Product
Datasheet

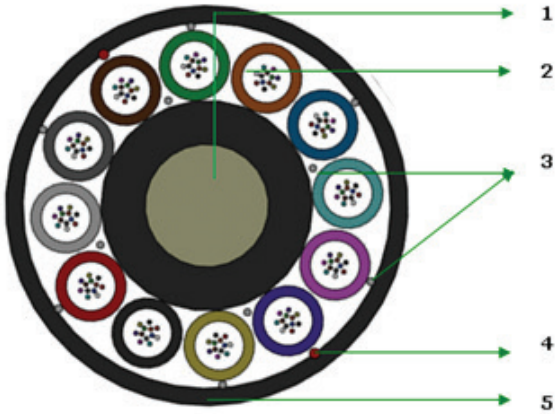
Sterlite Tech

Micro-LITE Multitube Single Jacket Fibre Optic Cable

Product Details

Sterlite Tech™ Micro-LITE Multitube Single Jacket Fibre Optic Cables are typically used in micro duct or aerial drop installation applications. This cable is a stranded micro loose tube cable with optical fibre placed inside robust buffer tubes stranded around a fibre reinforced plastic (FRP) central strength member. In addition to optical fibres, the buffer tubes contain water blocking gel and the cable core is surrounded with water-swellable tape to prevent water ingress in the interstices of cable core. The cable core is surrounded with thermoplastic sheath or Polyamide jacket making the cable robust and installation friendly.

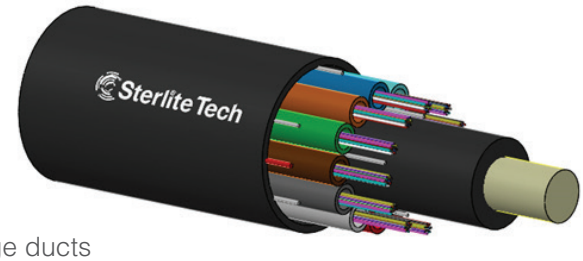
Typical Construction of Cable



1. CENTRAL STRENGTH MEMBER
2. MICRO LOOSE TUBE WITH FIBRES & GEL
3. WS YARNS
4. RIPCORD(S)
5. OUTER SHEATH

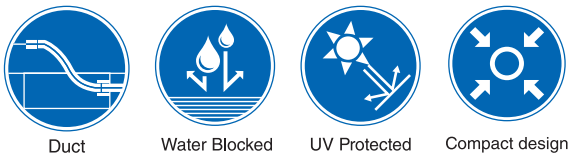
Product Application

These cables are typically used for Access / Metro and (air blown) Drop cabling for FTTx networks, like Fibre to the Home (FTTH). Microcables can utilise existing and new duct systems more effectively by accommodating more fibres in given sub-duct network.



Features & Benefits

- Available up to 576 fibre count in either single-mode or multi-mode optical fibres
- As compared to conventional cable, Micro Cable diameter is less and thereby reducing installation costs
- Excellent solutions for new and existing duct systems Typically blown into micro ducts previously installed into large ducts
- Maximizes large duct and rights-of-way utilisation
- Reduced size and weight aids transportation, handling, and blowing distances
- Multitube 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
- Flexible, light weight, easy to handle & install
- Tensile and crush resistant
- UV protected
- Tightly controlled physical parameters
- Combination of fibre types available on request



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Performance Standards

Cable complies to the latest issue of following main Standards IEC.60794 series, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T Recommendations, CPR certification for LSZH sheath

Specifications

250 Micron Optical Fibre					
Fibre Count	Design	Fibres per tube	Sheath Material	Nominal Cable Diameter (mm) ± 0.3mm	Duct Size, (OD/ID) mm
12F-72F	72F(12Fx6 LT)	12	HDPE	5.6	(10/8) or (12/8)
96F	96F(12Fx8 LT)		HDPE	6.5	(10/8) or (12/8)
144F	144F(12Fx12 LT)		HDPE	8.4	(16/12)
216F	216F(12Fx(6+12)LT)Bullet series		HDPE	8.0	(12/10) or (14/10)
288F	288F(12Fx(9+15)LT)		HDPE	10.2	(18/14)
288F	288F(12Fx(9+15)LT)Bullet series		HDPE	9.4	(16/12)
144F	144F(24Fx6 LT)	24	HDPE	7.0	(12/10) or (14/10)
192F	192F(24Fx8 LT)		HDPE	8.2	(16/12)
432F	432F(24Fx(6+12)LT)		HDPE	12.6	(22/18)
576F	576F(24Fx(9+15)LT)		Nylon	14.8	(32/26)

200 Micron Optical Fibre					
Fibre Count	Design	Fibres per tube	Sheath Material	Nominal Cable Diameter (mm) ± 0.3mm	Duct Size, (OD/ID) mm
96F	96F(12Fx8 LT)	12	HDPE	5.8	(10/8) or (12/8)
288F	288F(12Fx(9+15)LT)		HDPE	8.8	(16/12)
144F	144F(24Fx6 LT)	24	HDPE	5.9	(10/8) or (12/8)
192F	192F(24Fx8 LT)		HDPE	6.8	(12/10) or (14/10)
288F	288F(24Fx12 LT)		HDPE	9.1	(16/12)
288F	288F(36Fx8 LT)	36	HDPE	8.2	(12/10) or (14/10)

Mechanical and Environmental Characteristics*				
Test	Standard / Notes	Product Performance		
Bending Radius	IEC-60794-1-21-E11	Dynamic = 20D, Static = 15D		
Impact strength (N.m)	IEC-60794-1-21-E4	2		
Torsion	IEC-60794-1-21-E7	± 180°		
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Temperature Cycling	IEC-60794-1-22-F1	Installation: -20°C to +60°C	Operation: -30°C to +70°C	Storage: -40°C to +70°C
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

** After the test, the change in attenuation shall be ≤ 0.05 dB/km. No damage or crack on cable & no fibre break.

Cabled Optical Fibres Characteristics

The optical fibres are in accordance to the specifications ITU-T G.652D and ITU G.657A1 (250 & 200micron). Refer to specific data sheets for details.

Transmission Characteristics						
Fibre Type	Attenuation coefficient, dB/km (Average/Maximum)			PMD, ps/√km	PMD LDV, ps/√km	Cut-off Wavelength (λcc), nm 1310nm
	1310nm	1550nm	1625nm			
G652D fibre	≤ 0,35 / 0,36	≤ 0,22 / ≤ 0,23	≤ 0,24 / ≤ 0,26	≤ 0 ,20	≤ 0,1	≤ 1260
G657A1 fibre (250 & 200 micron)	≤ 0,35 / 0,36	≤ 0,22 / ≤ 0,23	≤ 0,24 / ≤ 0,26	≤ 0 ,20	≤ 0,1	≤ 1260

** This fibre is also available as a bend insensitive (Sterlite Tech's NOVA fibre) and fibre characteristics

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Fibre Standard Colour Code

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

* For more than 12 fibers per tube, single or double stripes marking are done as per EIA/TIA 598.

Tube Standard Color Code

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

* For more than 12 tubes, single or double stripes marking are done as per EIA/TIA 598.

Packing and Lengths

Packing: Wooden drums with protection
Lengths (tolerance ±5%): 2km, 4km
Note - Customized drum lengths available on request.

Sheath printing details

STERLITE < Fibre Type ><Fibre Count><Product Type ><OFC Laser Symbol ><Telephone Symbol ><Month & Year of Production><Cable ID>< Meter Marking>