STL

stl.tech

Glass to **Gigabit Connectivity**

Product Catalogue

Optical Fibre Cable

About STL

Glass to Gigabit Connectivty

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 fundamnetal 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 suplly 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

Optical Networking

Global Services

Digital and Technology Solutions

Offerings

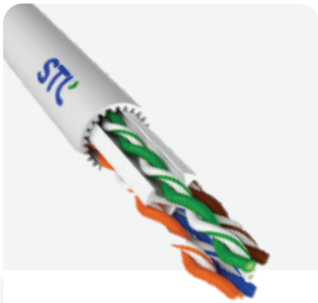
Optical Networking	Global Services	Digital and Technology Solutions
Glass Preform	Fibre Automation Services	Digital Transformation
Optical Fibre	Network Services	Enterprise applications
Optical and Specialty Cables	Data Center services	Data & Analytics services
Optical Connectivity	Managed Services	Network Operations Platforms
	RAN Services	5G Monetization

Optical Networking Portfolio and Solutions

Optical Fibre

Optical Fibre Cable

Optical Connectivity



Specialty Cables

30 Years of Experience in Optical Networking Solutions

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

Optical Fibre (OF)

Shendra, Aurangabad India

Jiangsu Sterlite Tongguang Fibre Co. Limited Haimen-City China

Waluj, Aurangabad

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

Rakholi, Silvassa India

Metallurgica Bresciana, Italy

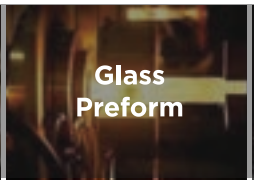
Sterlite Conduspar Parana Brazil

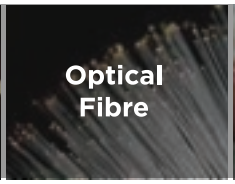
South Carolina, LugOff, USA

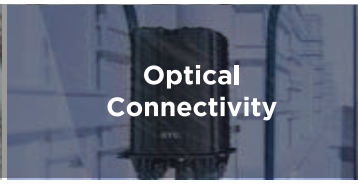
Optical Interconnect (OI)

Dadra & Nagar Haveli India

Origgio Italy







10

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 fibre & cable manufacturing facilities.

STL in Numbers

69.25 INR bn.

FY23 Revenue*

India (42%), EMEA (42%), America (11%), RoW (5%)

GLOBAL FOOTPRINT

*Conversion rate assumed : 1USD = 80 INR

- Software Development Centres
- Manufacturing Units
- Sales Offices

Zero

WASTE TO LANDFILL[1]
Italy, Shendra, Rakholi, Dadra, Waluj

686*

PATENTS
As on H1 of FY24
Across the network layer

India and UK

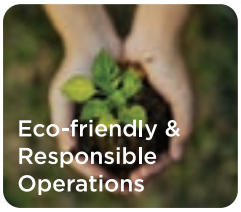
Global Services

10

Global production facilities

ESG Initiatives and its Impact

Environment | Social | Governance



Caring for our people & the environment

Policies & Systems
on Human Rights, Labour Practises, Fair Wages

2M+ m³
Water recycled and reused at STL and replenished in surrounding communities

28,000 tCO_2e
Reduced through in-plant initiatives and plantations in surrounding communities

Enabling millions using tech & connectivity

2.25M+
lives impacted through social impact programmes on Women Empowerment, Healthcare, Education & Environment

Signatory
To the UNGC & UN WEP

90+
ESG Awards won including 7 international wins

Driving Sustainability

200,000+
MT Waste diverted from landfills

97%
of waste is recycled, reused or co-processed

2030: Towards a Cleaner & Greener Future

100%
- Manufacturing locations to be ZWL certified
- Water Positivity globally
- Sustainable Sourcing
- Products families covered under LCAs

Net-zero
Emissions

2025: Facilitating a More Inclusive Society

5 Million
- Impacting 5M lives
- Undertaking 5M plantations
- Replenishing 5M cubic meters of water in communities

*All figures are cumulative (up to Q3 FY23) | **UNGC – United Nations Global Compact | UN WEP – United Nations Women Empowerment Principles

Committed to Sustainability & Social Responsibility

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

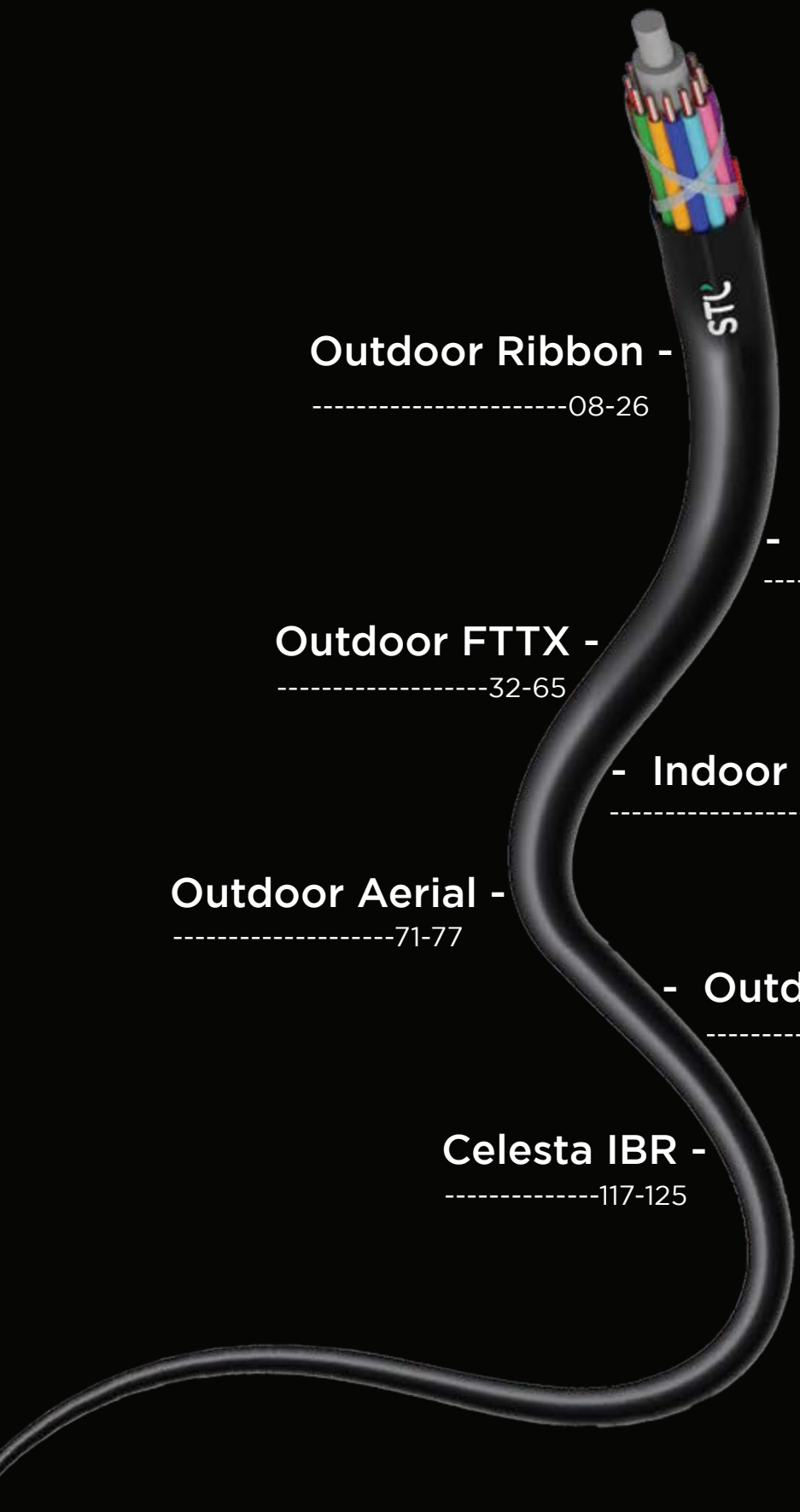
World's **1st**

ZERO WASTE TO LANDFILL

Integrated Optical Fiber and Cable Manufacturer

Certified Manufacturing Locations ◆ Shendra ◆ Rakholi ◆ Dadra

Index



Outdoor Ribbon - ----------08-26

- Yogalite ----------27-31

Outdoor FTTX - ----------32-65

- Indoor FTTx ----------66-70

Outdoor Aerial - ----------71-77

- Outdoor Underground ----------78-116

Celesta IBR - ----------117-125

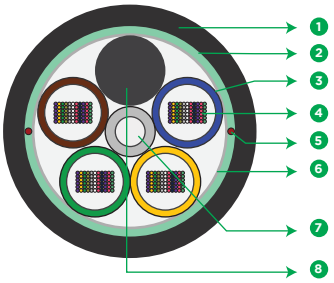
Outdoor Ribbon

Optical Fibre Cables

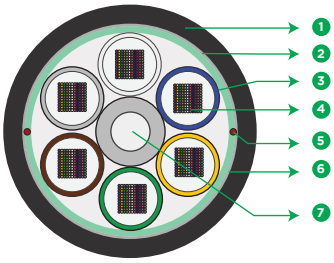
Product Specification

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

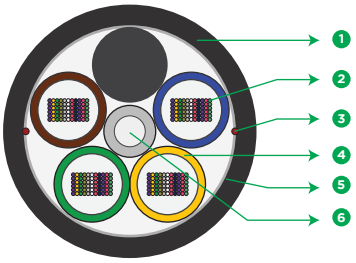
Drum Type	Fiber count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 360F	10000; 13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	432F	10,000; 13123 ± 5%		
	576F - 864F	10000 ± 5%		

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

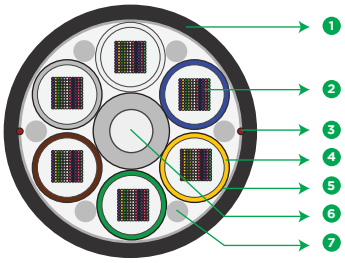
Product Specification

Ribbon-Lite

Multitube Gel 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

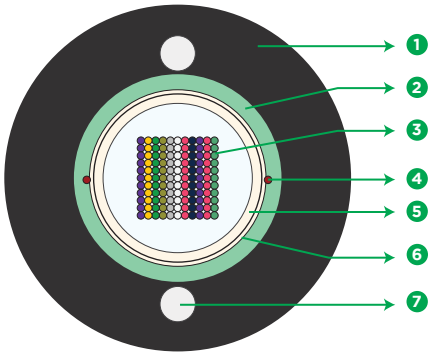
Drum Type	Fiber count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 432F	10000; 13,123; 20000 ± 5%	-0%, +5%	Max 5%, Customer Approval
	576F- 864F	10,000 ± 5%		

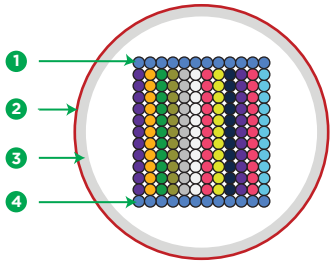
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Ribbon-Lite

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

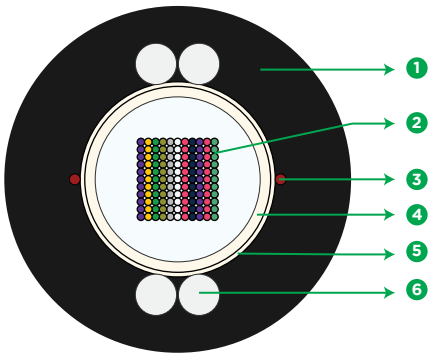
Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20000 ± 5% (For all fiber counts)	-0%, +5%	Max 5%, Customer Approval

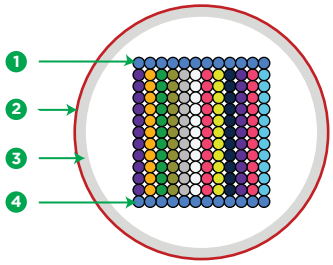
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

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.

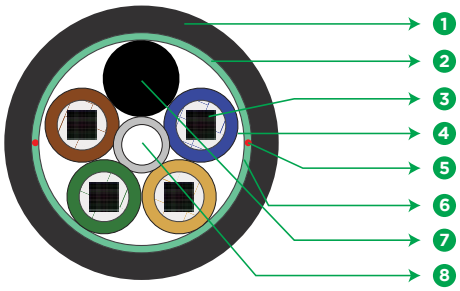
Packing and Lengths

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

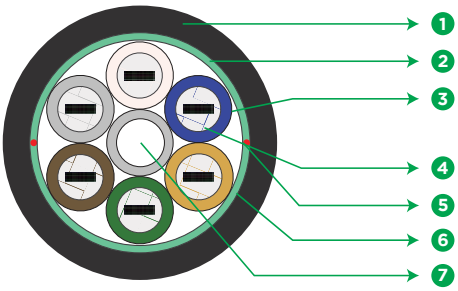
Product Specification

Ribbon-Lite

Multitube Gel Filled Armored Ribbon OFC
144F - 1152F | Bow Lite (E) - G.657.A2 Single Mode Fibre



5 Elements



6 Elements

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Precise fibre and ribbon geometries result in excellent mass fusion splicing yields
- Fibre ribbons are individually marked for easy identification
- Dry water-blocking technology for gel free core helps in quicker end preparation
- Easily removable rugged UV protected thermoplastic jacket
- Tensile and crush resistant

Product Details

STL RIBBON-LITE LITE Multitube Steel Tape Armored Cable combines robust performance for duct installations with the productivity of high-count mass fusion splicing. Twelve optical fibres are arranged into ribbon units by placing the fibres in a flat array of color-coded fibres bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel core 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, EIA/TIA-598C.

Printing Details

Printing: STERLITE SM FIBRE TYPE “FIBRE COUNT” OUTDOOR RIBBON ARMORED 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 BOW LITE E (ITU-T G.657.A2)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.22
PMD LDV (ps/sqrt.km)	≤ 0.1
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 (8 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
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
Tube Material	Thermoplastic Material
Central Strength Member	FRP (Fibre Reinforced Plastic)
FIllers	Thermoplastic Material
Water Blocking	Water blocking gel and water swellable tape
No of Ripcords Below ECCS Tape	2
Metallic Armoring	Corrugated ECCS Tape
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	Aqua

Cable Characteristics								
Product Code	**Fibre Count**	**No. of Ribbons**	**Fibres/ Ribbon**	**Ribbon/ Tube**	**Tube Color Sequence**	**No. of Tubes /Fillers**	**Cable Diameter mm (± 1.0)**	**Cable Weight (Kg/km) ± 10%**
O10144S203GAB10000	144	12	12	4	BL, OR, GR, F, F	3/0	19.5	310
O10288S206GAB10000	288	24	12	4	BL, OR, GR, BR, SL, WH	6/0	21	375
O10432S206GAB10000	432	36	12	6	BL, OR, GR, BR, SL, WH	6/0	23	435
O10720S206GAB100J1	720	60	12	10	BL, OR, GR, BR, SL, WH	6/0	25	530
O11152S208GAB100J1	1152	96	12	12	BL, OR, GR, BR, SL, WH, RD, BK	8/0	33	880

Where: BL =Blue, OR =Orange, GR=Green, BR=Brown, SL=Grey(Slate), WH=White, RD=Red, BK=Black, YL=Yellow, VI=Violet, PI=Pink, AQ=Aqua, NT=Natural, F=Filler

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	2700	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)	10 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	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	-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 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	4 ± 5%	± 5%	Max 5%, Customer Approval

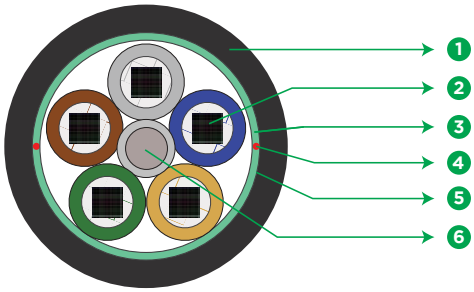
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Product Specification

Ribbon-Lite

Multitube Gel Filled Ribbon OFC
48F - 600F | OH Lite - G.652.D Single Mode Fibre



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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- Multitube design with ripcords for easy and quick mid span access
- Precise 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, lightweight, 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 fibres are arranged into ribbon units by placing the fibres in a flat array of color-coded fibres bonded together by a UV-curable acrylate matrix. RIBBON-LITE comes with gel core free technology; the buffer tubes contain water-blocking gel and are surrounded with double water-swellable tapes 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, ITU-T, RoHS, REACH, EIA/TIA-598C.

Printing Details

Printing: STERLITE SM FIBRE TYPE “FIBRE COUNT” OUTDOOR RIBBON 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	
Fibre Type	STL OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.22
PMD LDV (ps/sqrt.km)	≤ 0.1
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 (8 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
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
Tube Material	Thermoplastic Material
Central Strength Member	FRP (Fibre Reinforced Plastic)
FIllers	Natural Thermoplastic Material
Water Blocking	Water blocking gel and double water swellable tape
No of Ripcords Below ECCS 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	Aqua

Cable Characteristics								
Product Code	**Fibre Count**	**No. of Ribbons**	**Fibres/ Ribbon**	**Ribbon/ Tube**	**Tube Color Sequence**	**No. of Tubes /Fillers**	**Cable Diameter mm (± 1.0)**	**Cable Weight (Kg/km) ± 10%**
N10048S302GAP10000	48	4	12	2	BL, OR, F, F, F	2/3	17	205
N10096S304GAP10000	96	8	12	2	BL, OR, GR, BR, F	4/1	17	205
N10100S303GAP10000	100	9	12 & 8	2T - 12F X 3R 1T - 12F X 1R + 8FX2R	BL, OR, GR, F, F	3/2	17	205
N10192S303GAP10000	192	16	12	2T - 12F X 6R 1T - 12F X 4R	BL, OR, GR, F, F	3/2	19	225
N10200S303GAP10000	200	17	12 & 8	2T - 12F X 6R 1T - 12F X 4R + 8F X 1R	BL, OR, GR, F, F	3/2	19	225

Specifications

Cable Characteristics								
Product Code	Fibre Count	No. of Ribbons	Fibres/ Ribbon	Ribbon/ Tube	Tube Color Sequence	No. of Tubes /Fillers	Cable Diameter mm (± 1.0)	Cable Weight (Kg/km) ± 10%
N10300S304GAP10000	300	25	12	3T - 12F X 6R 1T - 12F X 7R	BL, OR, GR, BR, F	4/1	19	260
N10400S304GAP10000	400	34	12 & 8	3T - 12F X 9R 1T - 12F X 5R + 8F X 2R	BL, OR, GR, BR, F	4/1	22	340
N10600S304GAP10000	600	50	12	10	BL, OR, GR, BR, SL	5/0	22	350

Where: BL =Blue, OR =Orange, GR=Green, BR=Brown, SL=Grey(Slate), WH=White, RD=Red, BK=Black, YL=Yellow, VI=Violet, PI=Pink, AQ=Aqua, NT=Natural, F=Filler

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	2200	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)	10 D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	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	-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 fibre.

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

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

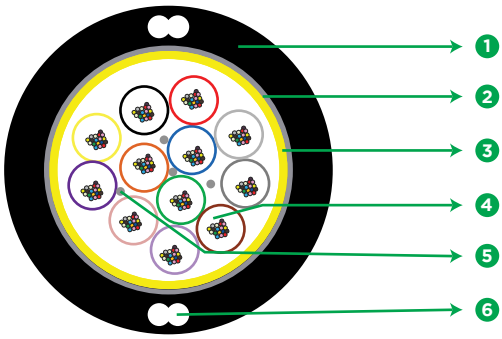
Yogalite

Optical Fibre Cables

Product Specification

Yoga-Lite

Gel Filled Single Sheath OFC
6F - 432F | Bow Lite (E) G.657.A2 Single Mode Fibre



1 HDPE OUTER SHEATH

2 WATER BLOCKING TAPE (BINDER IF REQUIRED)

3 ARAMID YARNS

4 MODULE WITH FIBRES

5 WATER SWELLABLE YARNS

6 EMBEDDED STENGTH 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
- Fibre micro-modules are kink resistant and easily removed without the need for tools
- Fast and easy midspan access

Product Details

YOGA LITE single jacket cable is based on micro-module technology to create an optimized design suitable for use in Duct scenarios. The micro module unit consists 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.

Cable Performance Standards

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

Printing Details

Printing: STERLITE SM G657A2 FIBRE COUNT M6/12 YOGALITE DUCT 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	6~432
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	6 / 12
Fibre Color Sequence	Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink
Peripheral Strength Members	High Strength Aramid Yarns
Outer Sheath Material	UV Proof Black Polyethylene
No of Ripcords Below Outer Sheath	2
Embedded Strength Member	FRP (Fibre Reinforced Plastic)

Cable Characteristics (6F/Module)

Product Code	Fibre Count	No. of Tubes	Tube Color Sequence	Cable Diameter (mm 3 5%)	Cable Weight (kg/km 3 10%)	Max. Tensile Strength (N)
H10006S201FGP10000	6	1	Red	6.0	30	620
H10012S202FGP10000	12	2	Red, Blue	7.0	40	840
H10036S206FGP10000	36	6	Red, Blue, Green, Yellow, Violet, White	8.5	58	1200
H10048S208FGP10000	48	8	Red, Blue, Green, Yellow, Violet, White, Orange, Gray	9.0	64	1300
H10072S212FGP10000	72	12	Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Black, Aqua, Pink,	10.0	74	1550
H10096S216FGP10000	96	16	Single Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink, Double Intermittent Ring Stripe : Red, Blue, Green, Yellow	11.0	90	1860
H10144S224FGP10000	144	24	Single Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink, Double Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink	13.0	115	2400

Specifications

Cable Characteristics (12F/Module)						
Product Code	Fibre Count	No. of Tubes	Tube Color Sequence	Cable Diameter (mm 3 5%)	Cable Weight (kg/km 3 10%)	Max. Tensile Strength (N)
H10012S201FGP10000	12	1	Red	6.5	35	740
H10024S202FGP10000	24	2	Red, Blue	7.5	42	880
H10048S204FGP10000	48	4	Red, Blue, Green, Yellow	8.5	57	1200
H10072S206FGP10000	72	6	Red, Blue, Green, Yellow, Violet, White	9.5	67	1400
H10096S208FGP10000	96	8	Red, Blue, Green, Yellow, Violet, White, Orange, Gray	10.5	82	1680
H10144S212FGP10000	144	12	Single Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Black, Aqua, Pink,	11.0	96	2000
H10288S224FGP10000	288	24	Single Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink, Double Intermittent Ring Stripe : Red, Blue, Green, Yellow	13.5	128	2500
H10432S236FGP10000	432	36+1#	Red Binder : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink, Blue Binder : Single Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink, Green Binder : Double Intermittent Ring Stripe : Red, Blue, Green, Yellow, Violet, White, Orange, Gray, Brown, Light Green, Aqua, Pink	15.6	185	3335

Note: (a) Distance between adjacent ring shall be 2mm to 3 mm
(b) Distance Between Sequence Ring shall be 40 mm to 60 mm
(c) Width or depth of each Ring shall be 2mm to 3 mm
(d) # An extra module shall be provide in fibre count 432 & above for any contingency in any of module, (module colour shall be Black). This is optional.

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	As per above table	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	15 D	IEC-60794-1-21-E11
Kink Radius	10 D	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 +45° 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 and ≤ 0.3 dB/km for Multimode fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Tolerance	Short Lengths
Wooden Drums	2 /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

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

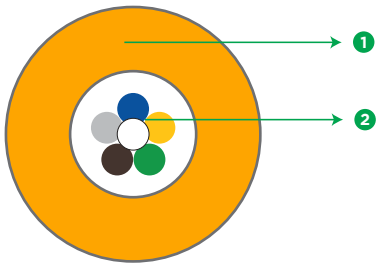
Outdoor FTTx

Optical Fibre Cables

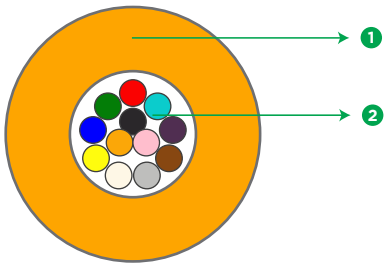
Product Specification

Atlas-Lite

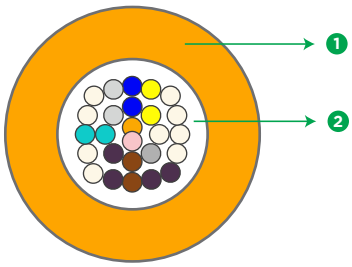
Unitube Gel Filled OFC
2F - 24F | G.652.A1 Single Mode Fibre



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

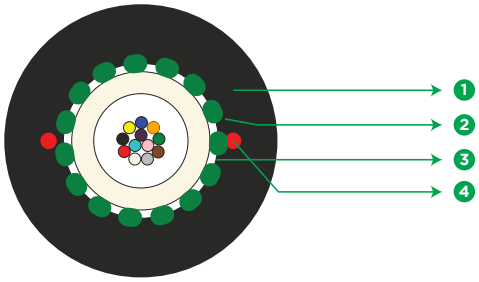
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

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.

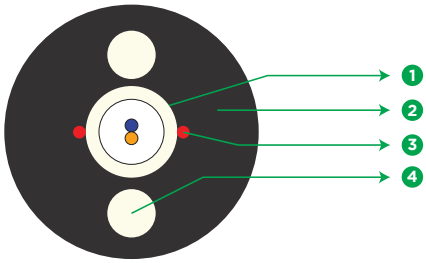
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Product Specification

Drop-Lite

Unitube Gel Filled OFC with FRP
2F - 24F | OH Lite - G.652.D Single Mode Fibre



Cross Section 2F

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- The cables have embedded strength members for anti-buckling property
- 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 and install

Product Details

STL DROP-LITE Unitube Single Jacket Embedded strength member Cables are multipurpose cables designed for diverse needs for CATV applications. This is a central tube cable using optical fibres presented in tube filled with a thixotropicgel, and is enclosed in a thermoplastic sheath.The cables have embedded strength members for anti-buckling property.

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 FIBRE TYPE FIBRE COUNT F UNITUBE 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	
Fibre Count	2-24
Fibre Type	STL OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	2 / 4 / 6 / 12 / 24
No. of Tubes	1
Tube Material	White / Natural Thermoplastic Material
Embeddedl Strength Members	FIbre Reinforced Plastic (FRP)
No of Ripcords Below Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene

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

[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

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

Cable Designs

Product Code	Fibre Count	No. of Fibres/Tube	Cable Diameter mm (± 0.5)	Cable Weight (Kg/km) ± 10%
F30002S301GAP10000	2	2	6.0	25
F30004S301GAP10000	4	4	6.0	25
F30006S301GAP10000	6	6	6.0	25
F30008S301GAP10000	8	8	6.0	25
F30012S301GAP10000	12	12	6.0	25
F30024S301GAP10000	24	24	7.0	40

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	300	IEC-60794-1-21-E1
Crush Resistance (N/cm)	1000	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	EC-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 shall be ≤ 0.05 dB/ km for Single Mode Fibre

Packing and Lengths

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

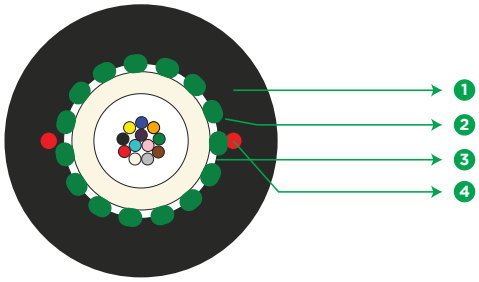
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

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

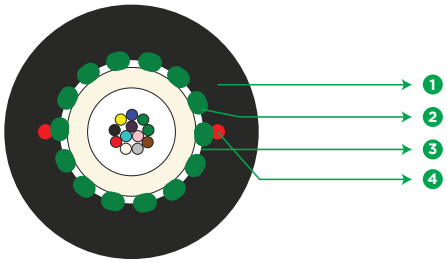
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Product Specification

Drop-Lite

Unitube Gel Filled OFC with GRY
2F - 24F | OH Lite - G.652.D Single Mode Fibre



Cross Section 12F

1 OUTER 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 directly buried in a 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
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install

Product Details

STL DROP-LITE Unitube 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 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 therequired tensile strength and enhanced rodent protection. An outer jacket of thermoplastic material is extruded over the cable core as a mechanical and environmental protection.

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 FIBRE TYPE FIBRE COUNT F UNITUBE 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	
Fibre Count	2-24
Fibre Type	STL OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	2 / 4 / 6 / 12 / 24
No. of Tubes	1
Tube Material	White / Natural Thermoplastic Material
Peripheral Strength Members	Glass Roving Yarns
No of Ripcords Below Sheath	2
Outer Sheath Material	UV Stabilized Black Polyethylene

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

[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

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

Cable Designs				
Product Code	**Fibre Count**	**No. of Fibres/Tube**	**Cable Diameter mm (± 0.5)**	**Cable Weight (Kg/km) ± 10%**
F20002S301GAP10000	2	2	7.4	50
F20004S301GAP10000	4	4	7.4	50
F20006S301GAP10000	6	6	7.4	50
F20008S301GAP10000	8	8	7.4	50
F20012S301GAP10000	12	12	7.4	50
F20024S301GAP10000	24	24	7.8	52

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	1500	IEC-60794-1-21-E1
Crush Resistance (N/cm)	1000	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	EC-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 shall be ≤ 0.05 dB/ km for Single Mode Fibre.

Packing and Lengths

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

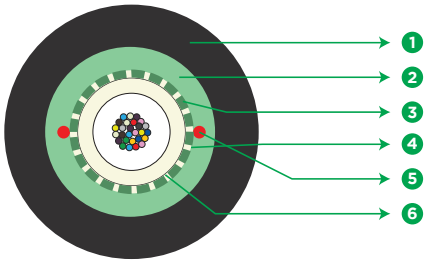
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Product Specification

Drop-Lite

Unitube Gel Filled Armored OFC
2F - 24F | OH Lite - G.652.D Single Mode Fibre



Cross Section 24F

1 OUTER JACKET
2 CORRUGATED STEEL TAPES
3 GLASS ROVING YARNS
4 WATER BLOCKING TAPES
5 RIPCORD(S)
6 GEL FILLED TUBES

** 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
- 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 and install

Product Details

STL DROP-LITE Unitube Single Jacket Steel Tape Armored Cables is a central tube cable using optical fibres presented in loose tube and surrounded by Steel Tape armor. To protect the optical fibres from water ingress, the tube is filled with a thixotropic gel, and is enclosed in a thermoplastic sheath. These cables can be used for outdoor applications in ducts or aerial drop for access and distribution for campus/ between and within buildings.

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 FIBRE TYPE FIBRE COUNT F UNITUBE 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	
Fibre Count	2-24
Fibre Type	STL OH LITE (ITU-T G.652.D)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35; 1550 nm : 0.23
PMD LDV (ps/sqrt.km)	≤ 0.1
Fibres per Tube	2 / 4 / 6 / 12 / 24
No. of Tubes	1
Tube Material	White / Natural Thermoplastic Material
Peripheral Strength Members	Glass Roving Yarns
No of Ripcords Below Sheath	2
Metallic Armoring	Corrugated Steel Tape
Outer Sheath Material	UV Stabilized Black Polyethylene

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

[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

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

Cable Designs

Product Code	Fibre Count	No. of Fibres/Tube	Cable Diameter mm (± 0.5)	Cable Weight (Kg/km) ± 10%
F20002S301GAB10000	2	2	9.6	96
F20004S301GAB10000	4	4	9.6	96
F20006S301GAB10000	6	6	9.6	96
F20008S301GAB10000	8	8	9.6	96
F20012S301GAB10000	12	12	9.6	96
F20024S301GAB10000	24	24	9.6	96

Specifications

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard Method**
Tensile Strength (N)	1500	IEC-60794-1-21-E1
Crush Resistance (N/cm)	1000	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	EC-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 ≤ 0.05 dB/ km for Single Mode Fibre

Packing and Lengths

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

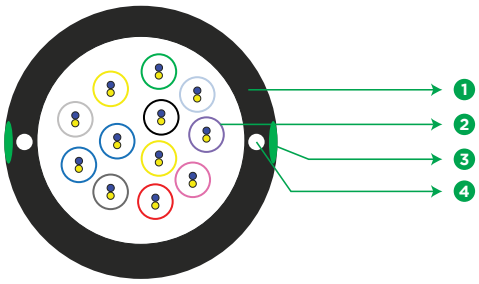
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

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

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

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

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

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

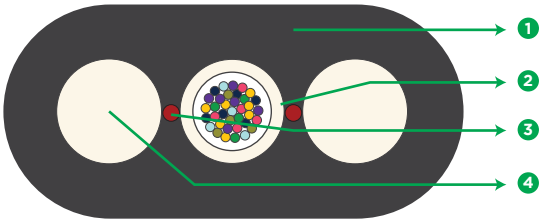
Product Specification

Drop-Lite

Flat Single Sheath OFC

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

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



** Typical Construction Diagram - Not to Scale*

Features & Benefits

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

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

Physical Characteristics	
Fiber Count	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

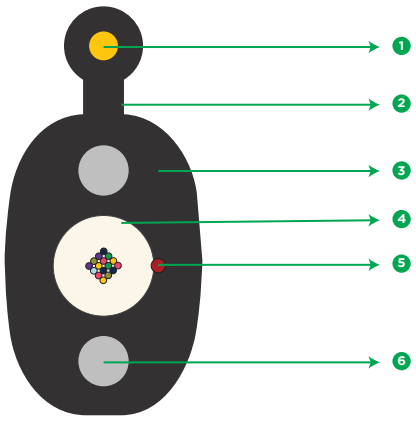
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

Drop-Lite

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

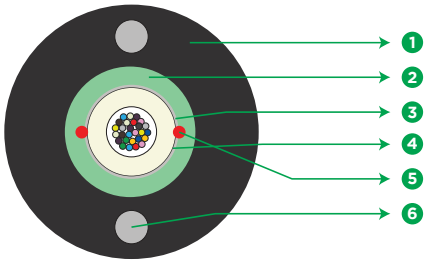
Drum Type	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20000 ± 5% (For all Fiber Counts)	-0% + 5%	Max 5%, Customer Approval

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

Product Specification

Drop-Lite

Unitube Gel 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

Indoor FTTx

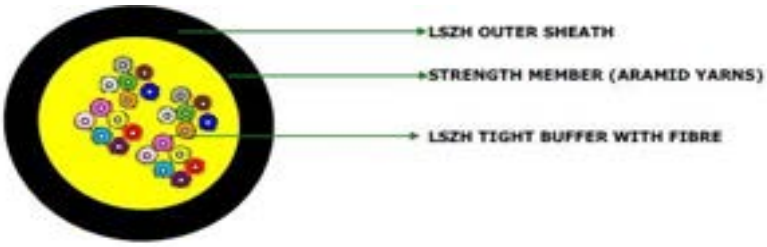
Optical Fibre Cables

Product Name : XXF Tight Buffer LSZH Sheath Distribution Optical Fibre Cable
Product Code : 00/XX-F-D-S3-1-TB/RR
Revision : 1.0 **Date** : 29-Nov-2021

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

Construction Diagram



* 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

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

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.

Cable Performance Standards

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

Packing and Lengths

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

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.

Revision History

Revision No.	Date	Description
1.0	29-Nov-2021	Initial Issue

Prepared By : Ankit

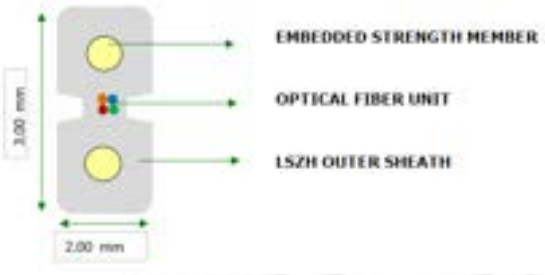
Specification sheet

Product Name : Easy-Strip FO Indoor Flat Drop cable
Local description : 1~4FO Indoor Flat drop cable -FRP

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.

Construction Diagram



* 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

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
Outer Jacket Material	UV Protected White, LSZH

Fibres and Tubes 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 (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

Mechanical & Environmental Characteristics

Cable Characteristics	Testing Standard	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	±180º
Min. Bend Radius	IEC-60794-1-21-E11	15 D (15 x 3) 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		-20° C to +70° C

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

Specification sheet

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.

Packing and Lengths

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

Printing Details

Printing : 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.

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	B	-	-	-	-		-	-	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 **0001** to **0004**

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

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.*

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

4 Special Requirement

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 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			

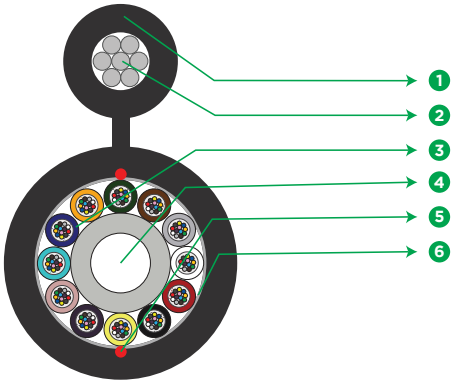
Outdoor Aerial

Optical Fibre Cables

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.

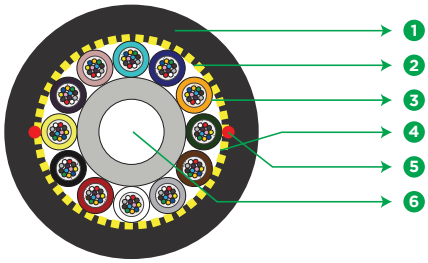
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

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

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

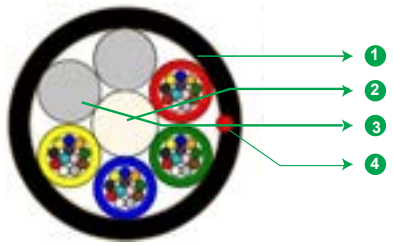
The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Outdoor Underground

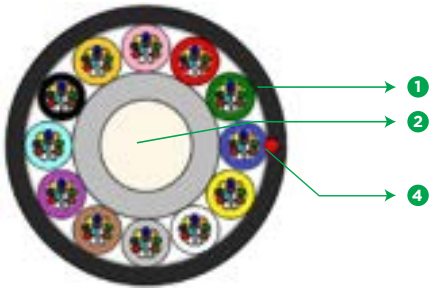
Optical Fibre Cables

Micro-Lite

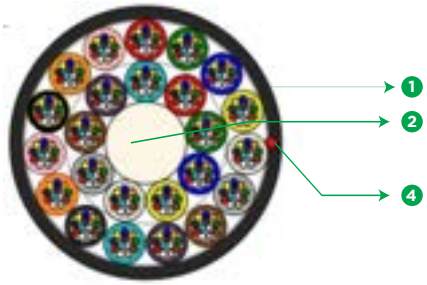
Multitube Gel Filled OFC 12F - 576F
A-DQ(ZN)2Y nn x ff E9/125 (nn = 01 to 24; ff = 12 or 24)



Cross Section 48F



Cross Section 144F



Cross Section 288F

1 OUTER JACKET 2 STRENGTH MEMBER 3 FILLING ELEMENT 4 RIPCORD(S)

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- As compared to conventional cable, Micro Cable diameter is smalller 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
- Class Fca rated according to CPR

Product Details

STL Micro-LITE 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-LITE-OFC CE-MARKING-Fca 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; 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]

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

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).

[2]Other fibres and tubes colour sequences are available on demand, prior approval.

Cable Designs with G.652 D 250µm Fibres[4]

Product Code	Fibre count	Fibre Type	Tube/ Fillers	Duct ID mm	Cable Diameter (mm) ±0.3 mm	Cable Weight (kg/km) ±10%	Max. Tensile Strength (N)
C10012S301GDP10000	12	G.652 D	1/5	8	5.7	28	500
C10024S302GDP10000	24	G.652 D	2/4	8	5.7	28	500
C10036S303GDP10000	36	G.652 D	3/3	8	5.7	28	500
C10048S304GDP10000	48	G.652 D	4/2	8	5.7	28	500
C10072S306GDP10000	72	G.652 D	6/0	8	5.7	28	500
C10096S308GDP10000	96	G.652 D	8/0	8	6.0	35	500
C10144S312GDP10000	144	G.652 D	12/0	12	8.0	50	1000
C10144S306GDP10000	144	G.652 D	6/0	10	6.8	40	500
C10192S308GDP10000	192	G.652 D	8/0	10	7.8	56	1000
C10288S324GDP10000	288	G.652 D	(9+15)/0	18	9.4	75	1500
C10432S318GDP10000	432	G.652 D	(6+12)/0	18	12.5	118	1000
C10576S324GDP10000	576	G.652 D	(9+15)/0	18	13.4	130	1000

Cable Designs with G.657 A1/G.652 D 250µm Fibres[4]							
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)
C10012SN01GDP10000	12	G.657 A1/G.652 D	1/5	8	5.7	28	500
C10024SN02GDP10000	24	G.657 A1/G.652 D	2/4	8	5.7	28	500
C10036SN03GDP10000	36	G.657 A1/G.652 D	3/3	8	5.7	28	500
C10048SN04GDP10000	48	G.657 A1/G.652 D	4/2	8	5.7	28	500
C10072SN06GDP10000	72	G.657 A1/G.652 D	6/0	8	5.7	28	500
C10096SN08GDP10000	96	G.657 A1/G.652 D	8/0	8	6.0	35	500
C10144SN12GDP10000	144	G.657 A1/G.652 D	12/0	12	8.0	50	1000
C10144SN06GDP10000	144	G.657 A1/G.652 D	6/0	10	6.8	40	500
C10192SN08GDP10000	192	G.657 A1/G.652 D	8/0	10	7.8	56	1000
C10288SN24GDP10000	288	G.657 A1/G.652 D	(9+15)/0	18	9.4	75	1500
C10432SN18GDP10000	432	G.657 A1/G.652 D	(6+12)/0	18	12.5	118	1000
C10576SN24GDP10000	576	G.657 A1/G.652 D	(9+15)/0	18	13.4	130	1000

Cable Designs with G.657 A1/G.652 D 200µm Fibres[4]							
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)
C20012N101GDP10000	12	G.657 A1/G.652 D 200	1/5	8	4.6	20	500
C20024N102GDP10000	24	G.657 A1/G.652 D 200	2/4	8	4.6	20	500
C20036N103GDP10000	36	G.657 A1/G.652 D 200	3/3	8	4.6	20	500
C20048N104GDP10000	48	G.657 A1/G.652 D 200	4/2	8	4.6	20	500
C20072N106GDP10000	72	G.657 A1/G.652 D 200	6/0	8	4.6	20	500
C20096N108GDP10000	96	G.657 A1/G.652 D 200	8/0	8	5.9	34	500
C20144N112GDP10000	144	G.657 A1/G.652 D 200	12/0	10	7.6	45	500
C20144N106GDP10000	144	G.657 A1/G.652 D 200	6/0	8	6.1	34	500
C20192N108GDP10000	192	G.657 A1/G.652 D 200	8/0	10	7.2	51	500
C20216N109GDP10000	216	G.657 A1/G.652 D 200	9/0	10	7.5	54	500
C20288N124GDP10000	288	G.657 A1/G.652 D 200	(9+15)/0	10	7.9	70	800
C20432N118GDP10000	432	G.657 A1/G.652 D 200	(6+12)/0	12	8.8	70	1000
C20576N124GDP10000	576	G.657 A1/G.652 D 200	(9+15)/0	14	10.3	92	1000

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

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 ± 5%	±5%	Max 5%, upon customer approval

Ordering Information

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

Product type		Fibre count (0012 – 0576)				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						
-	-	-	-	-	-	-	-	-	-	G	-	P	1	0	0	0	0

1. Product type

Code	Cable Design
C1	Micro-Lite cable with 250µm fibres
C2	Micro-Lite cable with 200µm fibres

2. Fibre count by indicating the corresponding number from 0012 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)
S	3	G.652 D	OH-Lite 250[5]	9.1 ± 0.4
S	N	G.657.A1/G.652 D	Nova 250[5]	9.2 ± 0.4
C	1	G.657 A2/G.652 D	Stellar 250[5]	9.1 ± 0.4
H	1	G657.A1	HD A1 250[5]	8.6 ± 0.4
S	2	G.657 A2	HD A2 250[5]	8.6 ± 0.4
N	1	G.657 A1/G.652 D 200µm	Nova 200[6]	9.2 ± 0.4
C	2	G.657 A2/G.652 D 200µm	Stellar 200[6]	9.1 ± 0.4
S	9	G.657 A2 200µm	HD A2 200[6]	8.6 ± 0.4

Note: [5]Only for Product type "C1" cables.
[5]Only for Product type "C2" cables.

4. Number of active tubes : 01 to 24

5. Fibres and tubes colour sequence available options[7]

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: [7]Other colour codes are available on demand prior approval

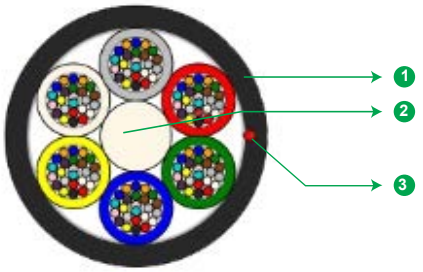
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech or www.stl.tech/germany

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

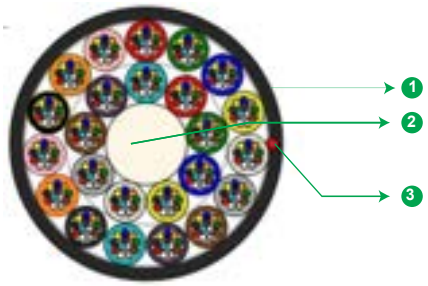
Micro-Lite High Density

Multitube Gel Filled OFC 144F - 576F

A-DQ(ZN)2Y nn x ff E9/125/200 (nn = 06 to 24; ff = 12 or 24)



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 smalller 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
- Class Fca rated according to CPR

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 a ddition 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 CE MARKING Fca 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]

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

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).

[2]Other fibres and tubes colour sequences are available on demand, prior approval.

Cable Designs with G.657 A1/G.652 D 200µm Fibres[4]

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)
C30144N206GDP10000	144	G.657 A1/G.652 D 200	6/0	8	5.5	30	500
C30192N208GDP10000	192	G.657 A1/G.652 D 200	8/0	8	6.3	42	500
C30216N209GDP10000	216	G.657 A1/G.652 D 200	9/0	10	6.8	50	1000
C30288N224GDP10000	288	G.657 A1/G.652 D 200	(9+15)/0	10	7.4	55	1000
C30432N218GDP10000	432	G.657 A1/G.652 D 200	(6+12)/0	12	8.2	65	800
C30576N224GDP10000	576	G.657 A1/G.652 D 200	(9+15)/0	14	9.5	84	1000

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

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 ± 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.

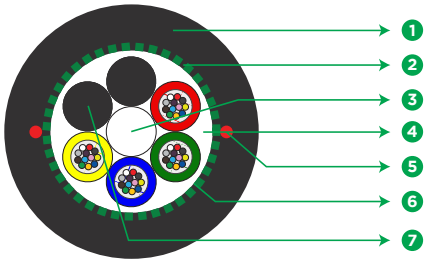
You can also visit our website at www.stl.tech or www.stl.tech/germany

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

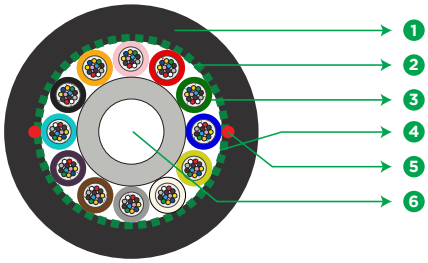
Product Specification

Duct-Lite

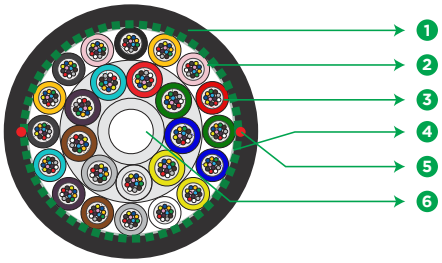
Multitube Gel Filled OFC with Glass Roving Yarn
12F - 288F



Cross Section 48F



Cross Section 144F



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.

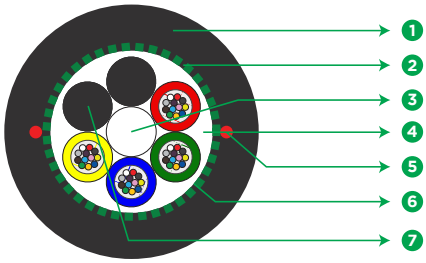
You can also visit our website at www.stl.tech

The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

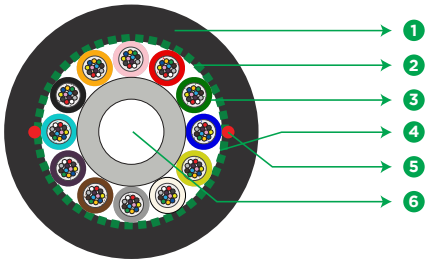
Product Specification

Duct-Lite

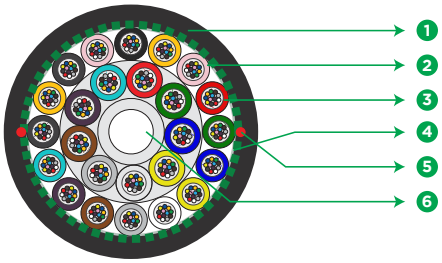
Multitube Gel Filled LSZH OFC with Glass Roving Yarn
12F - 288F



Cross Section 48F



Cross Section 144F



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

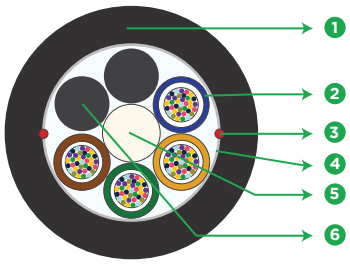
The information given herein, including drawings, illustrations and schematics are intended for illustration purposes only and is believed to be reliable. However, STL makes no warranties to its accuracy or completeness and disclaims any liability in connection with its use. STL obligations shall be only set forth in STL standard terms and conditions of the sale and in no case, STL be liable for any incidental, indirect or consequential damages arising out of sale, resale, use or misuse of the product. Users of STL products should make their own evaluation to determine the suitability of such each product for the specific application.

Product Specification

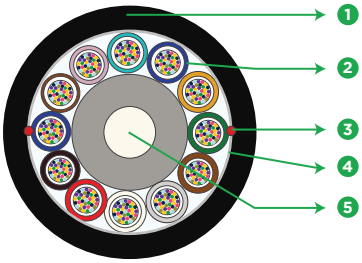
Duct-Lite

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

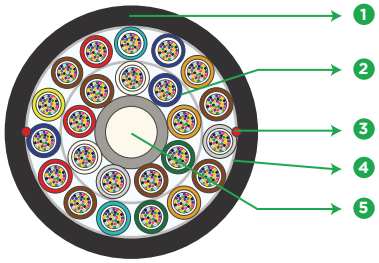
1. OUTER JACKET
2. GEL FREE LOOSE TUBE
3. RIPCORD(S)
4. WATER BLOCKING TAPE
5. STRENGTH MEMBER
6. FILLER



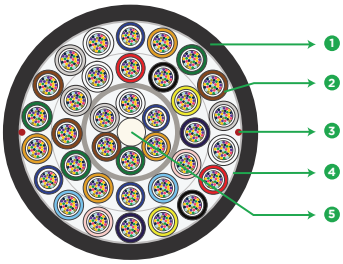
48F



144F



288F



432F

** Typical Construction Diagram - Not to Scale*

Features & Benefits

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

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

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

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

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
D10004SN01FAP10000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
D10006SN01FAP10000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
D10008SN01FAP10000	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	74 (0.049)
D10012SN01FAP10000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	78 (0.052)
D10024SN02FAP10000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	10.6 (0.417)	78 (0.052)
D10036SN03FAP10000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	10.6 (0.417)	74 (0.050)
D10048SN04FAP10000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	10.6 (0.417)	74 (0.050)
D10060SN05FAP10000	60	5	Blue, Orange, Green, Brown, Slate, Filler	1	10.6 (0.417)	74 (0.050)
D10072SN06FAP10000	72	6	Blue, Orange, Green, Brown, Slate, White	0	10.6 (0.417)	74 (0.050)
D10084SN07FAP10000	84	7	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	12.5 (0.484)	88 (0.059)
D10096SN08FAP10000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	12.5 (0.484)	88 (0.059)
D10144SN12FAP10000	144	12	Blue, Orange, Green, Brown, Slate, White Red, Black, Yellow, Violet, Rose, Aqua	0	15.7 (0.622)	145 (0.0981)
D10192SN16FAP10000	192	16	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Filler, Filler	2	15.7 (0.622)	140 (0.094)
D10216SN18FAP10000	216	18	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	15.7 (0.622)	135 (0.091)
D10288SN24FAP10000	288	24	**1st Layer -** Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer -** Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	18.2 (0.716)	172 (0.115)
D10432SN36FAP10000	432	36	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White# **3rd Layer -** Red#, Black#, Yellow#, Violet#, Rose#, Aqua#, Blue##, Orange##, Green##, Brown##, Slate##, White##, Red##, Black##, Yellow##, Violet##, Rose##, Aqua##	0	22.4 (0.881)	240 (0.161)

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

Specifications

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

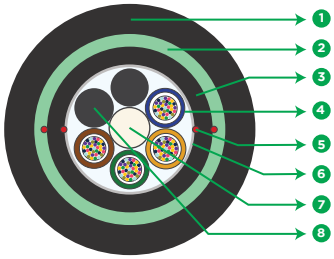
Note : All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber and </= 0.3 dB/km for Multimode Fiber.

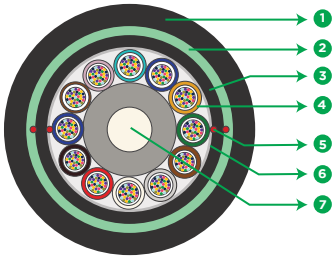
Packing and Lengths

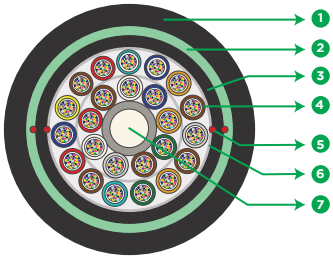
Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

Armor-Lite

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







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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

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

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

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

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

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
B10004SN01FAB20000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	196 (0.131)
B10006SN01FAB20000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	196 (0.131)
B10012SN01FAB20000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	15.1 (0.59)	198 (0.133)
B10024SN02FAB20000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	15.1 (0.59)	198 (0.133)
B10036SN03FAB20000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	15.1 (0.59)	198 (0.133)
B10048SN04FAB20000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	15.1 (0.59)	198 (0.133)
B10072SN06FAB20000	72	6	Blue, Orange, Green, Brown, Slate, White	0	15.1 (0.59)	198 (0.133)
B10096SN08FAB20000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	16.8 (0.66)	222 (0.149)
B10144SN12FAB20000	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	20.2 (0.79)	312 (0.209)

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (± 1.0 mm)**	**Cable Weight Kg/Km (lbs./ft.) (± 10%)**
B10216SN18FAB20000	216	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, **2nd Layer** - Red, Black, Yellow Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	20.2 (0.79)	306 (0.205)
B10288SN24FAB20000	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** -Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	22.8 (0.89)	368 (0.247)

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

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

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

Packing and Lengths

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

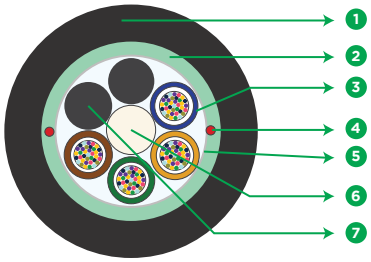
For additional information please contact your sales representative.
You can also visit our website at www.stl.tech

Product Specification

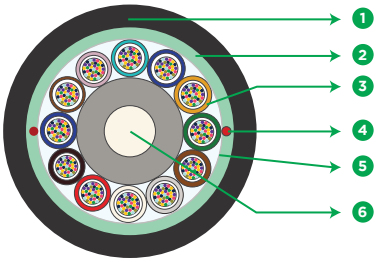
Armor-Lite

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

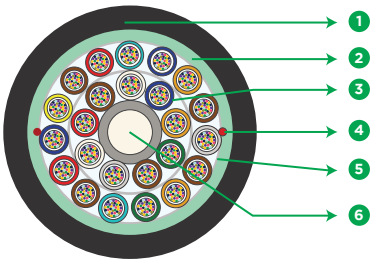
1. OUTER JACKET
2. CORRUGATED STEEL TAPE
3. GEL FREE LOOSE TUBE
4. RIPCORD(S)
5. WATER BLOCKING TAPE
6. STRENGTH MEMBER
7. FILLER



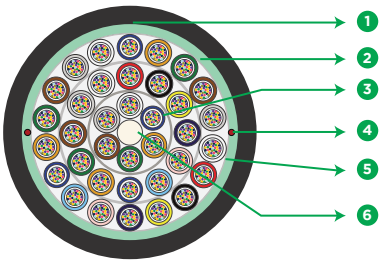
48F



144F



288F



432F

** Typical Construction Diagram - Not to Scale*

Features & Benefits

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

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

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

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

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
B10004SN01FABU0000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	145 (0.095)
B10006SN01FABU0000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	145 (0.095)
B10008SN01FABU0000	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	148 (0.097)
B10012SN01FABU0000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	148 (0.099)
B10024SN02FABU0000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	12.6 (0.496)	146 (0.045)
B10036SN03FABU0000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	12.6 (0.496)	146 (0.045)
B10048SN04FABU0000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	12.6 (0.496)	140 (0.094)
B10060SN05FABU0000	60	5	Blue, Orange, Green, Brown, Slate, Filler	1	12.6 (0.496)	140 (0.094)
B10072SN06FABU0000	72	6	Blue, Orange, Green, Brown, Slate, White	0	12.6 (0.496)	136 (0.092)
B10084SN07FABU0000	84	7	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	14.3 (0.562)	160 (0.107)
B10096SN08FABU0000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	14.3 (0.562)	160 (0.107)
B10144SN12FABU0000	144	12	Blue, Orange, Green, Brown, Slate, White Red, Black, Yellow, Violet, Rose, Aqua	0	17.8 (0.700)	265 (0.178)
B10192SN16FABU0000	192	16	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Filler, Filler	2	17.8 (0.700)	234 (0.157)
B10216SN18FABU0000	216	18	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#	0	17.8 (0.700)	221 (0.148)
B10288SN24FABU0000	288	24	**1st Layer -** Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer -** Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#	0	20.2 (0.795)	275 (0.184)
B10432SN36FABU0000	432	36	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White# **3rd Layer -** Red#, Black#, Yellow#, Violet#, Rose #, Aqua#, Blue##, Orange##, Green##, Brown##, Slate##, White##, Red##, Black##, Yellow## Violet##, Rose##, Aqua##	0	23.4 (0.921)	350 (0.228)

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

Specifications

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

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

Packing and Lengths

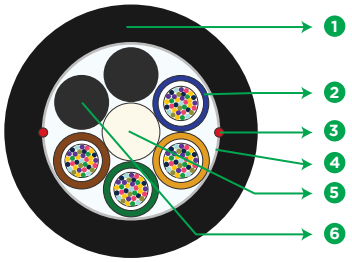
Drum Type	Length Multiple (in feet)	Tolerance	Short Lengths
Wooden Drums	10000; 13,123; 20,000 ± 5% (For all Fiber counts)	-0%, +5%	Max 5%, Customer Approval

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

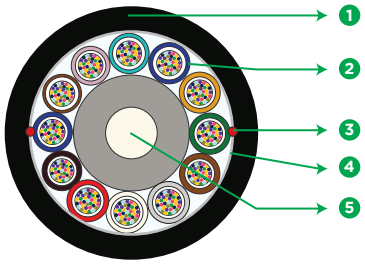
Product Specification

Duct-Lite

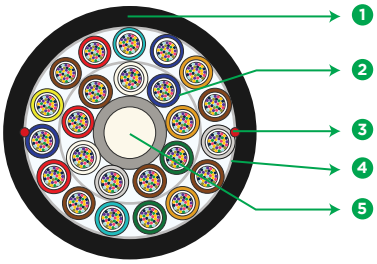
Multitube Gel Filled Single Sheath OFC
4F - 288F | Nova - G.657.A1 Single Mode Fiber



Cross Section 48F



Cross Section 144F



Cross Section 288F

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

** 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 dry core helps in quicker end preparation
- Flexible, light weight, easy to handle & install
- UV protected

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

Physical Characteristics	
Fiber 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
Loose tube Material	PBT
Loose tube Size	2.4 mm (Typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
No of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Polyethylene

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

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
D10004SN01GAP10000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	80 (0.049)
D10006SN01GAP10000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	80 (0.049)
D10008SN01GAP10000	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	80 (0.049)
D10012SN01GAP10000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	10.6 (0.417)	80 (0.049)
D10024SN02GAP10000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	10.6(0.417)	80 (0.049)
D10036SN03GAP10000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	10.6 (0.417)	82 (0.055)
D10048SN04GAP10000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	10.6 (0.417)	84 (0.056)
D10060SN05GAP10000	60	5	Blue, Orange, Green, Brown, Slate, Filler	1	10.6 (0.417)	84 (0.056)
D10072SN06GAP10000	72	6	Blue, Orange, Green, Brown, Slate, White	0	10.6 (0.417)	85 (0.057)
D10084SN07GAP10000	84	7	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	12.5 (0.484)	107 (0.071)
D10096SN08GAP10000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	12.5 (0.484)	108 (0.072)
D10144SN12GAP10000	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	15.7 (0.622)	174 (0.116)

Specifications

Cable Design with G.652.D Fiber						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (inch) (±5%)**	**Cable Weight Kg/Km (lbs./ft.) (±10%)**
D10192SN16GAP10000	192	16	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Filler#, Filler#, Filler, Filler	2	15.7 (0.622)	182 (0.122)
D10216SN18GAP10000	216	18	**1st Layer** - Blue, Orange, Green, Brown, Slate, White **2nd Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Violet, Rose, Filler, Filler	0	15.7 (0.622)	184 (0.123)
D10288SN24GAP10000	288	24	**1st Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer** - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#	0	18.2 (0.716)	228 (0.153)

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

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term - 2700 (606.9) | Long Term – 900 (202.3)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	220 (125.6)	ICEA 640|FOTP-41
Impact Strength (Nm) (lbf.in)	5 (44.2)	ICEA 640|FOTP-25
Torsion	±180°	ICEA 640|FOTP-85
Min. Bend Radius (During Installation)	20 D	ICEA 640|FOTP-88
Min. Bend Radius (After Installation)	15 D	ICEA 640|FOTP-88
Water Penetration Test	1m waterhead, 3m samples, 24 h	ICEA 640|FOTP-82
Drip Test	30 cm, 70°C, 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.
Change in attenuation after and before testing shall be </= 0.05 dB/km for Single Mode Fiber.

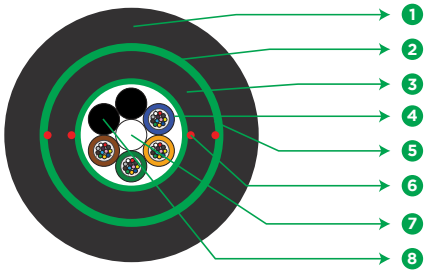
Packing and Lengths

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

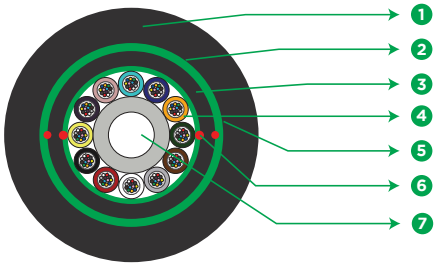
Product Specification

Armor-Lite

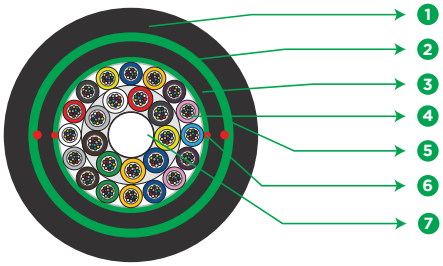
Multitube Gel Free Double Jacket Double Tape Armored OFC 6F - 288F | Nova - G.657.A1 Single Mode Fiber



Cross Section 48f



Cross Section 144f



Cross Section 288f

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

- PE outer jacket & Steel tape armor provide rodent protection along with improved crush and impact protection
- The Steel tape enables post installation cable locating
- Double armor allows direct buried of the cable
- 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 ARMOR-LITE Gel Free Multitube Double Jacket Double Steel Tape Armored Cables are suitable for direct burial as well as for duct applications. ARMOR-LITE comes with gel free technology, the buffer tubes contain water swellable yarns and the cable core is surrounded with water-swellable tape to prevent water ingress in the cable. The buffer tubes are stranded around the central strength member using reverse oscillation stranding method forming the cable core. A Corrugated Steel Tape armor surrounds the cable core with thermoplastic jacket placed over the armor layer twice making this double armored double sheathed cable robust and installation friendly.

Cable Performance Standards

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

Printing Details

Printing: STL SM FIBER TYPE FIBER COUNT F DOUBLE ARMORED OFC LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE "FEET OR 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 Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Fiber per Tube	12
Tube Material	Polypropylene (PP)
Loose tube Size	2.4 mm (Typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Filler	Thermoplastic material
Core Wrapping	Binder and water swellable tape
No of Ripcords Below Tape	2
Inner Metallic Armoring	Corrugated Steel Tape
Inner Sheath Material	Black Polyethylene
Outer Metallic Armoring	Corrugated Steel 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 Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (± 5%)**	**Cable Weight Kg/km(lbs./ft.) ± 10%**
B10006SN01FAB30000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	17.8 (0.700)	278 (0.186)
B10012SN01FAB30000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	17.8 (0.700)	284 (0.190)
B10024SN02FAB30000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	17.8 (0.700)	284 (0.190)
B10036SN03FAB30000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	17.8 (0.700)	284 (0.190)
B10048SN04FAB30000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	17.8 (0.700)	286 (0.192)
B10072SN06FAB30000	72	6	Blue, Orange, Green, Brown, Slate, White	0	17.8 (0.700)	286 (0.192)
B10096SN08FAB30000	96	8	Blue, Orange, Green, Brown, Slate, White	0	19.2 (0.755)	318 (0.213)

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (± 5%)**	**Cable Weight Kg/km(lbs./ft.) ± 10%**
B10144SN12FAB30000	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua	0	22.8 (0.897)	428 (0.287)
B10288SN24FAB30000	288	24	**1st Layer-** Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow **2nd Layer-** Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate#, White#, Red#, Black#, Yellow#, Violet#, Rose#, Aqua#.	0	25.4 (1.00)	484 (0.325)

Mechanical & Environmental Characteristics		
Cable Characteristics	**Cable Performance**	**Testing Standard**
Tensile Strength (N) (lbf)	Short Term – 2700 (606.9) Long Term – 900 (202.3)	ICEA 640|FOTP-33
Crush Resistance (N/cm) (lbf/in)	400 (228.4)	ICEA 640|FOTP-41
Impact Strength (Nm)(lbf.in)	As per GR-20 compliance	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	
Operation	-40° C to +70° C	

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

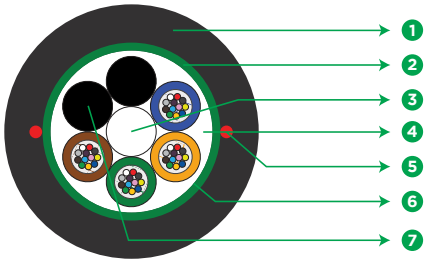
Packing and Lengths

Drum Type	Fiber Count	Length Multiple (in feet)	Order Tolerance	Short Lengths
Wooden Drums	Upto 144F 288F	13,123; 20000 ± 5% 13123 ± 5%	-0%, ±5%	Max 5%, Customer Approval

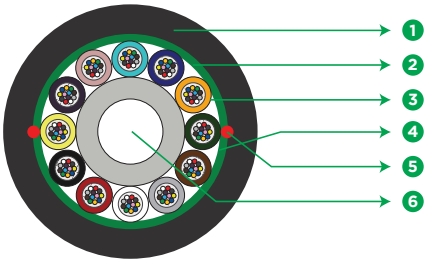
Product Specification

Armor-Lite

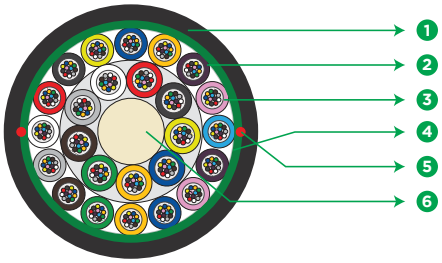
Multitube Gel Filled Single Jacket Armored OFC
4F - 288F | Nova - G.657.A1 Single Mode Fiber



Cross Section 48f



Cross Section 144f



Cross Section 288f

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

** Typical Construction Diagram - Not to Scale*

Features & Benefits

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

Product Details

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

Cable Performance Standards

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

Printing Details

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

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

Specifications

Physical Characteristics	
Fiber Type	STL NOVA (ITU-T G.657A1)
Maximum Cabled Attenuation (dB/km)	1310nm : 0.35 & 1550nm : 0.25
PMD LDV (ps/sqrt.km)	</= 0.1
Loose tube Material	PBT
Loose tube Size	2.4 mm (Typical)
Central Strength Member	FRP (Fiber Reinforced Plastic)
Core Wrapping	Binder and water swellable tape
Metallic Armoring	Corrugated Steel Tape (Unbonded with Sheath)
No of Ripcords Below Outer Sheath	2
Outer Sheath Material	UV Proof Black Medium density Polyethylene, MDPE

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 (± 5%)**	**Cable Weight Kg/km(lbs./ft.) ± 10%**
B10004SN01GAB10000	4	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	146 (0.098)
B10006SN01GAB10000	6	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	146 (0.098)
B10008SN01GAB10000	8	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	146 (0.098)
B10012SN01GAB10000	12	1	Blue, Filler, Filler, Filler, Filler, Filler	5	12.6 (0.496)	146 (0.098)
B10024SN02GAB10000	24	2	Blue, Orange, Filler, Filler, Filler, Filler	4	12.6 (0.496)	146 (0.098)
B10036SN03GAB10000	36	3	Blue, Orange, Green, Filler, Filler, Filler	3	12.6 (0.496)	147 (0.098)
B10048SN04GAB10000	48	4	Blue, Orange, Green, Brown, Filler, Filler	2	12.6 (0.496)	148 (0.098)
B10060SN05GAB10000	60	5	Blue, Orange, Green, Brown, late, Filler	1	12.6 (0.496)	148 (0.098)
B10072SN06GAB10000	72	6	Blue, Orange, Green, Brown, Slate, Filler	0	12.6 (0.496)	149 (0.100)
B10084SN07GAB10000	84	6	Blue, Orange, Green, Brown, Slate, White, Red, Filler	1	14.3 (0.562)	177 (0.118)

Specifications

Cable Characteristics						
Product Code	**Fiber Count**	**No. of Tubes**	**Tube Color Sequence**	**No. of Fillers**	**Cable Diameter mm (± 5%)**	**Cable Weight Kg/km(lbs./ft.) ± 10%**
B10096SN08GAB10000	96	8	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	14.3 (0.562)	178 (0.119)
B10144SN12GAB10000	144	12	Blue, Orange, Green, Brown, Slate, White, Red, Black	0	17.8 (0.700)	178 (0.119)
B10192SN16GAB10000	192	16	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Filler, Filler	2	17.8 (0.700)	178 (0.119)
B10216SN18GAB10000	216	18	**1st Layer -** Blue, Orange, Green, Brown, Slate, White **2nd Layer -** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate #, White#	0	17.8 (0.700)	230 (0.154)
B10288SN24GAB10000	288	24	**1st Layer-** Blue, Orange, Green, Brown, Slate, White **2nd Layer-** Red, Black, Yellow, Violet, Rose, Aqua, Blue#, Orange#, Green#, Brown#, Slate #, White#	0	20.2 (0.795)	332 (0.223)

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

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

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

Packing and Lengths

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

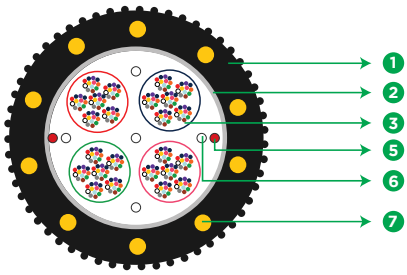
Celesta IBR

Optical Fibre Cables

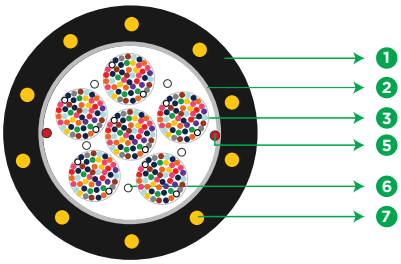
Product Specification

Celesta

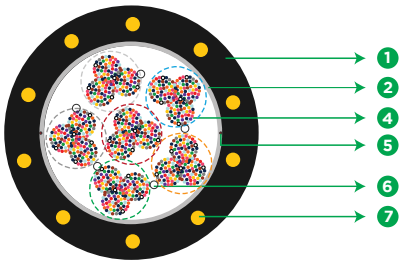
Intermittently Bonded Ribbon OFC
Single Sheath Duct



96F~576F



864F



1728F

1. **OUTER SHEATH**
2. **WATER BLOCKING TAPE**
3. **BUNDLE OF RIBBONS OF 12 FIBERS**
4. **BUNDLE OF RIBBONS OF 24 IBRs**
5. **RIPCORDS**
6. **WATER SWELLABLE YARNS**
7. **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 Bow-Lite(E) ITU-T G.657A2 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)
R11728S206FAP1000	1728	6 x 288	Blue, Orange, Green, Brown, Slate, White	23.5 (0.93)	332 (0.222)	2700 (606.9)

*- 864F and 1728F shall have smooth surface.

Specifications

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

* 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.

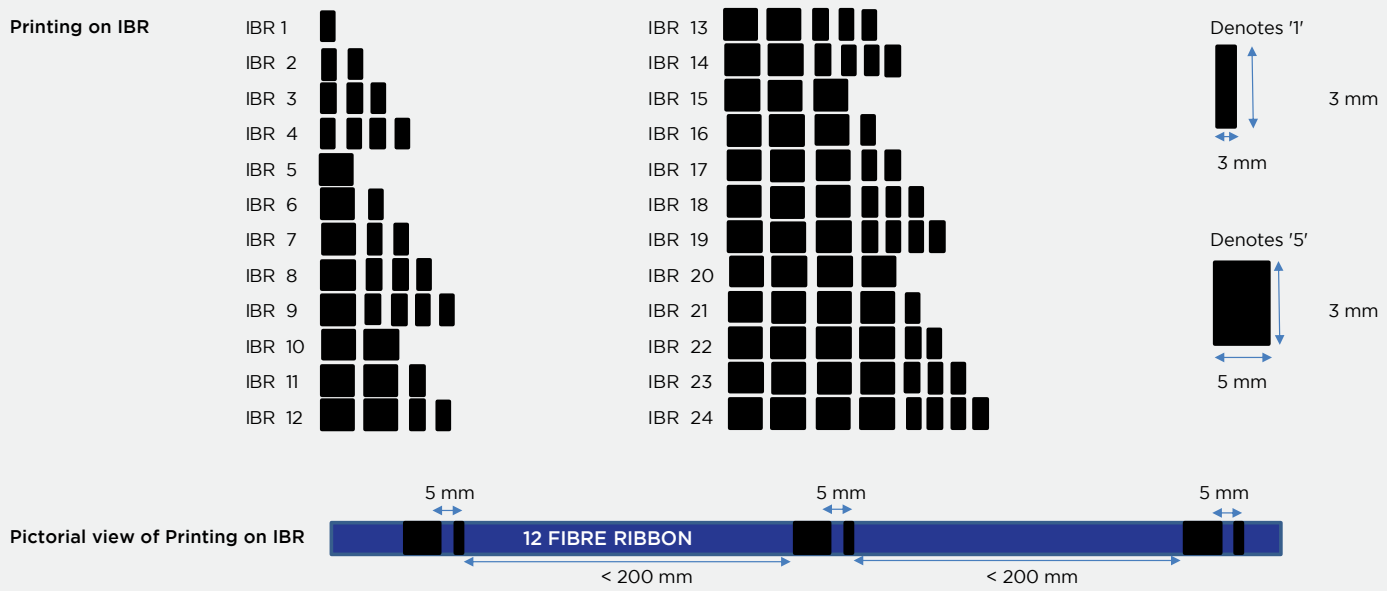
IBR Identification Printing and Color Sequence

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

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

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

Blue	Orange	Green	Brown	Slate	White



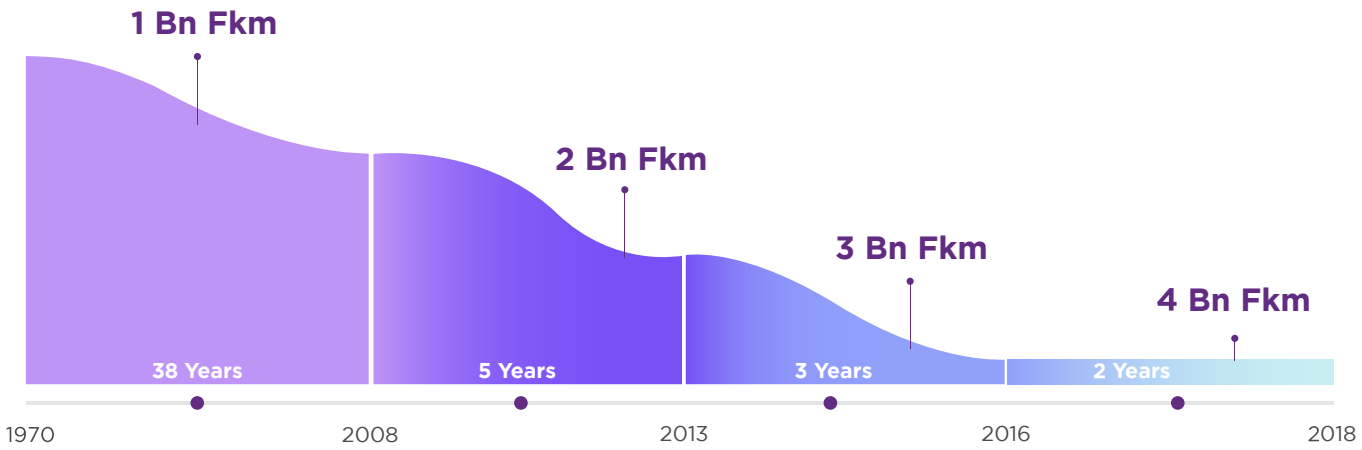
Packing and Lengths

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

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

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**

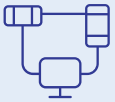
Countries across the globe had been on a steady broadband agenda with their respective spectrum reallocation or wireline network investments.

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.

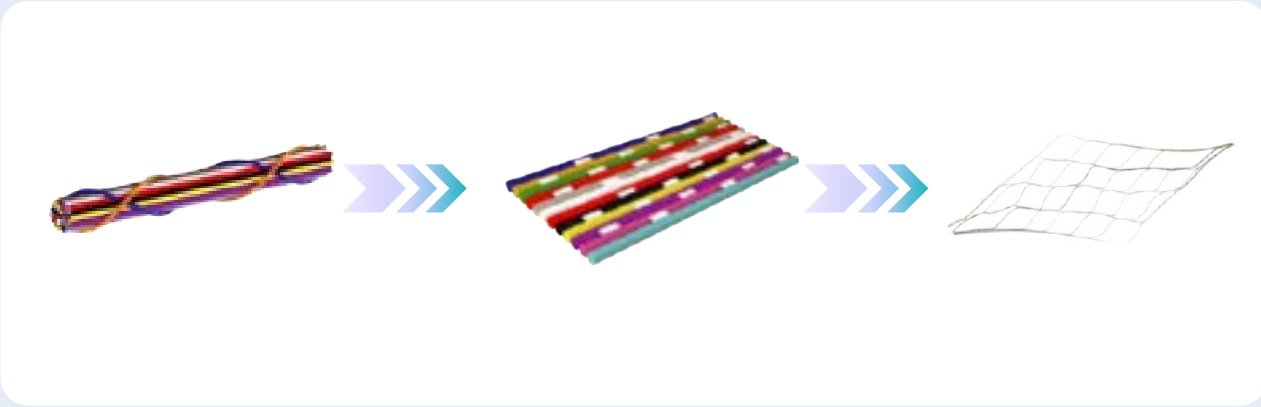
STL Celesta Ribbon Cables are compliant with international performance and testing standards

IEC 60794-5-10	ITU-T	RoHS	REACH

Innovative slim design optimises duct space utilisation

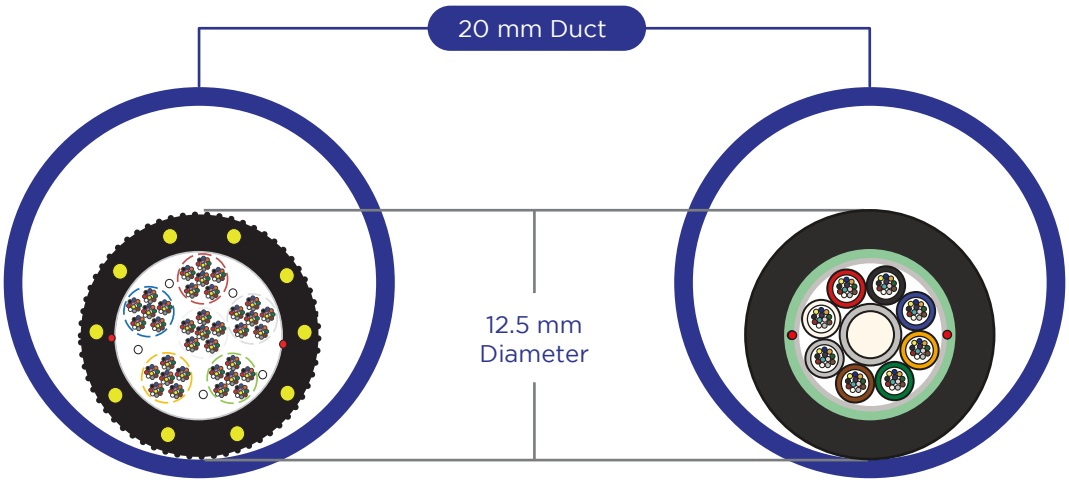
In Celesta, ribbons take the shape of a bundle because of their intelligently bonded design. This results in improved form factor of the cable.

432F Celesta Ribbon cable is as much as **26% slimmer** than a conventional 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



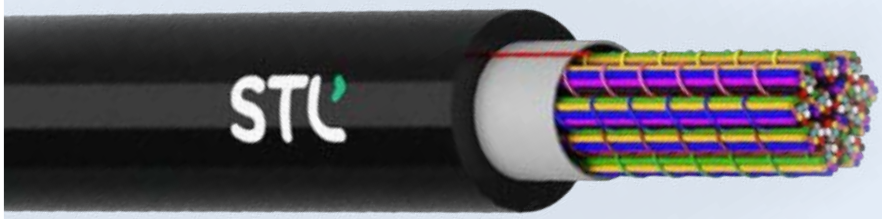
432F
Celesta Ribbon Cable

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

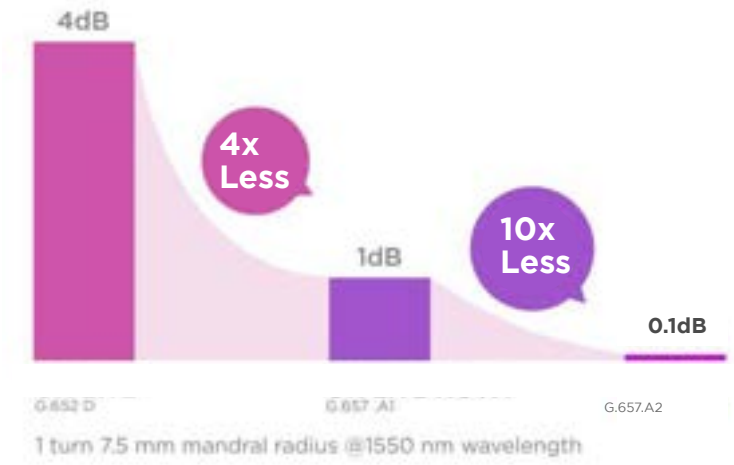
Celesta Ribbon Cable is blow optimized, has kink-free design with innovative sheathing and non-preferential bending. Installers can install upto 2 Km of cable within 1 hour inside a 20mm duct.

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 Broad-band 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

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

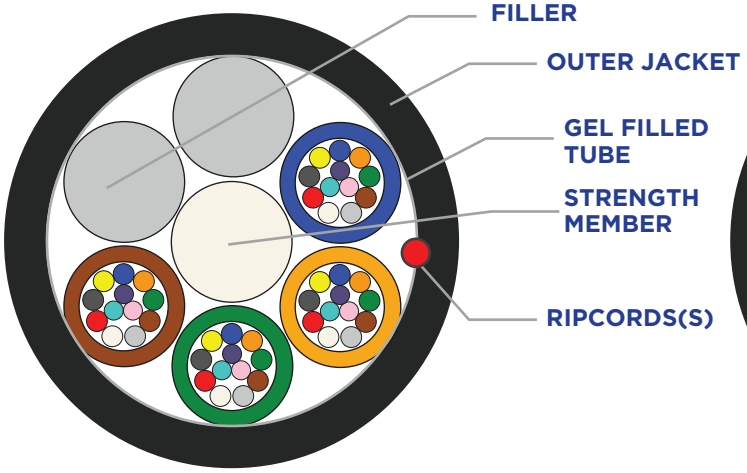
* https://8billiontrees.com/carbon-offsets-credits/carbon-footprint-of-the-internet/

And results are for all to see

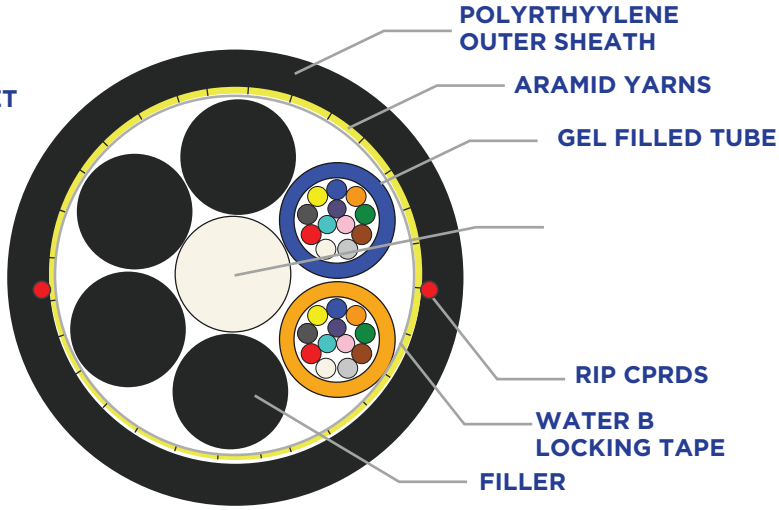
When compared to standard products, these Eco-labelled products:

- 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 | beyond tomorrow

About STL - Sterlite Technologies Ltd.
STL is a leading global optical and digital solutions company providing advanced offerings to build 5G, FTTx, Enterprise and Data Centre networks. The company, driven by its purpose of 'Transforming Billions of Lives by Conencting teh World', designs and manufactures in 4 continents with customers in mor ethan 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 ubiquitos 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 NetZero emissions by 2023. With top talent from 30+ nationalities. STL has earned numerous 'Great Place to Work' awards and been voted as the 'Best Organisation for Women'.

Registered Office
4th Floor, Godrej Millennium, Koregaon Road 9, STS 12/1, Pune-411001, Maharashtra
Phone: +91 2030514000 Fax: +91 2026138083
Email: stl.communications@stl.tech

Scan this for local contacts

Visit our website **www.stl.tech** for more information

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.