres protected by an easily strippable and flexible thermoplastic material and filled with thixotropic compound. These microstructures are surrounded with water swelling elements to protect against moisture ingress, and are constrained in a thermoplastic sheath, which is provided with embedded strength members to protect from buckling.

Fibres and Cable Performance Standards

Cable complies with the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM G657A2 FIBRE TYPE YOGALITE D/A LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURING LENGTH CODE METER MARKING.

Note: The accuracy of marking shall be + 0.5%.

Specifications

Physical Characteristics	
Fibre Count	12~144
Fibre Type	STL Fibre ITU-T G.657 A2
Maximum Cabled Attenuation (dB/km)	1310nm : 0.36, 1550nm : 0.23, 1625nm : 0.26
Link Design PMD (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12
Peripheral Strength Members	High Strength Aramid Yarns
No of Ripcords Below Outer Sheath	2
Embedded Strength Member	Megabond FRP (Fibre Reinforced Plastic)
Outer Jacket Material	UV Proof Black Polyethylene

Fibres Colour Sequence (as per DIN/VDE 0888)[1,2]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]The tubes 13 to 24, when present, have a black single intermittent ring stripe marking with width of 2 to 3 mm.
[2]Other fibres colour sequences are available on demand, prior approval.

Cable Characteristics						
Product Code	**Fibre count**	**Fibre Type**	**No. of Tubes**	**Cable Diameter (mm) ±5%**	**Cable Weight (kg/km) ±10%**	**Max. Tensile Strength (N)**
H10006S201GFP10000	6	G.657 A2	1	6.2	30	620
H10012S202GFP10000	12	G.657 A2	2	7.0	40	840
H10024S204GFP10000	24	G.657 A2	4	8.0	52	1080
H10036S206GFP10000	36	G.657 A2	6	8.5	58	1200
H10048S208GFP10000	48	G.657 A2	8	9.0	64	1300
H10072S212GFP10000	72	G.657 A2	12	10.0	74	1550
H10096S216GFP10000	96	G.657 A2	16	11.0	90	1860
H10144S224GFP10000	144	G.657 A2	24	13.0	115	2400
H10012S201GFP10000	12	G.657 A2	1	6.5	35	740
H10024S202GFP10000	24	G.657 A2	2	7.5	42	880

Cable Characteristics						
Product Code	Fibre count	Fibre Type	No. of Tubes	Cable Diameter (mm) ±5%	Cable Weight (kg/km) ±10%	Max. Tensile Strength (N)
H10048S204GFP10000	48	G.657 A2	4	8.5	57	1200
H10072S206GFP10000	72	G.657 A2	6	9.5	67	1400
H10096S208GFP10000	96	G.657 A2	8	10.5	82	1680
H10144S212GFP10000	144	G.657 A2	12	11.0	96	2000
H10288S224GFP10000	288	G.657 A2	24	13.5	128	2500
H10432S236GFP10000	432	G.657 A2	36	15.6	185	2400

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	Cable Performance	Testing Standard Method
Tensile Strength	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	5	IEC-60794-1-21-E4
Torsion	±180° °/m, L=80N	IEC-60794-1-21-E7
Static Bend Radius	15D	IEC-60794-1-21-E11
Kink Radius	10D	IEC-60794-1-21-E11
Water Penetration Test	1m head, 3m samples, 24 hrs, no water penetration	IEC-60794-1-22-F5
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Friction co-efficient in ducts	f ≤ 0.35	
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° 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 fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	2/4 ± 5% (For all Fibre Counts)	±5%	Max 5%, Customer Approval

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0006 – 0432)				Fibre type		No. of active tubes (01-12)		Cable core type	Fibres/tubes colour code	Jacket type		Running number		Special requirement	
		1				2		3			4						
H	2	-	-	-	-	-	-	-	-	G	-	P	1	0	0	-	-

1. Fibre count by indicating the corresponding number from 0006 to 0432

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	2	G.657 A2	BOW-LITE (E)

3. Number of active tubes : 01 to 12

4. Fibres and tubes colour sequence available options[3]

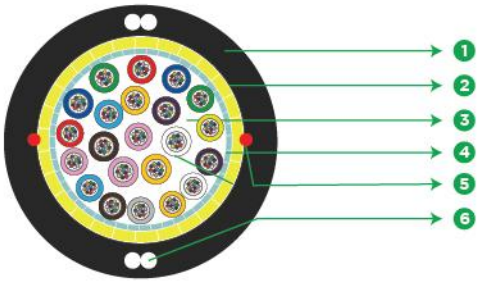
Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [3]other colour codes are available on demand prior STL approval	

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Yoga-Lite

Multitube Gel Filled Duct and ADSS OFC
12F - 144F | Bow Lite(E) - G.657.A2 Single Mode Fibre



1 OUTER JAKET
2 ARAMID YARNS
3 GET FILLED TUBE
4 WATER BLOCKING TAPE
5 RIPCORD(S)
6 STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Reduced diameter micro-modules manufactured from soft and flexible elastomeric material
- Diametrically opposed embedded strength members provides excellent crush protection performance
- Fibre micro-modules are kink resistant and easily removed without the need for tools
- Fast and easy midspan access

Product Details

YogaLite Single Jacket Cable by STL is based on micro-module technology to create an optimized design suitable for use in Duct/Aerial scenarios. The micro module unit consists of group of fibres protected by an easily strippable and flexible thermoplastic material and filled with thixotropic compounds. These microstructures are surrounded with water swelling elements to protect against moisture ingress, and are constrained in a thermoplastic sheath, which is provided with embedded strength members to protect from buckling.

Fibres and Cable Performance Standards

Cable complies with the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Printing: STERLITE SM G657A2 FIBRE TYPE YOGALITE D/A LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURING LENGTH CODE METER 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	
Fibre Count	12~144
Fibre Type	STL Fibre ITU-T G.657 A2
Maximum Cabled Attenuation (dB/km)	1310nm : 0.36, 1550nm : 0.23, 1625nm : 0.26
Link Design PMD (ps/sqrt.km)	≤ 0.1
Fibres per Tube	12
Peripheral Strength Members	High Strength Aramid Yarns
No of Ripcords Below Outer Sheath	2
Embedded Strength Member	FRP (Fibre Reinforced Plastic)
Outer Jacket Material	UV Proof Black Polyethylene

Fibres Colour Sequence (as per DIN/VDE 0888)[1,2]											
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Pink	Orange

Note: [1]The tubes 13 to 24, when present, have a black single intermittent ring stripe marking with width of 2 to 3 mm.
[2]Other fibres colour sequences are available on demand, prior approval.

Cable Characteristics						
Product Code	**Fibre count**	**Fibre Type**	**No. of Tubes**	**Cable Diameter (mm) ±5%**	**Cable Weight (kg/km) ±10%**	**Max. Tensile Strength (N)**
H20012S201GFP10000	12	G.657 A2	1	6.5	35	740
H20024S202GFP10000	24	G.657 A2	2	7.5	42	880
H20048S204GFP10000	48	G.657 A2	4	8.5	57	1200
H20072S206GFP10000	72	G.657 A2	6	9.5	67	1400
H20096S208GFP10000	96	G.657 A2	8	105	82	1680
H20144S212GFP10000	144	G.657 A2	12	11.5	96	2000

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength	As per above tables	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	5	IEC-60794-1-21-E4
Torsion	±180° °/m, L=80N	IEC-60794-1-21-E7
Static Bend Radius	15D	IEC-60794-1-21-E11
Kink Radius	10D	IEC-60794-1-21-E11
Water Penetration Test	1m head, 3m samples, 24 hrs, no water penetration	IEC-60794-1-22-F5
Drip Test	30 cm, 70° C, 24 hr	IEC-60794-1-21-E14
Friction co-efficient in ducts	f ≤ 0.35	
Temperature Performance		IEC-60794-1-22-F1
Installation	-5° C to +50° C	
Operation	-30° 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 fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	2/4 ± 5% (For all Fibre Counts)	±5%	Max 5%, Customer Approval

Ordering Information

Other Fibres counts, types and tube colours sequences may be available on request, please create product code from the table below.

Product type		Fibre count (0012 – 0144)				Fibre type		No. of active tubes (01-12)		Cable core type	Fibres/tubes colour code	Jacket type		Running number		Special requirement	
		1				2		3			4						
H	2	-	-	-	-	-	-	-	-	G	-	P	1	0	0	-	-

1. Fibre count by indicating the corresponding number from 0012 to 0144

2. Fibre code corresponding to requested fibre type among following options

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	2	G.657 A2	BOW-LITE (E)

3. Number of active tubes : 01 to 24

4. Fibres and tubes colour sequence available options[4]

Code	Fibres and Tubes Colour Codes
A	EIA/TIA 598 C
D	DIN/VDE 0888
F	France
H	Switzerland
I	Italy
L	Hungary
M	Poland
Note: [4]other colour codes are available on demand prior STL approval	

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

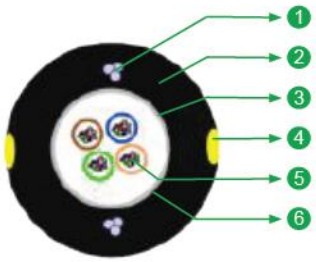
Micromodule

Aerial Cables

Product Specification

Yogalite

ULW OSP SJ Filled Tubes/ Dry Core Multitube OFC



1. EMBEDDED BRASS COATED STEEL WIRE
2. POLYETHYLENE OUTER SHEATH
3. ARAMID YARNS (IF REQUIRED)
4. YELLOW STRIPE MARKING
5. MICROBUNDLE WITH FIBRES & GEL
6. WATER SWELLABLE TAPE

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Reduced diameter micro- modules manufactured from soft and flexible elastomeric material
- Diametrically opposed embedded strength members provides excellent crush protection performance
- Fibre micro-modules are kink resistant and easily removed without the need for tools
- Fast and easy mid-span access

Product Details

YogaLite™ Single Jacket Cable by STL Tech™ is based on micro-module technology to create an optimized design suitable for use in duct/aerial scenarios. The micro module unit consist of groups of fibres protected by an easily strippable and flexible thermoplastic material and filled with thixotropic compound. These microstructures are surrounded with water swelling elements to protect against moisture ingress, and are constrained in a thermoplastic sheath, which is provided with embedded strength members to protect from buckling.

Fibres and Cable Performance Standards

The cables comply to the following standards IEC 60793-2-50, IEC 60794-5-10, Telcordia GR-20, ITU-T G652 and/or G657, RoHS, REACH.

Printing Details

Printing: STL SM " FIBRE TYPE " "FIBRE COUNT" ULW AERIAL LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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 Fibre Attenuation (dB/km)	1310nm: 0.35; 1550nm: 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibers per Tube	12
Micro- module	Easy strippable buffer tubes
Embedded Strength Member	Brass Coated Steel Wire
Stripe Marking	2 Nos. Yellow/Green stripe Marking [90° to steel wires]
Outer Sheath Material	UV Proof Black1 Polyethylene

Fibre Color Sequence (AS per EIA/TIA 598C)[2]											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua
Blue*	Orange*	Green*	Brown*	Slate*	White*	Red*	Natural*	Yellow*	Violet*	Rose*	Aqua*

Note: [1] Other jacket colours are available on demand, prior approval
[2]Other fibres and tubes colour sequences are available on demand, prior approval.

Cable Characteristics with G.657.A1 Fibre[3]					
Product Code	Fibre count	Color Code Sequence	Cable Diameter (mm) +0.3	Cable Weight (kg/km) + 10%	Breaking Load (N)
K20004S101GAP100J9	4	Blue	7	40	1350 - 2000
K20006S101GAP100J9	6	Blue	7	40	1350 - 2000
K20012S101GAP100J9	12	Blue	7	40	1350 - 2000
K20024S102GAP100J9	24	Blue, Orange	7	42	1350 - 2000
K20036S103GAP100J9	36	Blue, Orange, Green	7	48	1350 - 2000
K20048S104GAP100J9	48	Blue, Orange, Green, Brown	7	50	1350 - 2000

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Installation Load (N)	250	IEC-60794-1-21-E1
Crush Resistance (N/10cm)	2000	IEC-60794-1-21-E3A
Impact Strength (N·m)	5	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Repeated Bending	20 x OD	IEC-60794-1-21-E6
Min. Bend Radius (During Installation)	20 x OD	
Min. Bend Radius (After Installation)	15 x OD	
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-21-F5B
Drip Test	30 cm, 70°C, 24 h	IEC-60794-1-21-E14
Temperature Performance		IEC-60794-1-22-F1
Installation	-30° C to +70° C	
Operation	-40° C to +70° C	
Storage	-40° C to +70° C	
Span Length	85 Meter Maximum	1.5% - Sag
Environmental Loading	Wind Speed: 97 km/hr and "0" (Zero) Ice load	Condition1
	Wind Speed: "0" (Zero) and 5 mm Ice load	Condition2
High Voltage test	15 kV rms, 5mins	

Note: All tests shall be performed according to the relevant methods of the IEC 60794-1 standard series with limit values and acceptance criteria according to the IEC 60794-5-10 standard.

Packing and Lengths

Drum Type : Wooden Drums
Length Multiple (km) : 2 | 4 ± 5% (For all Fibre Counts)

Printing Details

Printing : STL SM " FIBRE TYPE " "FIBRE COUNT" ULW AERIAL LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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.

Product Ordering Information for cable

Product Type		Fibre count (4 – 96)				Fibre type		No. of active tubes/bundles (01-24)		Gel Tube/ Dry Core	*Color Code	Jacket type		"Running number"		**Jacket color	
		1				2		3		4	5	6				7	
K	2	-	-	-	-	-	-	0	1	G	A	P	1	0	0	0	0

Create the desired Product Code following the instructions below:

1. 1 Select Fibre count by indicating the corresponding number from **0004** to **0096**

2. Select Fibre code corresponding to the requested Fibre type among the following options.

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	1	G.657.A1	STL HD A1 250
S	N	G.657.A1/G.652.D	STL NOVA
S	2	G.657.A2	STL HD A2 250
C	1	G.657.A2/G.652.D/G.657A1	STL Stellar 250

5.

Code	Color Sequence Description*
A	EIA/TIA 598C
D	VDE/DIN
F	Orange

***Codes may vary as per color code**

3. Select number of active tubes/bundles by indicating the corresponding number **01**

6. Select jacket material code corresponding to requested material type.

Jacket type code		Jacket material, number, and combinations
P	1	Polyethylene Single Jacket

7. Select Jacket Color Code

Color code		Jacket color**
J	8	Black Sheath with Yellow Stripe Marking
J	8	Black Sheath with Green Stripe Marking

****Codes may vary as per jacket color**

Example: 12F Yogalite ULW G.657.A1 OSP SJ Filled Tubes/ Dry Core Multitube OFC with Green Stripes

K	2	0	0	1	2	S	1	0	1	G	A	P	1	0	0	J	9

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

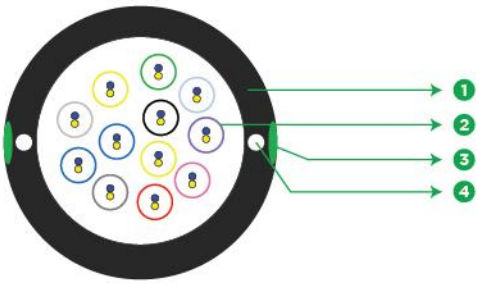
Micromodule

Retractable Cables

Product Specification

Indicium-Lite

Multitube Gel Filled OFC
12F - 96F | Bow Lite (E) - G.657.A2 Single Mode Fibre



Cross Section 24F

1. BLACK OUTTER SHEATH
2. PULLBACK MODULES WITH FIBRES AND GEL
3. STRIP 2 NOS
4. EMBEDDED STRENGTH MEMBER

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Available up to 96 fibre count in either single-mode or multi-mode optical fibres
- Special low-bend-sensitivity fibre provides high bandwidth and excellent communication transmission property
- Two parallel strength members ensure good performance of crush resistance to protect the fibre
- Simple structure, light weight and high practicability
- Window cuts into the sheath wall allow easy selection and extraction of single fibre unit for re-routing purposes
- UV protected

Product Details

STL INDICIUM-LITE Single Jacket Fibre Optic Cable is used for outdoor installation into ducts, constructed with color coded single mode /bend sensitive fibres placed in a thermoplastic tube/ module, protected by two embedded strength members for anti-buckling property and are covered with outer sheath which makes the cable robust and installation friendly.

Cable Performance Standards

standards IEC 60793, IEC 60794-1-21/22, ITU-T, RoHS, REACH.

Micromodule Retractable

Printing Details

Printing: STERLITE SM FIBRE TYPE FIBRE COUNT F RETRACTABLE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "METER" 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	
Fibre Count	12~96
Fibre Type	STL BOW LITE E (ITU-T G.657.A2)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.36 & 1550nm : 0.23
Link Design PMD (ps/sqrt.km)	≤ 0.1
Stripes on Outer Sheath	2 Green stripes over Embedded FRP
No of Ripcords Below Outer Sheath	2
Embedded Strength Member	FRP (Fibre Reinforced Plastic)
Outer Sheath Material	UV Proof Black Polyethylene

Fibre Color Sequence (as per EIA/TIA 598C)											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Turquoise

Cable Characteristics						
Product Code	**Fibre Count**	**No. of Fibre per tube**	**No. of Tubes**	**Tube Color Sequence**	**Cable Diameter mm (± 0.5)**	**Cable Weight (Kg/km) ± 10%**
L10012S212AGP10000	12	1	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	15.5	110
L10024S212AGP10000	24	2	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	15.5	115
L10048S224AGP10000	48	2	24	Blue, Orange, Green, Brown, Slate, White, Red, Light Green, Yellow, Violet, Pink, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Light Green#, Yellow#, Violet#, Pink#, Aqua#	15.5	120
L10072S218AGP10000	72	4	18	Blue, Orange, Green, Brown, Slate, White, Red, Light Green, Yellow, Violet, Pink, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	15.5	125
L10096S224AGP10000	96	4	24	Blue, Orange, Green, Brown, Slate, White, Red, Light Green, Yellow, Violet, Pink, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Light Green#, Yellow#, Violet#, Pink#, Aqua#	15.5	130

Note: # denotes black stripe marking for all tubes

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	1000	IEC-60794-1-21-E1
Crush Resistance (N/cm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	5	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
Drip Test	30 cm, 70°C, 24 hr	IEC-60794-1-21-E14
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +70° C	
Operation	-20° C to +70° C	
Storage	-20° C to +70° C	

Note: All tests shall be carried out as per IEC standards. Change in attenuation after test shall be ≤ 0.1 dB/ km for Single Mode Fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Tolerance	Short Lengths
Wooden Drums	2 ± 5%	±5%	Max 5%, Customer Approval

ce contact your sales representative.

You can also visit our website at www.stl.tech

Tight Buffer

Applications:

- **Drop Tight Buffer**: Short-distance runs for last-mile indoor and outdoor drop connections.

Tight Buffer

STL's Tight Buffer cables are designed for durability, ease of termination, and flexible connectivity.

Industries it may cater to:

Telecom

Indoor and short-distance outdoor connections.

Enterprise Network

Fiber cabling within buildings and office spaces.

Industrial Automation

Robust connections for industrial control and automation systems.

Defense

Tactical solutions for rugged, reliable field communication.

Healthcare

Structured cabling for hospitals and medical facilities requiring low-interference communication.

Deployment Type: Optimized for **short-distance** indoor/outdoor applications.

Cable Runs: Typically less than 2 km.

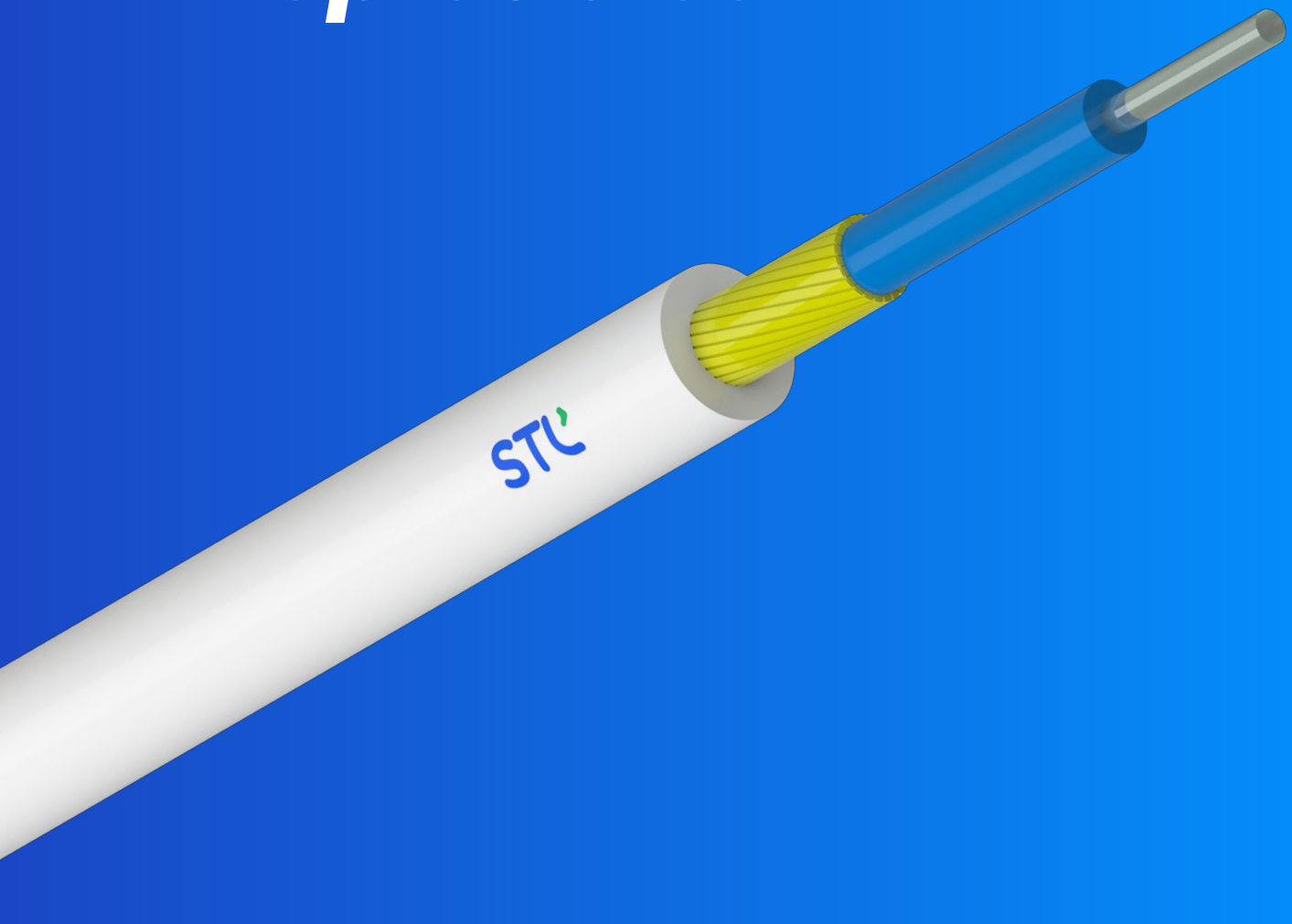
Variants available of Tight Buffer Cables:

- **Drop Tight Buffer**: Compact and robust cables ideal for short-distance indoor and outdoor drop applications.

Tight Buffer cables offer superior crush resistance, quick termination, and reliability for environments requiring compact and flexible cable solutions.

Tight Buffer

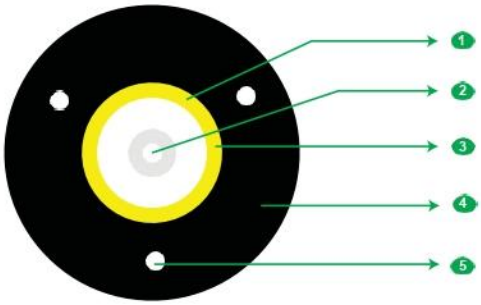
Drop Cables



Drop-Lite

FTTx External ARP Drop OFC

1F | G.657.A2 Single Mode Fibre



1. STRENGTH MEMBER (ARAMID YARNS)
2. SEMI-TIGHT BUFFER WITH FIBRE
3. WATER BLOCKING TAPE
4. OUTER SHEATH
5. EMBEDDED STRENGTH MEMBER ARP

** Typical Construction Diagram - Not to Scale*

Specifications

Product Information	
Single Mode Optical Fibres	STL Fibre ITU.T - G.657.A2
Maximum Cabled Fibre Attenuation dB/km	1310nm : ≤0.4 , 1550nm : ≤ 0.3
Bare Fibre	Coating Diameter Uncoloured Fibre 242 ± 7 µm
Semi-Tight Buffer	Semi-tight LSZH buffer (20mm single strip, <10N Strip Force 0.9 ± 0.1 mm)
Water Blocking Element	Water Blocking Tape over the tight buffer
Strength Member	Aramid Yarn distributed over the Water Blocking Tape
Embedded Strength Member	ARP are embedded in equilateral position in outer sheath
Sheathing	UV Stabilized, Black Polyethylene (1.3 mm Nominal thickness)

Loading Condition		
Span Length	**Loading condition(Operating Condition -20°C to +60°C)**	
55mm	Condition 1	Wind speed: 97 km/hr, 1ce thickness: 0 (zero) mm
	Condition 2	Wind speed: 0 (zero) km/hr, 1ce thickness: 5 mm

Printing Details

OPTO BOLT STL 1F G657A2 DROP CABLE OFC Year of Manufacturing Cable Id Meter Marking Packaging: as per customer requirements.

Specifications

Mechanical & Environmental Characteristics [3] (Test Standard - IEC 60794-1-2)	
Cable Characteristics	**Testing Standards**
Maximum Breaking Load	1350~2000 N
Installation Tension	150N at ≤0.30%
Max allowable Tensile	420N at ≤0.80%
Minimum Bend Radius	12 D
Water Penetration	1m head, 3m samples, 24 hrs
Crush Resistance	2000 N/100mm
Impact	5Nm
Torsion	±360°
***Temp. Performance**	
Installation	-20°C to +60°C
Operation	-20°C to +60°C
Storage and Transport	-20°C to +60°C

Note 3. Tests shall be carried out as per IEC Standards. Change in attenuation shall be ≤0.05 dB/km. *Max. change in attenuation shall be ≤0.1 dB/km.

Colour Details		
Optical Fibre Colour	**Tight Buffer Colour**	**Sheath Colour**
White	Natural	Black

Application & Features	
Applications	**Features**
Underground in duct	ITU-T G.657.A2 Bend Insensitive Fibre
Aerial Self Supporting Drop	Tight Buffered
Clipped to external wall	Non Metallic
	UV Stabilized & Crush Resistant Jacket
	IEC & ITU-T Standard Complied
	RoHS Compliant

Physical Parameters				
Cable Diameter (mm)	**Cable Weight (Kg/km)**	**Cable Length**	**Order Tolerance**	**Short Length**
4.9 + 0.3	16 + 2	as per customer requirement	± 5 %	MAX 5%, Customer Approval.

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Tight Buffer Drop

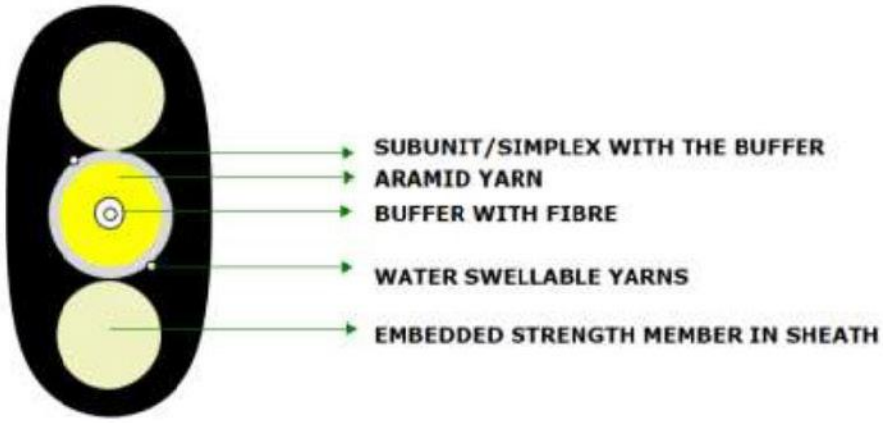
For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

Product Specification

DROP-LITE

Simplex Flat Optical Fiber Cable



* Typical Construction Diagram - Not to Scale

Features & Benefits

- Embedded strength members for anti-buckling properties
- Easy access to Fiber due to its buffer construction
- Tensile and crush resistant
- UV protected

Product Details

STL DROP-LITE Flat Drop Dielectric Fiber Optic Cable offers ease of installation in an easy access, single-buffer design. This is a central inner subunit cable (Simplex) using single optical Fiber with buffer presented 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.

Fibres and Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ICEA S_110-717, Telcordia GR-20, ITU-T, RoHS, REACH, EIA/TIA-598C.

Specifications

Physical Characteristics	
Fiber Count	1
Fiber Type	STL (ITU-T G.657 A2)
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4 & 1550nm: 0.3
Fiber Color	Natural
Number of Tight Buffer	1
Buffer Size Nominal (mm)	0.9
Tight Buffer Color	White
No of Subunit	1
Subunit Color	White
Outer Sheath Material	UV Proof Black Polyethylene
Copper wire Diameter (mm)	0.5 (24 AWG Cu TONING WIRE)
Cable Diameter mm (inch) (± 5%)	4.5 x 8.4 mm
Cable Weight Kg/Km (lbs./ft.) (± 10%)	35 (0.023)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N) (lbf)	ICEA 640|FOTP-33	1350 (303.49)
Crush Resistance (N/cm) (lbf/in)	ICEA 640|FOTP-41	100 (57.101)
Impact Strength (Nm)(lbf.in)	ICEA 640|FOTP-25	2.9 (25.66)
Torsion	ICEA 640|FOTP-85	±180°
Min. Bend Radius (During Installation)	ICEA 640|FOTP-88	24 D
Min. Bend Radius (After Installation)	ICEA 640|FOTP-88	12 D
Water Penetration Test	ICEA 640|FOTP-82	1m waterhead, 3m samples, 24 h
Temperature Performance	ICEA 640|FOTP-3	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-30° C to +70° C (-22 °F to 158 °F)
Operation		-40° C to +70° C (-40 °F to 158 °F)
Storage		-40° C to +70° C (-40 °F to 158 °F)

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

Packing and Lengths

Drum Type	Length Multiple (km.)	Order Tolerance	Short Lengths
Wooden Drums	2/4 ± 5%	± 5%	Max 5%, Customer Approval

Printing Details

STERLITE SM FIBER TYPE FIBER COUNT 1F SIMPLEX TONEABLE 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, zand this supersedes the earlier markings.

Product Specification

DROP-LITE

Simplex Flat Toneable Optical Fiber Cable

* Typical Construction Diagram - Not to Scale

Features & Benefits

- Embedded strength members for anti-buckling properties
- Toning wire enables underground location.
- Easy access to Fiber due to its buffer 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-buffer design. This is a central inner subunit cable (Simplex) using single optical Fiber with buffer presented and is enclosed in a thermoplastic sheath. The cables have two embedded strength members for anti-buckling property. 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.

Fibres and 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.

Specifications

Physical Characteristics	
Fiber Count	1
Fiber Type	STL (ITU-T G.657A2)
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4 & 1550nm: 0.3
Fiber Color	Natural
Number of Tight Buffer	1
Buffer Size Nominal (mm)	0.9
Tight Buffer Color	White
No of Subunit	1
Subunit Color	White
Outer Sheath Material	UV Proof Black Polyethylene
Copper wire Diameter (mm)	0.5 (24 AWG Cu TONING WIRE)
Cable Diameter mm (inch) (± 5%)	4.5 x 9.6 (0.18 x 0.37)
Cable Weight Kg/Km (lbs./ft.) (± 10%)	37 (0.025)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N) (lbf)	ICEA 640|FOTP-33	1350 (303.49)
Crush Resistance (N/cm) (lbf/in)	ICEA 640|FOTP-41	100 (57.101)
Impact Strength (Nm)(lbf.in)	ICEA 640|FOTP-25	4.4(38.94)
Torsion	ICEA 640|FOTP-85	±180°
Min. Bend Radius (During Installation)	ICEA 640|FOTP-88	20 D
Min. Bend Radius (After Installation)	ICEA 640|FOTP-88	15 D
Water Penetration Test	ICEA 640|FOTP-82	1m waterhead, 3m samples, 24 h
Temperature Performance	ICEA 640|FOTP-3	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-30° C to +70° C (-22 °F to 158 °F)
Operation		-40° C to +70° C (-40 °F to 158 °F)
Storage		-40° C to +70° C (-40 °F to 158 °F)

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

Packing and Lengths

Drum Type	Length Multiple (km.)	Order Tolerance	Short Lengths
Wooden Drums	2/4 ± 5%	± 5%	Max 5%, Customer Approval

Printing Details

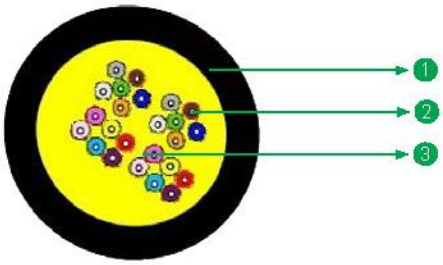
STERLITE SM FIBER TYPE FIBER COUNT 1F SIMPLEX TONEABLE OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE FEET MARKING

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

Product Specification

Tight Buffer

XXF Tight Buffer LSZH
Sheath Distribution Optical Fibre Cable



1 LSZH OUTER SHEATH 2 STRENGTH MEMBER (ARAMID YARNS) 3 LSZH TIGHT BUFFER WITH FIBRE

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Available up to 24 fibre count in either Single Mode or Multimode Optical Fibres
- Tight buffered fibres supports fast field installations
- Reduce installation time and costs.
- Easy jacket removal using standard tools.
- Flexible and Fire retardant outer sheath with aramid yarns as tensile elements helps in easy installation in space constrained areas
- LSZH sheath makes cable suitable for higher fire safety requirement
- Small cable diameter & lightweight
- Requires no grounding or bonding due to all-dielectric construction

Product Details

Sterlite Tech™ Tight Buffer Riser Cables are an integral part of the end-to-end fibre optic solution, designed to support enhanced data needs along with future advancing network requirements. These cables are intended for riser application in multi storey buildings. Tight buffered fibres are reinforced with aramid yarns and sheathed with Low Smoke Zero Halogen (LSZH). This cable is suitable for both indoor / outdoor application with standard commercial type connectors

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, Telcordia GR-20, ITU-T, RoHS, REACH, ANSI/TIA-492 Series, ANSI/TIA-568.3-E.

Printing Details

Printing: As per Customer Request

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	
Fibre Count	4-24
Fibre Type	SM – G652D (9/125)
Maximum Cabled Attenuation (dB/km)	1310nm : < 0.36 & 1550nm : < 0.24
Tight Buffer Fibre	Uncoloured fibre 250 (Nominal) µm
Tight Buffer Material	Flame retardant LSZH Tight Buffer
Tight Buffer Size (mm)	0.85 +/- 0.05 mm
Strength Members	Aramid Yarns distributed over & around Tight Buffer for strength
Sheathing Material	Flame retardant LSZH

Cable Characteristics					
Fibre Count	**Sheath Colour**	**Tight Buffer Colour**	**Cable Diameter**	**Weight of Cable**	**Cable Length in one Reel**
			(mm)	(kg/km)	Meters
4	Black	Blue, Orange, Green, Brown.	5.8 + 0.5	35 +10%	2000 + 5%
6		Blue, Orange, Green, Brown, Slate, White	6.2 + 0.5	38 +10%	2000 + 5%
12		Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet , Pink, Aqua.	7.2 + 0.5	48 +10%	2000 + 5%
24		Blue, Orange, Green, Brown, Slate, White, Red, Magenta, Yellow, Violet, Pink, Aqua, Blue*, Orange*, Green*, Brown*, Slate*, White*, Red*, Magenta*, Yellow*, Violet*, Pink*, Aqua*.	8.8 + 0.5	72 +10%	2000 + 5%

Note: "*"Black colour intermediate ring marking over Tight Buffer.

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	1000	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	500	IEC-60794-1-21-E3
Impact Strength(Nm)	1	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius (Static)	10 D	IEC-60794-1-21-E11
Kink Radius	5 D	IEC-60794-1-21-E10
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	IEC-60794-1-22-F1
Installation	-0°C to +50°C	
Operation	-20°C to +70°C	
Storage	-20°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 fibre.

Packing and Lengths

Drum Type	Length Multiple (m)	Order Tolerance	Short Lengths
Wooden Drums	2000 + 5%	± 5%	Max 5%, Customer Approval

Tight Buffer Drop

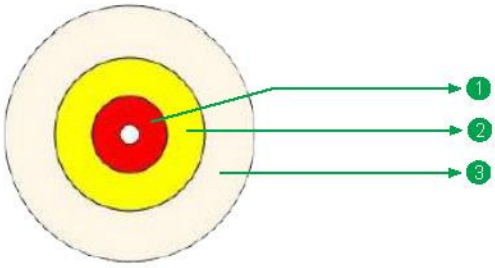
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Tight Buffer

1F G.657A2 Indoor Simplex FTTX Tight Buffered TPU OFC



1 TIGHT BUFFERED FIBRE 2 ARAMID YARNS 3 OUTER JACKET

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Easily strip and splice, simplify the installation and maintenance
- The construction with FR TPU sheath makes cable suitable for higher fire safety requirement
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install
- Tight buffered fibres support fast field installations

Product Details

STL Tight Buffer Simplex Cables are an integral part of the end-to-end fibre optic solution, designed to support enhanced data needs along with future advancing network requirements. These cables are intended for connectorization purpose. Tight buffered fibres are reinforced with water blocking aramid yarns and sheathed with flame retardant thermoplastic Polyurethane (TPU). This cable is suitable for both indoor / outdoor applications.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 6079 ,ITU-T, RoHS, REACH.

Printing Details

Printing : STERLITE SM "FIBRE COUNT" "FIBRE TYPE" SIMPLEX INDOOR OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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	
Fibre Count	1
Fibre Type	Sterlite Fibre ITU-T G.657A2
Fibre Color	Blue
Maximum Cabled Attenuation (dB/km)	1310nm : 0.40 & 1550nm : 0.30
Tight Buffer Material	Low Smoke Zero Halogen (LSZH)
Tight Buffer Color	Blue/Natural
Tight Buffer Diameter(mm)	0.9 ± 0.05 mm
Strength Members	Aramid Yarns distributed over & around Tight Buffer
Outer Sheath Material	UV Proof Black TPU
Span length (M)	60
Cable Diameter (mm)	3 ± 0.1
Cable Weight (kg/km)	8 ± 10%

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	Short term: 150 Long term: 500	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Kink Diameter (mm)	15	IEC-60794-21-E10
Min. Bend Radius (During Installation)	20 D	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	10 D	IEC-60794-1-21-E11
Water Penetration Test	1m head, 3m samples, 24 hrs	IEC-60794-1-22 F5B
Temperature Performance		IEC-60794-1-22-F1
Installation	-20°C to +60°C	
Operation	-20°C to +60°C	
Storage	-20°C to +60°C	

Note: All tests shall be carried out as per IEC 60794 Standard.

Packing and Lengths

Packing Type	Length Multiple (km)	Order Tolerance	Short Lengths
Cable reel shall be taken on plywood spool & Packing details shall be attached to spool outer side	0.5|1|2 ± 5%	± 5%	Max 5%, Customer Approval

Tight Buffer Drop

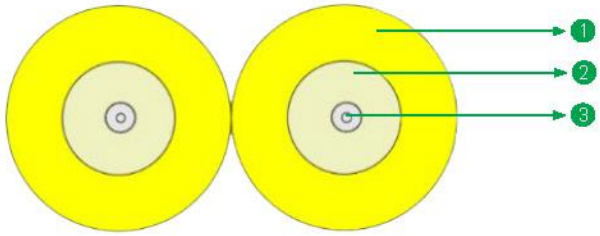
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Drop cable

Duplex FO Indoor Drop cable
2FO Indoor Duplex drop cable



1 OUTER JACKET 2 ARAMID YARN 3 TIGHT BUFFER WITH FIBRE

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Novel flute design, easily strip and splice, simplify the installation and maintenance
- The construction with LSZH sheath makes cable suitable for higher fire safety requirement
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install
- 850 ± 50 µm Tight buffered fibres support fast field installations

Product Details

Tight Buffer Duplex Cables are an integral part of the end-to-end fibre optic solution, designed to support enhanced data needs along with future advancing network requirements. These cables are intended for riser application in multi-story buildings. Tight buffered fibres are reinforced with aramid yarns and sheathed with Low Smoke Zero Halogen (LSZH). This cable is suitable for indoor applications.

Fibres and Cable Performance Standards

Cable complies with the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Printing : STERLITE SM "FIBER TYPE" "FIBER COUNT" SIMPLEX INDOOR OFC LASER SYMBOL TELEPHONE SYMBOL MONTH & YEAR OF MANUFACTURE" "LENGTH CODE" "METER MARKING"

Note:
1. 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.
2. Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics	
Maximum Cabled Fibre Attenuation (dB/km)	1310nm: ≤ 0.40 & 1550nm: ≤ 0.30 & 1625nm: ≤ 0.35
Tight Buffer Fibre	Cladding Diameter 125 ± 7 µm Coating Diameter Uncolored fibre 242 ± 7 µm
Tight Buffer Material	Low Smoke Zero Halogen (LSZH)
Tight Buffer Diameter(mm)	0.85 +/- 0.05 mm
Strength Members	Aramid Yarns distributed over & around Tight Buffer for strength
Outer Jacket Material	UV Protected Yellow, LSZH

Fibres and Tight Buffer Color Sequence (to be defined)[1]											
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Note: [1]Other fibres colour sequences are available on demand, prior approval.

Cable Designs					
Product Code	**Fiber/Tight Buffer Count**	**Fiber Color**	**Tight Buffer Color**	**Cable Diameter (Height X Width) +/- 0.2 mm**	**Cable Weight Kg/Km (± 10%)**
M70002S201NTL10000	2	Natural	White	2 x 4	8

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	150N	IEC-60794-1-21-E1
Crush Resistance (N/mm)	500 N/100 mm	IEC-60794-1-21-E3
Impact Strength (Nm)	1Nm @ 1 impact @0.5m	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius (During Installation)	20 D (D= 4mm)	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	10 D (D= 4mm)	IEC-60794-1-21-E11
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	IEC-60794-1-22-F1
Installation	-10° C to +50° C	
Operation & Storage	-20° C to +60° 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 fibre & </= 0.3 dB/km for Multi-Mode Fibre.

Packing and Lengths

Packing Type	Length Multiple (km)	Order Tolerance	Short Lengths
Cable reel shall be taken on plywood spool & Packing details shall be attached to spool outer side	2 ± 5%	±5%	Max 5%, Customer Approval

Product Ordering Information for Cables

Product type		Fibre count (0004 – 0024)					Fibre type		No. of active tubes/bundles (01-24)		Tube/ Bundle	Tube/Core type	Jacket type		"Running number"		*Special requirement				
		1					2		3								4				
M	7	-	-	-	-		-	-	0	1	N	T	L	1	X	X	X	X	-	-	-

Create the desired Product Code following the instructions below:

1. Select fibre count by indicating the corresponding number from 0004 to 0024
2. Select fibre code corresponding to requested fibre type among following options.
3. Select number of active tubes/bundles by indicating the corresponding number from 01
4. Special Requirement

Fibre code		Fibre type (ITU-T)	STL's Fibre Name
S	3	G.652.D	OH-LITE
S	1	G.657.A1	BOW-LITE
S	N	G.657.A1/G.652.D	OH-LITE NOVA
S	2	G.657.A2	BOW-LITE (E)
C	1	G.657.A2/G.652.D	STELLAR

**Click on fiber name to view fiber specs.*

Special Requirement code					Special Requirement Description
					Standard Black Sheath
-	-	-	-	-	

**Special code for special requirement shall be defined by STL as per customer requirement*

Examples:

2F Duplex Indoor <G657A2> OFC (Standard)

M	2	0	0	0	1		S	2	0	1	N	T	L	1	X	X	X	X			

Tight Buffer Drop

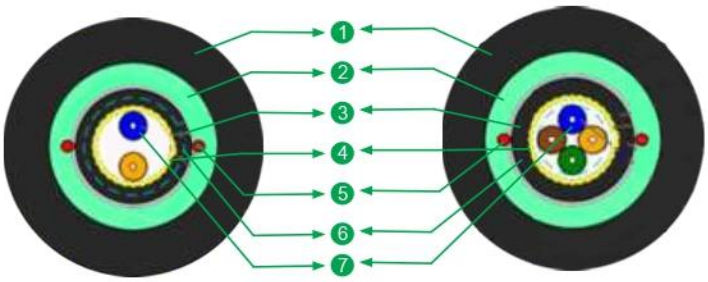
For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

Product Specification

Armor Lite

2F & 4F G657A2 Tight Buffered Double Jacket Single Armor Lite Optical Fiber Cable



1 OUTER JACKET 2 CORRUGATED STEEL TAPE 3 INNER JACKET 4 ARAMID YARNS

5 WATER BLOCKING TAPE 6 RIPCORD(S) 7 TIGHT BUFFERED FIBRE

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Dry core technology easy for faster end preparation during termination
- 900µm (nom) Tight buffered fibres supports fast field installations, reduces installation time and costs
- Small cable diameter & lightweight
- Requires grounding or bonding due to metallic armor
- LSZH inner sheath makes cable suitable for Indoor application & outer polyethylene sheath suitable for Outdoor application
- Easy jacket removal using standard tools. Available in Single Mode and Multimode Optical Fibres.

Product Details

These cables are single sheath single steel armored cables in construction which are suitable for direct burial as well as for duct applications. These cables can be used for short drop in last mile connectivity. Also these cables can be installed by renching techniques.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794-1-2, ITU-T G.657A2.

Printing Details

Printing : STERLITE 2F / 4F G657A2 ARMOUR LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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	
Fibre Count	2F & 4F
Fibre Type	ITU-T G.657A2 Sterlite Fiber
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
Fiber Color & Tight Buffer Color Sequence	Natural & Blue, Orange, Green, Brown.
Peripheral Strength Members	High Strength Aramid Yarns with water swellable yarns
Inner Sheath	Black FR LSZH (3.4+0.3mm for 2F & 3.8+0.2mm for 4F)
Moisture barrier	Water blocking tape over inner sheath
Metallic Armoring	Corrugated Steel Tape
Number of Ripcords Below steel tape	1 No. (if required)
Outer Sheath Material	UV Stabilized Black HDPE
Nominal Cable Dimensions (mm)	8.2+0.1/-0.3 for 2F ; 8.5±0.5 for 4F
Nominal Cable Weight (kg/km)	70±10% for 2F & 75±10% for 4F

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)	450/300 (Short/Long Term)	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	1000N/100mm	IEC-60794-1-21-E3
Min. Bend Radius (During Installation)	160 mm Dynamic	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	80 mm Static	IEC-60794-1-21-E11
Repeated Bend	20 x D , 30 Cycles	IEC 60794-1-2-E6
Torsion Resistance	± 180°	IEC 60794-1-2-E7
Temperature Performance	Max. change in attenuation shall be </= 0.15 dB/km	IEC-60794-1-22-F1
Installation	-20°C to +60°C	
Operation	-40°C to +70°C	
Storage	-40°C to +70°C	

Note: All tests shall be carried out as per IEC 60794 standards. Change in attenuation after and before testing shall be </= 0.1 dB/km

Packing and Lengths

Drum Type	Length Multiple (Km)	Order Tolerance	Short Lengths
Wooden Drums	2KM +/- 5% or as per customer requirement.	+/-5%	Max 5%, Customer Approval

Tight Buffer Drop

ntact your sales representative.

You can also visit our website at **www.stl.tech**

Flat Ribbon

Applications:

- **Duct Flat Ribbon**: Medium to long runs in underground ducts.
- **Direct Buried Flat Ribbon**: Long-distance underground installations without conduit.
- **Aerial Flat Ribbon**: Long spans in aerial installations.
- **Drop Flat Ribbon**: Short-distance FTTH drop connections.

Flat Ribbon

STL's Flat Ribbon cables enable high-density, efficient installations for faster splicing and reduced deployment time.

Industries it may cater to:

Telecom

High-density splicing solutions for backbone and metro networks.

Data Centers

Fast deployment and connectivity for high-bandwidth networks.

Utilities

Ruggedized solutions for power grids and infrastructure.

Smart Cities

Efficient, high-fiber solutions for surveillance and IoT.

Transportation

Fiber networks for roads, highways, and metro systems.

Deployment Type: Suitable for **medium to long-distance** high-fiber-count installations.

Cable Runs: Typically 10-40 km.

Variants available of Flat Ribbon Cables:

- **Duct Flat Ribbon**: Ideal for underground duct installations, delivering consistent performance in challenging environments.
- **Direct Buried Flat Ribbon**: Designed for underground burial, these cables offer unmatched durability against moisture and physical stress.
- **Aerial Flat Ribbon**: UV-resistant and lightweight, perfect for aerial deployments with high fiber counts.
- **Drop Flat Ribbon**: Compact and reliable for last-mile connectivity in FTTH networks.

Flat Ribbon cables ensure efficient high-fiber splicing, saving time and effort while delivering superior network performance.

Flat Ribbon

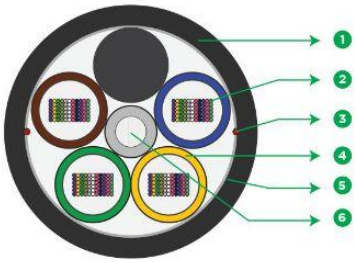
Duct Cables

Product Specification

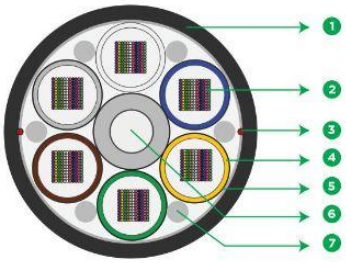
Ribbon-Lite

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. RIBBON
3. RIPCORD(S)
4. GEL FREE LOOSE TUBES
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER
7. INTERTITIAL FILLERS

** 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%)**
N10192SN04FAP10000	192	Blue, Orange, Green, Brown, Filler	1	0	21.4 (0.842)	220 (0.147)
N10216SN03FAP10000	216	Blue, Orange, Green, Filler, Filler	2	0	21.4 (0.842)	230 (0.154)
N10288SN04FAP10000	288	Blue, Orange, Green, Brown, Filler	1	0	21.4 (0.842)	235 (0.157)
N10360SN05FAP10000	360	Blue, Orange, Green, Brown, Slate	1	0	21.4 (0.842)	235 (0.157)
N10432SN06FAP10000	432	Blue, Orange, Green, Brown, Slate, White	0	6	23.8 (0.937)	275 (0.184)
N10576SN04FAP10000	576	Blue, Orange, Green, Brown, Filler	1	5	24.4 (0.960)	306 (0.205)
N10720SN05FAP10000	720	Blue, Orange, Green, Brown, Slate, Filler	1	6	27.0 (1.06)	348 (0.233)
N10864SN06FAP10000	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 432F	10000; 13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	576F- 864F	10,000 ± 5%		

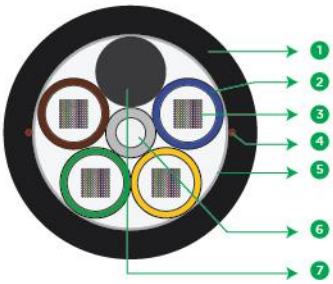
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

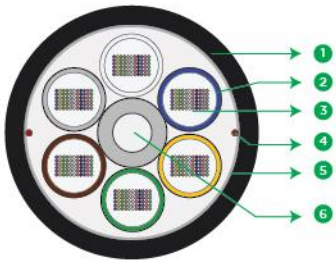
Ribbon-Lite

Multitube Gel Filled Ribbon OFC

96F - 864F | OH Lite - G.652.D Single Mode Fiber



5 Elements



6 Elements

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Precise fiber and ribbon geometries result in excellent mass fusion splicing yields
- Fiber ribbons are individually marked for easy identification
- Easily removable rugged UV protected thermoplastic jacket
- Tensile and crush resistant

Product Details

STL RIBBON-LITE Multitube 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. The buffer tubes contain water blocking gel and are surrounded with water-swellable tape to prevent water ingress in the cable which 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 and outside plant applications.

Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ITU-T, RoHS, REACH.

Printing Details

Printing: STL SM “FIBER TYPE” “FIBER COUNT” MLT RIBBON DUCT OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET/METER 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.
Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics	
Fiber Type	STL Fiber ITU-T G.652.D
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	≤ 0.1
Ribbon Printing per Tube (2 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2
Ribbon Printing per Tube (4 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4
Ribbon Printing per Tube (6 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6
Ribbon Printing per Tube (12 Ribbon/Tube)	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
Central Strength Member	FRP (Fiber Reinforced Plastic)
Tube Material	Polybutylene Terephthalate (PBT)
Filler (if required)	Black Thermoplastic Material
Water Blocking Elements	Water Blocking Gel, Water Swellable Tape & Yarns
Core Wrapping	Binder and water swellable tape
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

Cable Design with G.652.D Fiber

Product Code	Fiber Count	No. of Tubes	Tube Color Sequence	No. of Fillers	Cable Diameter mm (inch) (±1.0mm)	Cable Weight Kg/Km (lbs./ft.) (±10%)
N10096S304GAP10000	96	4	Blue, Orange, Green, Filler, Filler	2	18.4 (0.72)	230 (0.15)
N10144S306GAP10000	144	6	Blue, Orange, Green, Brown, White	0	20.2 (0.79)	276 (0.19)
N10192S304GAP10000	192	4	Blue, Orange, Green, Brown, Filler	1	20.2 (0.79)	276 (0.19)
N10216S303GAP10000	216	3	Blue, Orange, Green, Filler, Filler	2	20.2 (0.79)	276 (0.19)
N10288S304GAP10000	288	4	Blue, Orange, Green, Brown, Filler	1	20.2 (0.79)	276 (0.19)
N10432S306GAP10000	432	6	Blue, Orange, Green, Brown, Slate, White	0	21.8 (0.86)	330 (0.22)
N10576S304GAP10000	576	4	Blue, Orange, Green, Brown, Filler	1	23.4 (0.92)	355 (0.24)
N10720S305GAP10000	720	5	Blue, Orange, Green, Brown, Slate, Filler	1	26.5 (1.04)	478 (0.32)
N10864S306GAP10000	864	6	Blue, Orange, Green, Brown, Slate, White	0	26.5 (1.04)	485 (0.33)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)(lbf)	Short Term – 2700 (606.9) | Long Term – 900 (202.3)	IEC-60794-1-21-E1
Crush Resistance (N/cm) (lbf/in)	220 (125.6)	IEC-60794-1-21-E3
Impact Strength (Nm) (lbf.in)	5 (44.2)	IEC-60794-1-21-E4
Torsion	± 180°	IEC-60794-1-21-E7
Min. Bend Radius	15 D	IEC-60794-1-21-E11
Repeated Bending	20 D Radius, 50 N, 25 Cycles	IEC-60794-1-21-E6
Water Penetration Test	1m water head, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-30° C to +70° C (-22° F to +158° F)	
Operation	-40° C to +70° C (-40° F to +158° F)	
Storage	-40° C to +70° C (-40° F to +158° F)	

Note: Change in attenuation after and before testing shall be ≤ 0.05 dB/km.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	6,562 | 13,123 ± 5% (13,123 ft. for up to 432F)	±5%	Max 5%, Customer Approval

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Flat Ribbon

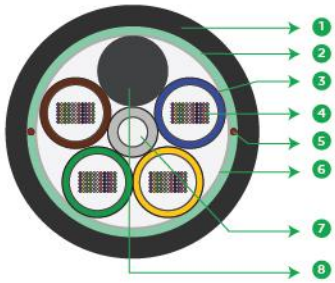
Direct Buried Cables

Product Specification

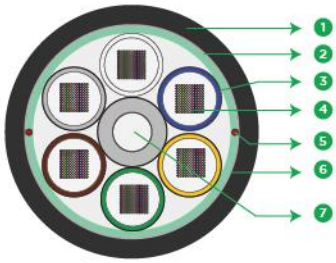
Ribbon-Lite

Multitube Gel Free Single Sheath Armored OFC

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



288F



864F

1 OUTER JACKET
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%)**
O10192SN04FABU0000	192	Blue, Orange, Green, Brown, Filler	1	23.8 (0.937)	352 (0.236)
O10216SN03FABU0000	216	Blue, Orange, Green, Filler, Filler	2	23.8 (0.937)	365 (0.245)
O10288SN04FABU0000	288	Blue, Orange, Green, Brown, Filler	1	23.8 (0.937)	375 (0.251)
O10360SN05FABU0000	360	Blue, Orange, Green, Brown, Slate	0	23.8 (0.937)	380 (0.256)
O10432SN06FABU0000	432	Blue, Orange, Green, Brown, Slate, White	0	26.2 (1.030)	440 (0.295)
O10576SN04FABU0000	576	Blue, Orange, Green, Brown, Filler	1	26.6 (1.040)	420 (0.282)
O10720SN05FABU0000	720	Blue, Orange, Green, Brown, Slate, Filler	1	29 (1.140)	530 (0.356)
O10864SN06FABU0000	864	Blue, Orange, Green, Brown, Slate, White	0	29 (1.140)	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 :

1. 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.
2. The edge fibers (Blue, Orange, Rose & Aqua) in top & bottom ribbons shall be Stellar.

Packing and Lengths

Drum Type	Fiber count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 360F	10000; 13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	432F	10,000; 13123 ± 5%		
	576F - 864F	10000 ± 5%		

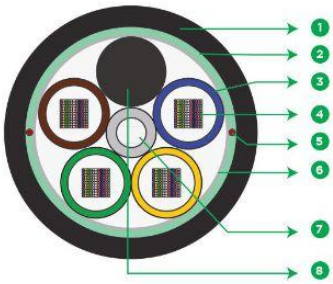
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Ribbon-Lite

Multitube Gel Filled Ribbon Armored OFC

96F - 864F | OH Lite - G.652.D Single Mode Fiber



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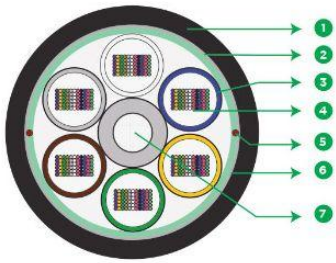


6 Elements

1 OUTER JACKET
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

- Precise fiber and ribbon geometries result in excellent mass fusion splicing yields
- Fiber ribbons are individually marked for easy identification
- Easily removable rugged UV protected thermoplastic jacket
- Tensile and crush resistant

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-blocking gel and are surrounded with water-swellable tape and yarns 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 a 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, ITU-T, RoHS, REACH.

Printing Details

Printing: STL SM “FIBER TYPE” “FIBER COUNT” MLT RIBBON ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL “YEAR OF MANUFACTURE” “LENGTH CODE” “FEET/METER 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.
Any other cable printing can be customized based on customer request and agreement.

Specifications

Physical Characteristics	
Fiber Type	STL Fiber ITU-T G.652.D
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD LDV (ps/sqrt.km)	≤ 0.1
Ribbon Printing per Tube (2 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2
Ribbon Printing per Tube (4 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4
Ribbon Printing per Tube (6 Ribbon/Tube)	1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6
Ribbon Printing per Tube (12 Ribbon/Tube)	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
Central Strength Member	FRP (Fiber Reinforced Plastic)
Tube Material	Polybutylene Terephthalate (PBT)
Filler (if required)	Black Thermoplastic Material
Water Blocking Elements	Water Blocking Gel, Water Swellable Tape & Yarns
Core Wrapping	Binder and water swellable tape
No of Ripcords Below Tape	2
Metallic Armoring	Corrugated Steel Tape
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 Design with G.652.D Fiber						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±1.0mm)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
O10096S304GAB10000	96	4	Blue, Orange, Green, Filler, Filler	2	20.4 (0.80)	340 (0.23)
O10144S306GAB10000	144	6	Blue, Orange, Green, Brown, White	0	22.2 (0.87)	380 (0.26)
O10192S304GAB10000	192	4	Blue, Orange, Green, Brown, Filler	1	22.2 (0.87)	380 (0.26)
O10216S303GAB10000	216	3	Blue, Orange, Green, Filler, Filler	2	22.2 (0.87)	380 (0.26)
O10288S304GAB10000	288	4	Blue, Orange, Green, Brown, Filler	1	22.2 (0.87)	402 (0.27)
O10432S306GAB10000	432	6	Blue, Orange, Green, Brown, Slate, White	0	23.8 (0.94)	440 (0.30)
O10576S304GAB10000	576	4	Blue, Orange, Green, Brown, Filler	1	25.5 (1.00)	488 (0.33)
O10720S305GAB10000	720	5	Blue, Orange, Green, Brown, Slate, Filler	1	28.0 (1.10)	600 (0.40)
O10864S306GAB10000	864	6	Blue, Orange, Green, Brown, Slate, White	0	28.0 (1.10)	600 (0.40)

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N)(lbf)	Short Term – 2700 (606.9) | Long Term – 900 (202.3)	IEC-60794-1-21-E1
Crush Resistance (N/cm) (lbf/in)	300 (171)	IEC-60794-1-21-E3
Impact Strength (Nm) (lbf.in)	5 (44.2)	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Min. Bend Radius	15 D	IEC-60794-1-21-E11
Repeated Bending	20 D Radius, 50 N, 25 Cycles	IEC-60794-1-21-E6
Water Penetration Test	1m water head, 3m samples, 24 h	IEC-60794-1-22-F5
Temperature Performance	Max. change in attenuation shall be ≤ 0.15 dB/km	IEC-60794-1-22-F1
Installation	-30° C to +70° C (-22° F to +158° F)	
Operation	-40° C to +70° C (-40° F to +158° F)	
Storage	-40° C to +70° C (-40° F to +158° F)	

Note: Change in attenuation after and before testing shall be ≤ 0.05 dB/km.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	6,562 | 13,123 ± 5% (13,123 km for up to 432F)	±5%	Max 5%, Customer Approval

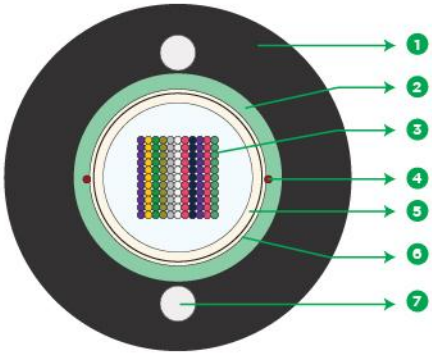
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

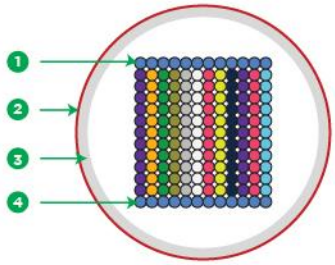
Product Specification

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%)**
O70012SN01FABU0000	1	BSR, 1 RIBBON 1, BSR	12.5 (0.492)	142 (0.095)
O70024SN01FABU0000	2	BSR, 1 RIBBON 1, 2 RIBBON 2, BSR	12.5 (0.492)	144 (0.096)
O70036SN01FABU0000	3	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, BSR	12.5 (0.492)	146 (0.098)
O70048SN01FABU0000	4	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BSR	12.5 (0.492)	152 (0.102)
O70072SN01FABU0000	6	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, 5 RIBBON 5, 6 RIBBON 6, BSR	13 (0.511)	160 (0.107)
O70096SN01FABU0000	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)
O70144SN01FABU0000	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.
The edge fibers (Blue, Orange, Rose & Aqua) in top & bottom ribbons shall be Stellar.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20000 ± 5% (For all fiber counts)	-0%, +5%	Max 5%, Customer Approval

For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Flat Ribbon

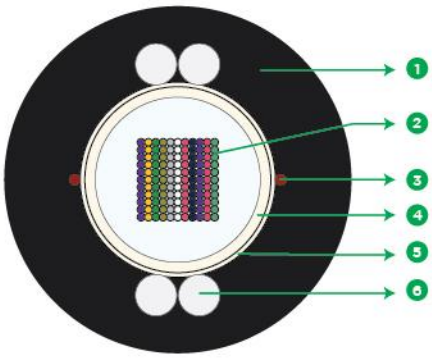
Drop Cables

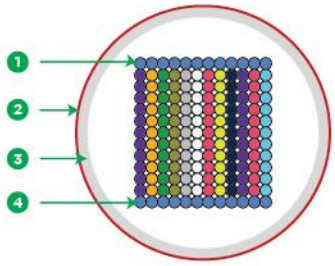
Product Specification

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 & instal

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%)**
Q10012SN01FAP10000	1	BSR, 1 RIBBON 1, BSR	11.8 (0.464)	136 (0.091)
Q10024SN01FAP10000	2	BSR, 1 RIBBON 1, 2 RIBBON 2, BSR	11.8 (0.464)	138 (0.092)
Q10036SN01FAP10000	3	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, BSR	11.8 (0.464)	140 (0.094)
Q10048SN01FAP10000	4	BSR, 1 RIBBON 1, 2 RIBBON 2, 3 RIBBON 3, 4 RIBBON 4, BSR	11.8 (0.464)	142 (0.095)
Q10072SN01FAP10000	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)
Q10096SN01FAP10000	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)
Q10144SN01FAP10000	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 : 1. 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.
2. The edge fibers (Blue, Orange, Rose & Aqua) in top & bottom ribbons shall be Stellar.

Packing and Lengths

Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Intermittently Bonded Ribbon

Applications:

- **Duct Intermittently Bonded Ribbon**: Medium to long runs within ducts.
- **Direct Buried Intermittently Bonded Ribbon**: Long spans for underground burial without conduit.
- **Aerial Intermittently Bonded Ribbon**: Long-distance aerial installations.
- **Drop Intermittently Bonded Ribbon**: Short-distance FTTH connections.

Intermittently Bonded Ribbon Cables

STL's Intermittently Bonded Ribbon cables combine the benefits of ribbon and individual fibers, delivering unmatched versatility for splicing and installations.

Industries it may cater to:

Telecom

High-density splicing solutions for backbone and metro networks.

Data Centers

Fast deployment and connectivity for high-bandwidth networks.

Utilities

Ruggedized solutions for power grids and infrastructure.

Transportation

Fiber networks for roads, highways, and metro systems.

Government & Defense

Scalable, high-performance networks for secure communication.

Deployment Type: Optimized for **medium to long-distance** networks requiring flexibility and high-capacity splicing.

Cable Runs: Typically 10-50 km.

Variants available of Intermittently Bonded Ribbon Cables:

- **Duct Intermittently Bonded Ribbon**: Optimized for underground duct installations, ensuring easy fiber access and splicing.
- **Direct Buried Intermittently Bonded Ribbon**: Built to endure harsh underground conditions with enhanced toughness and protection.
- **Aerial Intermittently Bonded Ribbon**: UV-resistant, lightweight cables for aerial installations that demand flexibility and durability.
- **Drop Intermittently Bonded Ribbon**: Compact and ideal for FTTH connections, providing flexible yet high-density connectivity.

These cables combine the advantages of bonded ribbons with the flexibility of loose fibers, making them ideal for high-capacity networks.

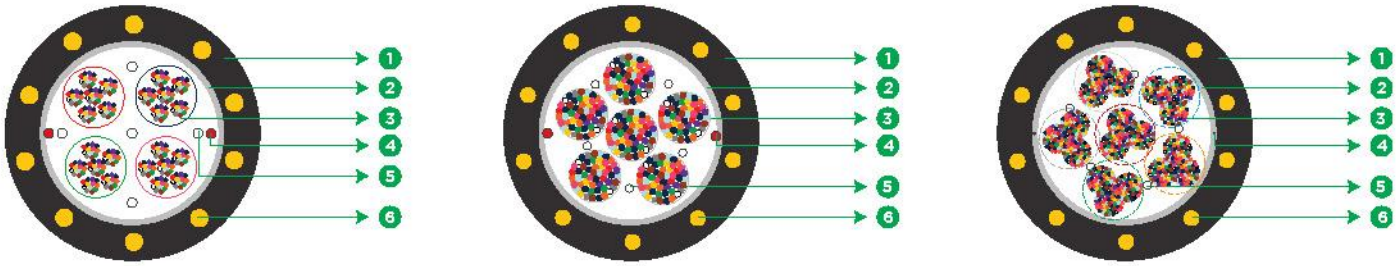
Intermittently Bonded
Ribbon

Duct Cables

Product Specification

Celesta

Intermittently Bonded Ribbon OFC
Single Sheath Duct



96F-576F | 864F | 1728F

1 OUTER SHEATH
2 WATER BLOCKING TAPE
3 BUNCH OF IBRs
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
- Black Printing 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, 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 HD A2 250um
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

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.)
R10096S201FAP10000	96	1 x 96	Blue	8.2 (0.322)	45 (0.030)	1000 (224.8)
R10144S202FAP10000	144	2 X 72	Blue, Orange	11.7 (0.460)	78 (0.05)	1000 (224.8)
R10288S204FAP10000	288	4 X 72	Blue, Orange, Green, Brown	11.7 (0.460)	96 (0.06)	2500 (562)
R10432S206FAP10000	432	6 X 72	Blue, Orange, Green, Brown, Slate, White	12.7 (0.50)	110 (0.73)	2700 (606.9)
R10576S204FAP10000	576	4 X 144	Blue, Orange, Green, Brown	14.0 (0.55)	130 (0.08)	2700 (606.9)
R10864S206FAP10000	864	6 x 144	Blue, Orange, Green, Brown, Slate, White	17.7 (0.69)	200 (0.13)	2700 (606.9)
R11728S206FAP10000	1728	6 x 288	Blue, Orange, Green, Brown, Slate, White	23.5 (0.93)	332 (0.222)	2700 (606.9)

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)	1 (8.85)	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	

* For 1728F sample length shall be 5m

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.

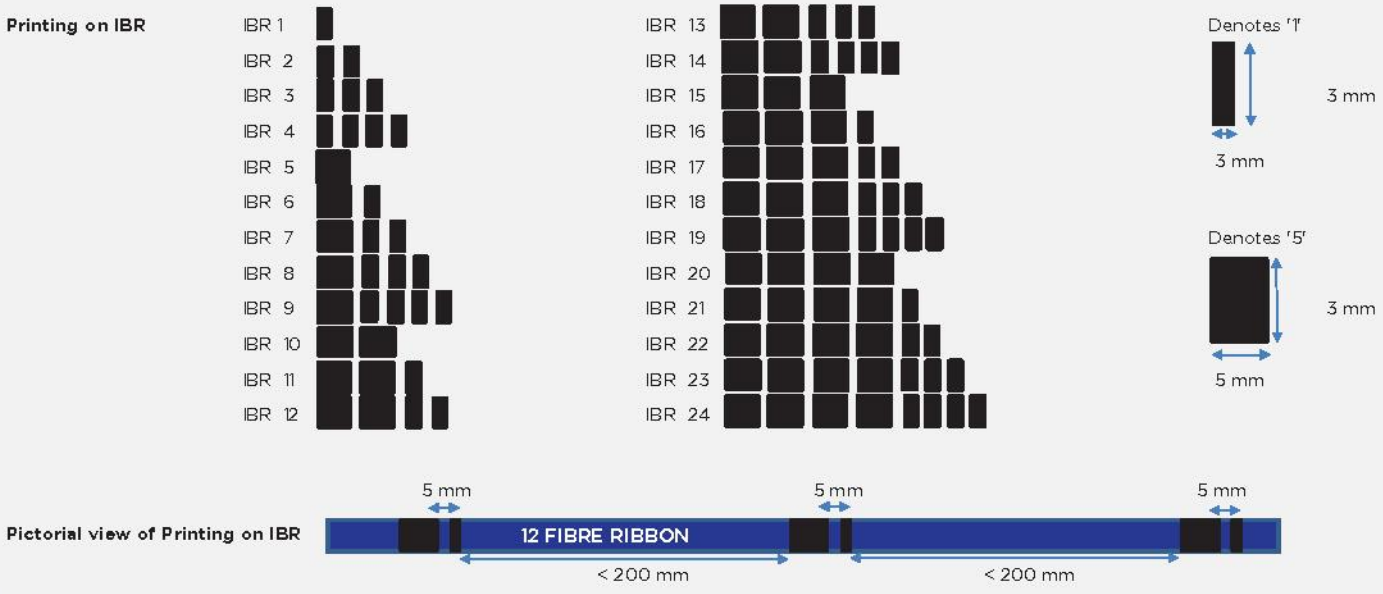
IBR Identification Printing and Color Sequence

Fiber Color Sequence (AS per EIA/TIA 598C)

Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Binder Color Sequence (AS per EIA/TIA 598C)

Blue	Orange	Green	Brown	Slate	White



Packing and Lengths

Drum Type	Length Multiple (feet)	Order Tolerance	Non-standard Length
Wooden Drums	10,000 | 20,000 ± 5% (upto 864F) 10,000 ± 5% (for 1728F)	± 5%	Max 20%, Customer Approval

Intermittently Bonded Ribbon Duct

ase contact your sales representative.

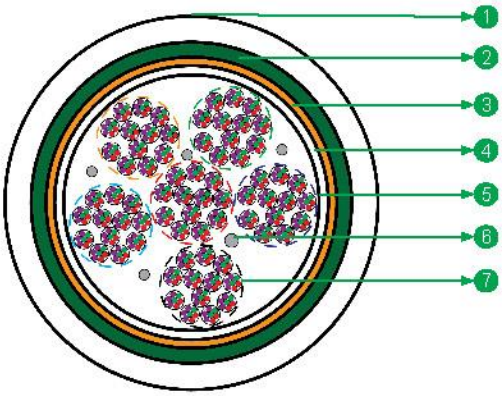
at www.stl.tech

Product Specification

Celesta™

Indoor-Outdoor G.657.A2 Gel Free Single Jacket OFC

72F-1008F



1 OUTER SHEATH
2 GLASS ROVING YARN
3 FR TAPE
4 INNER TUBE
5 WS TAPE
6 WS YARN
7 INTERMITTENTLY BONDED RIBBON

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Special bend insensitive fibre 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
- Black Printing for easier and faster Ribbon identification
- Precise fibre and ribbon geometries result in excellent mass fusion splicing yields
- Multiple ribbon bundles design with ripcords for easy and quick mid-span access
- Dry water-blocking technology for gel free core helps in quicker end preparation.
- Fire Performance in compliance with CPR Euro Class Cca and above.

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 fibre packing and smaller cable diameter. This cable offers an outstanding solution for demanding high-growth, high-bandwidth communications applications like data centres, equipment connections within cabinets, outside plant applications.

Fibres and Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ITU-T, CPR, RoHS, REACH.

Printing Details

STERLITE SM "FIBRE COUNT" "FIBRE TYPE" CELESTA ISP/OSP OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER 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	
Fibre Type	STL HD A2 250um Fibre (ITU-T G.657 A2)
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4 & 1550nm: 0.3
PMD LDV (ps/sqrt.km)	</= 0.2
Ribbon Type	Intermittently Bonded Ribbon (IBR)
Fibre per IB Ribbon	12
Tube Color	White
Water Blocking Elements	Yarns and Water Swellable Tape
Fire retardant tape	For Fire Protection
Peripheral Strength Member	A layer of GRY (Glass Roving Yarns)
No of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Stabilized White LSZH

Cable Characteristic						
Product Code	**Fibre Count**	**Bundling of Ribbons (Bundle X Fibre)**	**Unit Binder Color**	**Cable Diameter mm (± 0.5)**	**Cable Weight Kg/Km (+10%)**	**Tensile Strength N**
R30072S201FAL100J5	72	1X72	Blue	12.7	160	1360
R30096S201FAL100J5	96	1X96	Blue	13.0	170	1360
R30144S201FAL100J5	144	1X144	Blue	13.7	180	1360
R30288S201FAL100J5	288	1X288	Blue	15.2	215	1360
R30432S203FAL100J5	432	3X144	Blue, Orange, Green	18.2	380	1360
R30576S204FAL100J5	576	4X144	Blue, Orange, Green, Brown	19.4	475	1360
R30864S206FAL100J5	864	6X144	Blue, Orange, Green, Brown, Slate, White	20.0	700	1360
R31008S207FAL100J5	1008	7X144	Blue, Orange, Green, Brown, Slate, White, Red	22.8	830	1360

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Crush Resistance (N/100 mm)	IEC-60794-1-21-E3	1000
Impact Strength (Nm)	IEC-60794-1-21-E4	5
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (During Installation)	IEC-60794-1-21-E11	20 D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	15 D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24 h
Temperature Performance	IEC-60794-1-22-F1	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-10°C to +60°C
Operation		-30°C to +70°C
Storage		-40°C to +70°C

Note 2: All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.1 dB/km

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	2 ± 5%	±5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

R1.9/0624

Intermittently Bonded Ribbon

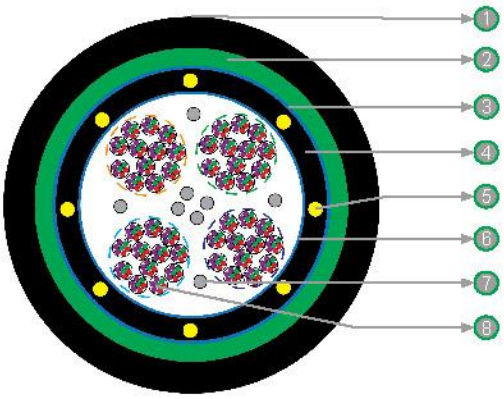
Direct Buried Cables

Product Specification

Celesta™

Outdoor Stellar 250 Gel Free DJ ST Armored OFC

288F-1728F



1. OUTER SHEATH
2. CORRUGATED ECCS TAPE
3. WATER BLOCKING TAPE(WBT)
4. INNER SHEATH
5. EMBEDDED STRENGTH MEMBER
6. WATER BLOCKING TAPE(WBT)
7. WATER SWELLABLE YARNS (WSYs)
8. BUNCH OF IBRs

** 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.
- Lower diameter cable as compared to conventional flat ribbon.
- 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, lightweight, easy to handle & install.

Product Details

STL SM CELESTA® Armored Lite Gel Free Double Sheath Optical Fibre Cable combines robust performance for duct as well as direct installations with the productivity of high-count mass fusion splicing. The optical fibres are arranged into ribbon units by placing the fibres in a flat array of color-coded fibres partially bonded together by a UV-curable acrylate matrix. CELESTA comes with gel free technology; the inner sheath contains water swellable yarns and is surrounded with water-swellable tape to prevent water ingress in the cable. Corrugated Steel Tape armor surrounds the inner sheath making the cable robust and installation friendly.

Fibres and Cable Performance Standards

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

Printing Details

STERLITE SM STELLAR "FIBER COUNT" "FIBRE TYPE" CELESTA ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL "YEAR OF MANUFACTURE" "LENGTH CODE" "FEET/METER MARKING"

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

Specifications

Physical Characteristics	
Fibre Type	STL Stellar (ITU-T G.657.A1/A2)
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4 & 1550nm: 0.3
PMD LDV (ps/sqrt.km)	</= 0.1
Ribbon Type	Intermittently Bonded Ribbon (IBR)
Fiber Color Sequence in Ribbon	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Inner sheath Material	Black Polyethylene
Water Blocking	Water swellable yarns and water blocking tape
Metallic Armoring	Corrugated Steel Tape (Un-bonded with Sheath)
No of Ripcords Below Tape	2 below ECCS tape
Embedded Strength Member	Aramid Reinforced Plastic (ARP)
Outer Sheath Material	UV Proof Black Polyethylene

Cable Characteristic					
Product Code	**Fibre Count**	**Bundling of Ribbons (Bundle X Fibre)**	**Unit Binder Color**	**Cable Diameter mm (inch) (+5%)**	**Cable Weight Kg/Km (lbs/ft) (+10%)**
S10288C104FAB20000	288	4 X 72	Blue, Orange, Green, Brown	16.0 (0.629)	215 (0.144)
S10432C106FAB20000	432	6 X 72	Blue, Orange, Green, Brown, Slate, White	17.0 (0.669)	235 (0.157)
S10576C104FAB20000	576	4 X 144	Blue, Orange, Green, Brown	18.4 (0.724)	265 (0.178)
S10864C106FAB20000	864	6 X 144	Blue, Orange, Green, Brown, Slate, White	21.5 (0.846)	330 (0.221)
S11008C107FAB20000	1008	7 X 144	Blue, Orange, Green, Brown, Slate, White, Red	22.5 (0.885)	370 (0.248)
S11152C104FAB20000	1152	4 X 288	Blue, Orange, Green, Brown	23.6 (0.929)	425 (0.285)
S11728C106FAB20000	1728	6 X 288	Blue, Orange, Green, Brown, Slate, White	26.7 (1.05)	525 (0.352)

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N) (lb.)	ICEA 640|FOTP-33	Short Term – 2700 (607) Long Term – 900 (202.3) (or 0.3*short term tensile)
Crush Resistance (N/100 mm) (lb./inch)	ICEA 640|FOTP-41	4400 (228.4)
Impact Strength (Nm) (lb. Inch)	ICEA 640|FOTP-25	5 (44.2)
Torsion	ICEA 640|FOTP-85	±180°
Min. Bend Radius (During Installation)	ICEA 640|FOTP-88	20 D
Min. Bend Radius (After Installation)	ICEA 640|FOTP-88	15 D
Water Penetration Test*	ICEA 640|FOTP-82	1m waterhead, 3m samples, 24 h
Temperature Performance	ICEA 640|FOTP-3	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-30°C to +70°C
Operation		-40°C to +70°C
Storage		-40°C to +70°C

*Water Penetration Test shall be applied on optical element (Inner Sheath).

Note 2: All tests shall be carried out as per ICEA standards. Change in attenuation after and before testing shall be </= 0.05 dB/km

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	4|6 km (13,123|20,000 ft) ± 5%	±5%	Max 5%, Customer Approval

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**

R1.2/0624

Intermittently Bonded
Ribbon

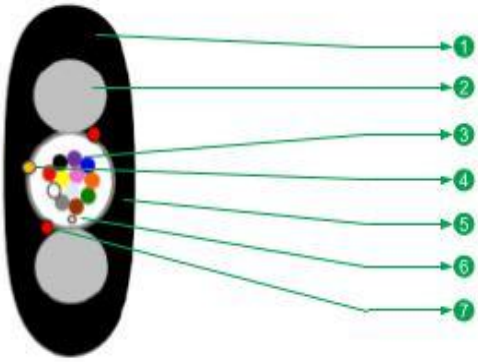
Drop Cables

Product Specification

Celesta™

Flat Drop Outdoor Stellar 250 Gel Free PE OFC

12F-24F-48F



1 OUTER SHEATH
2 EMBEDDED STRENGTH MEMBER
3 IR RIBBONS
4 ARAMID YARNS
5 GEL FREE LOOSE TUBE
6 WATER SWELLABLE YARN
7 RIPCORD(s)

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Embedded strength members for anti-buckling properties
- All dry design for easy and fast end preparation
- Easy access to Fiber due to its Unitube construction
- Tensile and crush resistant
- UV protected

Product Details

STL Celesta 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 dry tube filled with water swellable yarns 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.

Fibres and Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, ANSI/ICEA S-110-717, Telcordia GR-20, ITU-T, RoHS, REACH.

Printing Details

STERLITE SM "FIBER TYPE" "FIBER COUNT" CELESTA FLAT DROP OFC LASER SYMBOL TELEPHONE SYMBOL "MM/YYYY" "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	
Fibre Type	STL Stellar Fiber (Comply ITU-T G.657.A1/G.657.A2 & G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4, 1550nm: 0.3 & 1625nm: 0.4
PMD LDV (ps/sqrt.km)	</= 0.1
Type of Ribbon	Intermittently Bonded Ribbon (IBR)
Fibers per IB Ribbon	12
Fiber Color Sequence in IB Ribbon	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Strength Member	High strength aramid yarns along with fibres
Water Blocking	Water Swellable Yarns
No of Tubes	1
Tube Color	Black
Outer Sheath Material	UV Proof Black Polyethylene

Cable Characteristic				
Product Code	**Fibre Count**	**No of Ribbons**	**Cable Diameter mm (inch) (± 0.3)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
U20012C101FAP10100	12	1	4.1 x 8.2 (0.161 x 0.322)	32 (0.021)
U20024C101FAP10100	24	2	4.1 x 8.2 (0.161 x 0.322)	32 (0.021)
U20048C101FAP10100	48	2	5.0 x 9.0 (0.196 x 0.35)	40 (0.026)

Mechanical & Environmental Characteristics		
Cable Characteristics	**Testing Standard Method**	**Cable Performance**
Tensile Strength (N) (lbf)	ICEA 110-717 | FOTP-33	1336 N (300.3)
Crush Resistance (N/100 mm) (lbf/in)	ICEA 110-717 | FOTP-41	500 (28.55)
Impact Strength (Nm) (lbf.in)	ICEA 110-717 | FOTP-25	5 (44.2)
Torsion	ICEA 110-717 | FOTP-85	±180°
Min. Bend Radius (During Installation)	ICEA 110-717| FOTP-88	20 D
Min. Bend Radius (After Installation)	ICEA 110-717 | FOTP-88	15 D
Water Penetration Test	ICEA 110-717 | FOTP-82	1m waterhead, 3m samples, 24 h
Temperature Performance	ICEA 110-717 | FOTP-33	Max. change in attenuation shall be </= 0.4 dB/km at 1550nm
Installation		-30°C to +70 °C
Operation		-30°C to +70°C
Storage		-40°C to +70°C

Note 2: All tests shall be carried out as per ICEA 110-717 standards, the change in attenuation shall be </= 0.4 dB at 1550 nm

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	2|4|6 (6561.6|13,123|20,000)ft ± 5%	±5%	Max 5%, Customer Approval

Intermittently Bonded Ribbon Drop

For additional information please contact your sales representative.
You can also visit our website at **www.stl.tech**

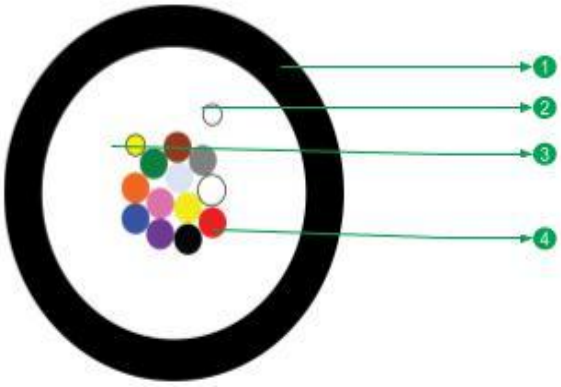
R1.4/0624

Product Specification

Celesta™

Air Blown Outdoor Stellar 250 Gel Free PP Single Jacket OFC

12F-24F-48F



1 OUTER JACKET 2 WATER SWELLABLE YARNS 3 ARAMID YARNS 4 RIBBON OF 12 FIBRES

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Small size, fast cable termination and easy cable management.
- Optimum solution for last mile application.
- Provides comparable better crush and impact resistance.

Product Details

STL Celesta Air blown Fibre Optic cable is generally used in FTTx applications. It features lightweight and small diameter specifically designed for metro feeder or access networking, especially suitable for air-blowing installations into single or bundled micro ducts.

Fibres and 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

STERLITE SM 'FIBRE COUNT' 'FIBRE TYPE' CELESTA AIR BLOWN LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE FEET/METER MARKING

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

Specifications

Physical Characteristics	
Fibre Type	STL Stellar Fiber
Maximum Cabled Attenuation (dB/km)	1310nm: 0.4, 1550nm: 0.3
PMD LDV (ps/sqrt.km)	</= 0.2
Type of Ribbon	Intermittently Bonded Ribbon (IBR)
Fibers per IB Ribbon	12
Fibre Color Sequence in IB Ribbon	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua
Strength Member	High Strength Aramid Yarn along with Fibres

Cable Characteristic				
Product Code	Fibre Count	No of Ribbons	Cable Diameter mm (inch) (± 0.3)/ (0.01 inch)	Cable Weight kg/km (lbs./ft.) (±10%)
U20012C101FAR10000	12	1	3.0 (0.11)	6 (0.0040)
U20024C101FAR10000	24	2	3.0 (0.11)	6.5 (0.0043)
U20048C101FAR10000	48	4	4.3 (0.17)	9.5 (0.0064)

Mechanical & Environmental Characteristics		
Cable Characteristics	Testing Standard Method	Cable Performance
Tensile Strength (N) (lbf)	ICEA 122-744 | FOTP-33	Max. Installation Load: 111 (24.95) Max. Operational Load: 36 (8.09)
Crush Resistance (N/100 mm) (lbf/in)	ICEA 122-744 | FOTP-41	800 (45.68)
Impact Strength (Nm) (lbf.in)	ICEA 122-744 | FOTP-25	1 (8.85)
Torsion	ICEA 122-744 | FOTP-85	±180°, 100 N
Min. Bend Radius (During Installation)	ICEA 122-744 | FOTP-88	20D
Min. Bend Radius (After Installation)	ICEA 122-744 | FOTP-88	10D
Water Penetration Test	ICEA 122-744 | FOTP-82	1m waterhead, 3m samples, 24 h
Temperature Performance	ICEA 122-744 | FOTP-3	Max. change in attenuation shall be </= 0.15 dB/km
Installation		-30°C to +70 °C
Operation		-30°C to +70°C
Storage		-40°C to +70°C

Note 2: All tests shall be carried out as per ICEA standards. Change in attenuation after and before testing shall be </= 0.05 dB/km

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Plywood	4|6 (13123|20000) ± 5%	±5%	Max 5%, Customer Approval

Intermittently Bonded Ribbon Drop

ct your sales representative.

You can also visit our website at **www.stl.tech**

R1.4/0724

Speciality

Applications:

- **Sensory Cables**: Medium to long runs for industrial and monitoring solutions.
- **Fire Retardant Cables**: Short to medium runs in safety-critical indoor installations.
- **Defense Cables**: Short to long runs depending on military-grade applications.
- **Hybrid Cables**: Medium to long runs where both power and data are required, such as smart grids or telecom networks.

Specialty Cables

STL's Specialty Cables are designed to meet unique, application-specific requirements across various industries.

Industries it may cater to:

Industrial Automation

Sensory cables for monitoring and control in manufacturing environments.

Defense

Ruggedized solutions for military-grade communication networks.

Oil & Gas

Monitoring and sensing cables for pipelines, offshore rigs, and harsh environments.

Power Utilities

Hybrid cables for combined power and data transmission in smart grids.

Mining

Fire-retardant and hybrid solutions for underground operations.

Healthcare

Fire-safe, low-smoke cables for safety-critical medical environments.

Surveillance

Sensor-based solutions for security monitoring systems.

Deployment Type: Suitable for **specialized short to long-distance** applications depending on specific use cases.

Cable Runs: Varies from 1 km to over 50 km depending on application.

Variants available of Specialty Cables:

- **Sensory Cables**: Engineered for advanced sensing applications, offering reliability for industrial monitoring and detection.
- **Fire Retardant Cables**: Built for safety-critical environments, these cables feature LSZH materials to minimize smoke emission and fire hazards.
- **Defense Cables**: Designed for mission-critical military and defense applications, delivering ruggedness and reliability in extreme conditions.
- **Hybrid Cables**: Combining power and data transmission, hybrid cables provide versatile solutions for telecom and utility networks.

STL's Specialty Cables address industry-specific challenges, ensuring customized solutions for safety, performance, and reliability.

Please reach out to STL Sales for more information on these cables.

Connecting the next billion

In the last 20 years, world population has grown by just 1.3% while optical fibre cable deployment has grown by ~14%. The figure below shows how the roll out of fibre has been galloping – time taken to lay 1 bn FKm (Fibre Km) shrunk from 38 years to less than two years by 2018. Considering the connectivity urgency driven by 5G and FTTx investments, the next 1 bn FKm is likely to take significantly less time now.

World's rate of deployment of **1Bn Fkm Cable** has shrunk drastically from **38 years to less than 2 years**

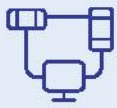
Countries across the globe had been on a steady broadband agenda with their respective spectrum reallocation or wireline network investments.

Multi-Gigabit, Ubiquitous Connectivity – A NOW-requirement

To run enterprise-grade connectivity from homes for online education, work, shopping, entertainment

Suburb connectivity levels in parity with commercial centers

For fixed, mobile and broadcast network convergence



Interconnected objects and devices to enable the Internet of Things

Network providers, worldwide, pivoted almost instantaneously to meet the surge in demand. But what was initially thought to be a short-term arrangement, has now given way to an increased acceptance that the exponential demand on networks is here to stay. Be it 5G, or FTTx, or data centers, the appetite for bandwidth is increasing by leaps and bounds. In today's common parlance, super-fast, steady connectivity will be a basic requirement in the 'new world' order.

Providers, therefore, have no recourse but to gear up for networks that comply with the 3Rs

3Rs

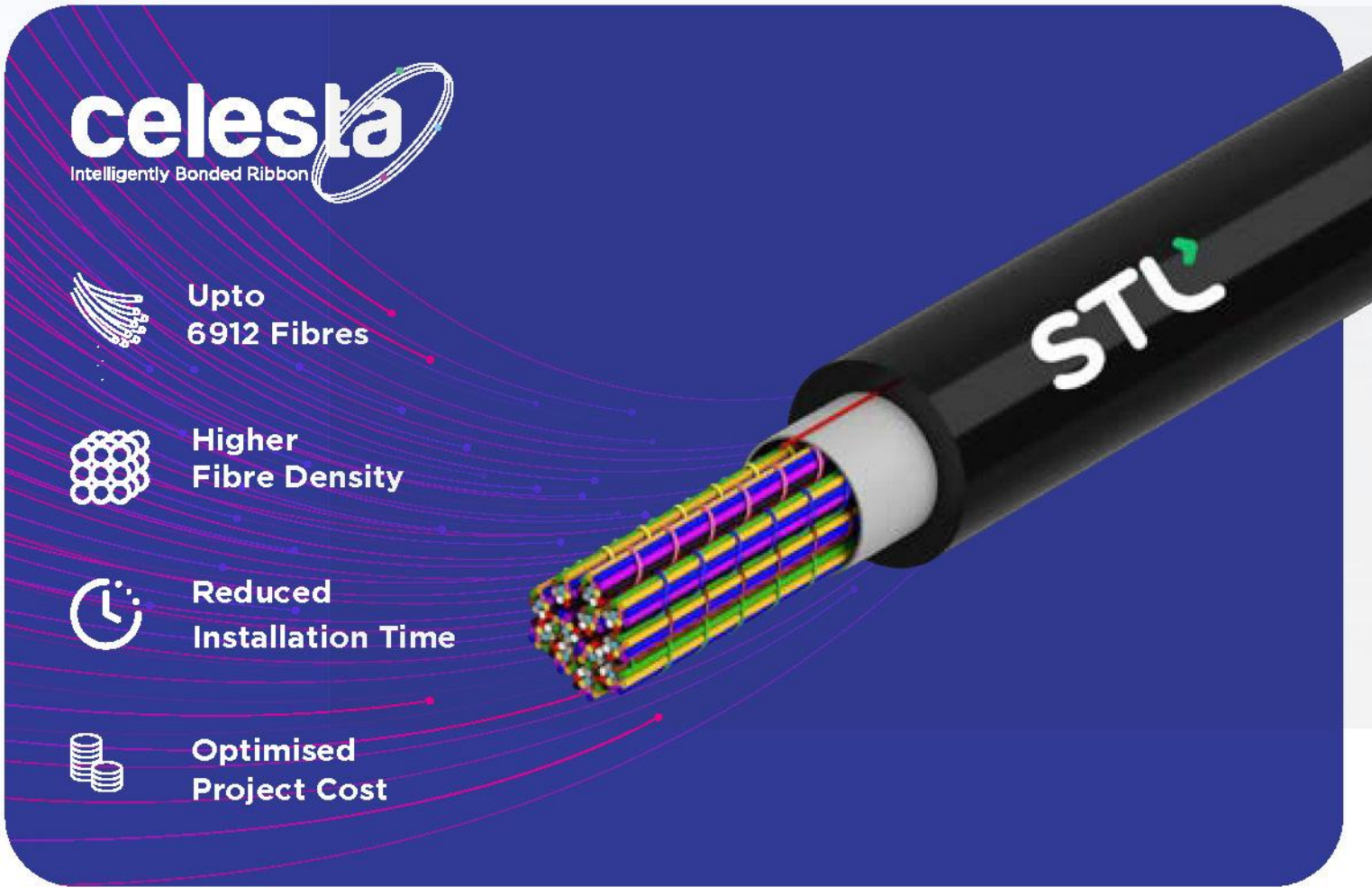
Reliability
High on service quality and low losses

Resilience
Zero downtime

Ready-for-Future
Next gen technology compatible

They have to achieve the 3Rs by deploying networks swiftly while at the same time optimising space. For, while the bandwidth demand is unlimited, space availability is not. Networks have to be smarter – they have to hold more optical fibre within the same available space.

Meeting these criteria of time and space are the high-density Optical Fibre Ribbon Cables. These new-age, innovative ribbon cables address the 3R requirement. They are reliable, resilient and are ready for future **needs of the network because of their smart design that offer:**



STL Celesta ribbon cable is better and smarter than traditional loose tube cables and flat ribbon cables, **Celesta ribbon cable offers an outstanding solution for demanding, high-growth, high-bandwidth** communications applications.

STL Celesta Ribbon Cables are new age cables that offer a technology leap in terms of size and space requirements. They have found wide application at data centers, equipment connections within cabinets, outside plant applications.

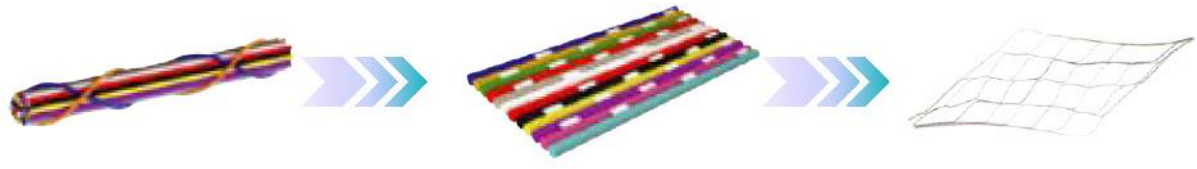
STL Celesta Ribbon Cables are compliant with international performance and testing standards

IEC 60794-5-10	ITU-T	RoHS	REACH

Innovative slim design optimises duct space utilisation

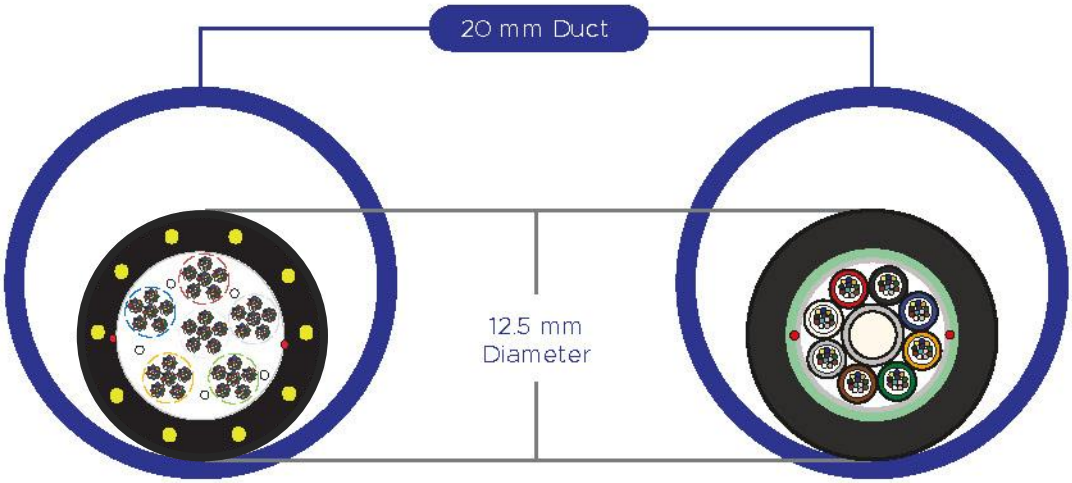
In Celesta, ribbons take the shape of a bundle because of their intelligently bonded design. This results in improved form factor of the cable.

432F Celesta Ribbon cable is as much as **26% slimmer** than aconventional multi-loose tube cable with the same number of fibres.



4X better duct utilisation

High-density ribbon cable packs more fibre in the same cable diameter and helps improve duct space utilisation by as much as 4X as compared with a conventional MLT cable



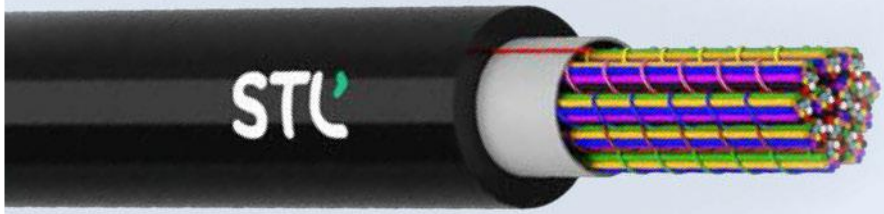
432F
Celesta Ribbon Cable

96F
Conventional MLT cable

Easily fits inside 20mm duct

This is an ideal solution for application in space constraint locations. The 432F Celesta Ribbon Cable can be easily blown inside a 20mm duct. This is about 30 percent lesser High-Density Polyethylene (HPDE) material under the ground and helps reduce carbon footprint.

Installer-friendly design help operators roll out network faster



Install upto 2 Km of cable within 1 hour

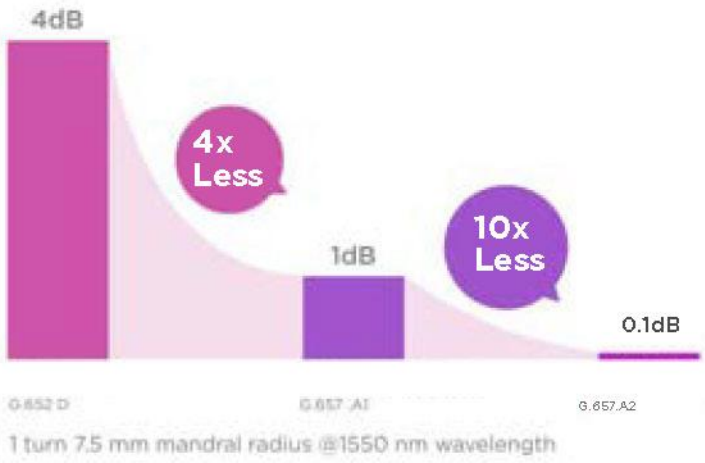
Celesta Ribbon Cable is blow optimized, has kink-free design with innovative sheathing and non-preferential bending. Installers can install upto 2 Km of cable within 1 hour inside a 20mm duct.

Cable preparation in less than 3 minutes

The multiple peripheral strength members inside the sheath of optical fibre ribbon cables provide crush protection and are rodent resistant. Its gel-free, water-blocking and contra-helical binding cable design reduces the cable preparation time for splicing. Cable-end preparation can be done under 3 minutes and mid-span access in 13 minutes.

Once the cable has been laid inside the duct, installation of the cable is truly an installer's delight. With Celesta Ribbon Cables, the installation process takes 80% lesser time as compared to installing a conventional loose tube cable with same fibre count.
Celesta with its innovative colour-coded bonded design results in easier and faster ribbon identification. This ensures first time right splicing even with semi-skilled manpower. The ribbon fibres are compatible with existing and new fusion splicers. The collapsible ribbon design transforms quickly into a flat ribbon resulting in five times faster splicing than a MLT cable. This can result in huge savings in time and labour cost.

Future-proofing network set to optimise project cost



Celesta ribbon cable is made using future-ready G.657.A2 bend insensitive optical **fibre and offers industry's lowest attenuation** in ribbon cables.

With improved network performance and power budget, network becomes resilient to bends and cuts. After commissioning of the network, as much as 18 additional repairs can be done.

This can **enhance networks life by up to 10 years,** thereby improving the ROI.

Saves upto 32% cost

With superior bend performance, cable and fibres can have a much smaller bend radius. This provides ease of handling in manholes and handholes. This also helps further improve the TCO with the reduced the size of passive infrastructure.

STL Celesta's light weight design helps operator reduce the logistics cost. Smaller form factor results in smaller reel size which optimises the storage and shipping cost, resulting in enormous capex and opex savings.

Operators can expect a **cost saving of 32% in the overall investment.**

Need of the hour!

Not with standing stark digital divide across countries, most countries around the world are on their respective digital path. Already recipients of massive budget allocation, network augmentation and enhancement will witness further rise in investments. In Europe, for instance, the Connecting Europe Facility (CEF2) digital programme " aims to support and catalyse investments in digital connectivity infrastructures of common interest during the period 2021-2027 ". Policy makers have gone on record committing to providing high-quality access to Gigabit networks to all people, businesses and "socioeconomic drivers" such as schools, universities, hospitals, transport hubs and public administrations . In the United States of America, counted amongst the largest online markets of the world with internet user penetration at 85.8 percent, Connecting America: The National Broadband Plan, aims to take broadband to households, institutions, government organisations to fuel their progress **and ensure their safety. Even if the scale and speed of investments may differ, the narrative is similar in other** countries and regions of the world.

Optical fibre ribbon cables offer the perfect solution to the present-day world riding this heightened urgency for connectivity. Optimising costs, infrastructure availability, installation time and thereby maximising investments, these high-density cables come in as game changers in the bandwidth arena. And are set to change the narrative of digital preparedness.

stl.tech

Revolutionising the Green Quotient of Fibre Optics

DID YOU KNOW?

"Internet and digital networks are responsible for ~3.7% of global carbon emissions"*

World's first Eco-labelled optical products range in our march towards Net Zero by 2030

STL has now become the **'first in the world'** to launch a range of **Eco-labelled Certified Optical Products.**

Highlights:

- STL's optical products range is recognised by US-based **Sphera**, an ESG performance consulting services company
- Verified by **Metsims Sustainability Consulting**, a global sustainability consulting firm
- Executed in strict adherence to the globally recognised ISO 14024 standards and guidelines set forth by the European Union
- STL's optical products' performance has been rated in 'Gold' category
- Follows the highest standards of health and environmental safety
- Certified by prestigious global bodies like RoHS, REACH and POP

Our sustainability assessment methodology

STL's Eco-label framework ensures that the methodology is robust and holistic in its approach, from sourcing raw materials to selling finished products. STL's approach promotes sustainable sourcing, clean energy use, and resource optimisation and further emboldens **STL's 2030 goal of Net-zero emissions**. Some of the parameters covered include:

Energy consumption

Renewable fuel and electricity consumption

Water consumption

Wastewater discharged

Global warming potential impact

Waste disposal from manufacturing

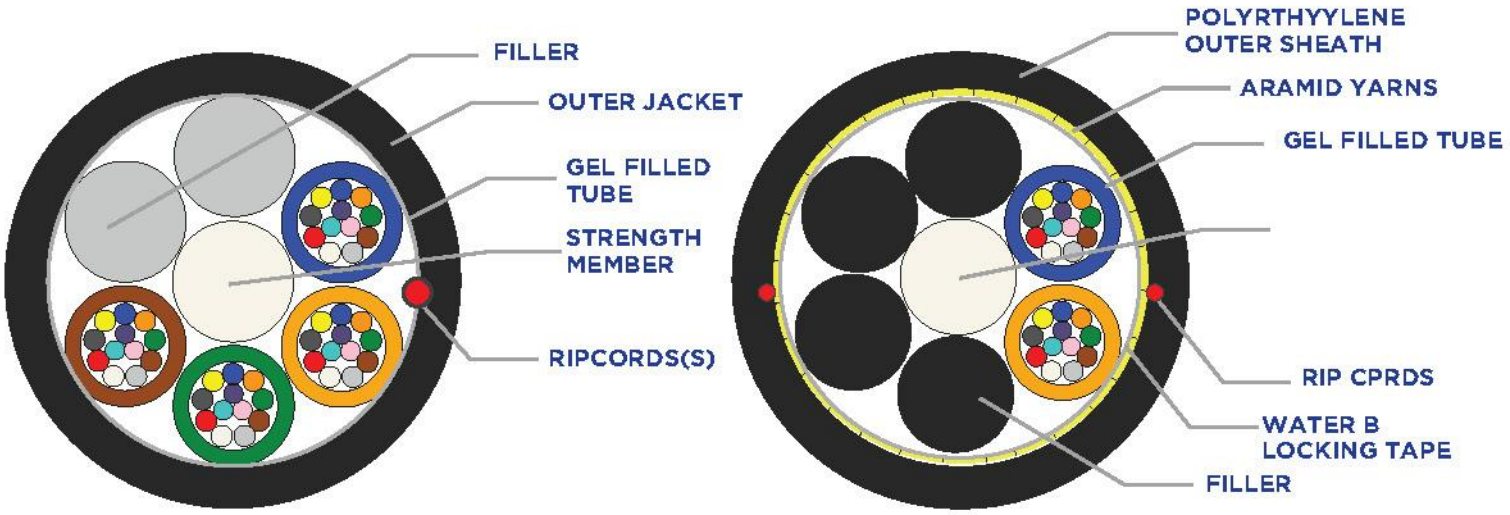
* https://8billiontrees.com/carbon-offsets-credits/carbon-footprint-of-the-internet/

And results are for all to see

When compared to standard products, these Eco-labelled products:

- Utilise **~52%** less energy
- Carry **~75%** less global warming potential
- Use **~18%** more recycled content and **~25%** more recycled packaging material and water
- Reuse and recover **~20%** more waste
- Enhance the longevity of network by nearly **13** years.

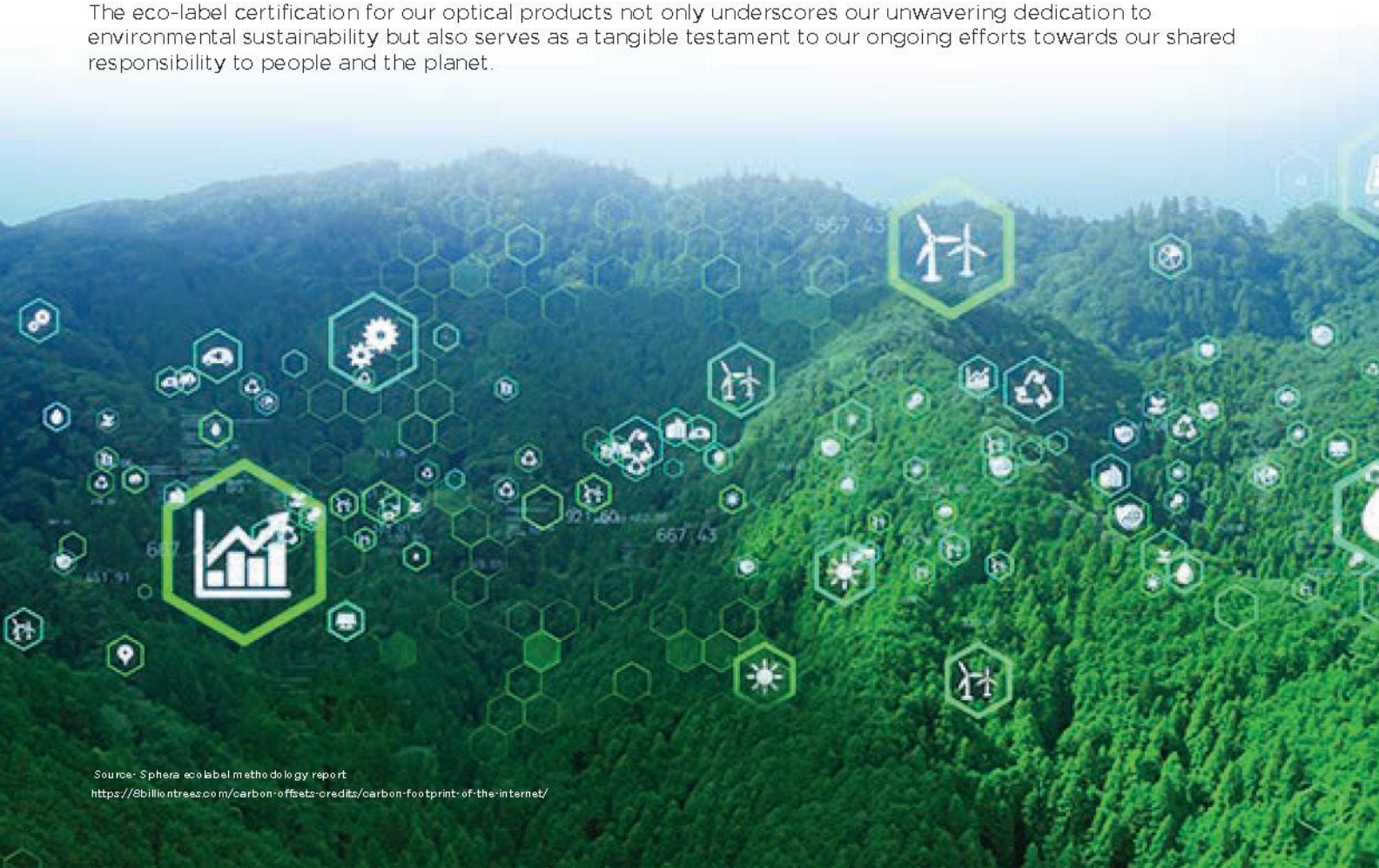
Source: Sphera Ecolabel Methodology report



Micro cable

ADSS

The eco-label certification for our optical products not only underscores our unwavering dedication to environmental sustainability but also serves as a tangible testament to our ongoing efforts towards our shared responsibility to people and the planet.



Source- Sphera ecolabel methodology report
https://8billiontrees.com/carbon-offsets-credits/carbon-footprint-of-the-internet/

STL's ESG initiative

Environment

- Waste diversion from landfills
- Water security & conservation
- Carbon emissions reduction
- Energy Conservation
- Sustainable sourcing
- Lifecycle assessments
- Afforestation & bio-diversity restoration

Social

- Women empowerment
- Livelihood enhancement environment programs
- Healthcare
- Education
- Employee volunteering

Governance

- Leadership involvement & support
- Part of Global/National collectives
- Policies
- Stakeholder Communications
- Robust monitoring & processes
- Reporting (GRI standards & ensuring transparency)
- Protocols to address policy exceptions & grievances

STL's Sustainability Goals

- **Net Zero Emissions by 2030**
- **100% product families Life Cycle Assessments by 2030**
- **Water Positivity by 2030**
- **Sustainable sourcing by 2030**
- **100% plants Zero Waste to Landfill certified by 2030**

STL | beyond tomorrow

About STL - Sterlite Technologies Ltd.

STL is a leading global optical and digital solutions company providing advanced offerings to build 5G, Rural, FTTx, Enterprise and Datacenter networks. The company, driven by its purpose of 'Transforming Billions of Lives by Connecting the World', designs and manufactures in 4 continents with customers in more than 100 countries. Telecom operators, cloud companies, citizen networks, and large enterprises recognize and rely on STL for advanced capabilities in Optical Connectivity, Global Services, and Digital and Technology solutions to build ubiquitous and future-ready digital networks. STL's business goals are driven by customer-centricity, R&D and sustainability. Championing sustainable manufacturing, the company has committed to achieve Net Zero emissions by 2030. With top talent from 30+ nationalities, STL has earned numerous 'Great Place to Work' awards and been voted as the 'Best Organisation for Women'.

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Scan this for local contacts