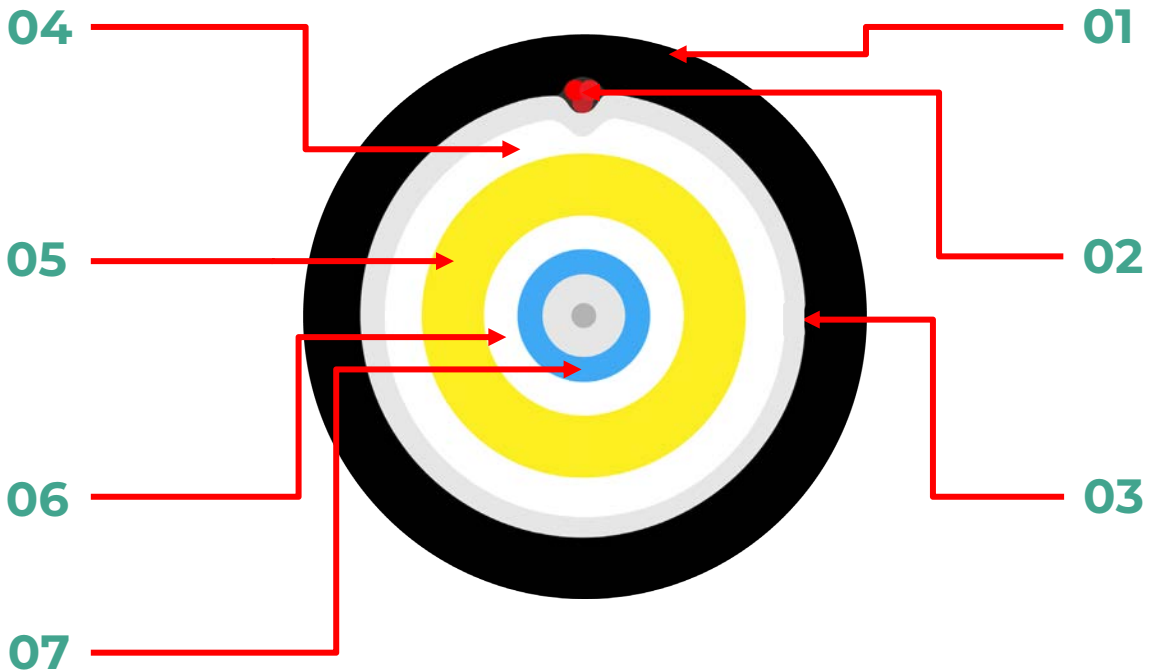


**1. Cable Structure**

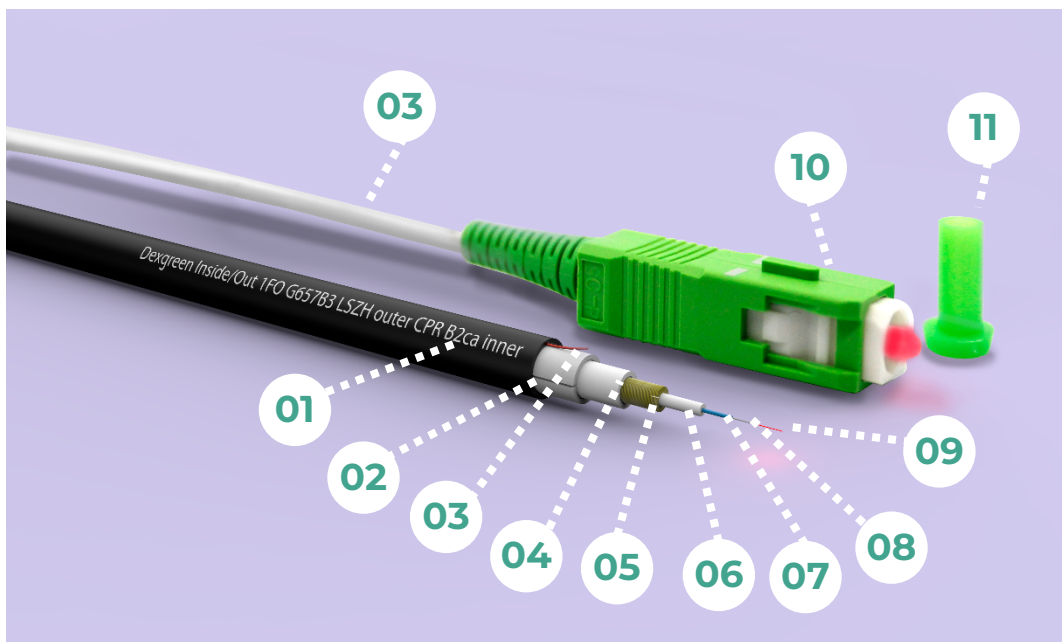


1. **LSZH easy strip black outer sheath UV stabilised**
2. **Ripcord**
3. **Water blocking tape**
4. **LSZH inner white sheath CPR B2ca and UV stabilised**
5. **Aramid strength member**
6. **900um tight Buffer**
7. **G567.B3 Fibre**

## 2. Description

- **Suitable for both indoor and outdoor use.**
- **Connectors** – Factory connectorized at both ends with SC/APC connectors, there is 150mm inner sheathing exposed with ripcord to facilitate stripping of outer sheathing by installer.
- **Double sheathed cable construction:**
  - **White Inner LSZH sheath**, *diameter = 2.9mm*, CPR reaction to fire B2ca s1a d0 a1, UV resistant. Staple / tacking gun compatible for wall fixing. Contains aramid strength member (Kevlar) providing tensile strength and crush resistance for optimum installation, bending & stapling.
  - **Outer Black LSZH sheath**, *diameter = 5.0mm*, suitable for outdoor use, easy peel (tool less) UV stabilised (minimum 25 years), low gravimetric water absorption, fungus stabilised. Moisture barrier below sheath for water resistance plus prevents mutual adhesion with inner sheath.
  - **Fibre properties** – **G657.B3**, (bend insensitive), primary coating 250µm with 900 µm tight Jacket.
- **Stapling / fixing / tacking to surface**, confirmed as suitable for application, tested around multiple bends (e.g. door frames) using approved fireproof fixings with attenuation loss monitoring.

### 3. Application



#### 1. Outer sheath –

- Material: LSZH. UV resistant and water repellent.
- Outer Diameter: 5mm

**2. Water blocking tape** – Provides moisture barrier & prevents mutual adhesion / sticking between inner and outer sheath

**3. Ripcord** - Facilitates easier stripping of outer sheathing. Cable can also be stripped by hand.

#### 4. Inner sheath –

- Flame retardant: CPR Euroclass B2ca (s1a d0 a1).
- UV resistant: Cable is suitable for direct wall mounting externally
- Material: White LSZH. Meets all internal cabling building regulations with respect to fire performance, BS6701: 2016 + A1: 2017 Telecommunications equipment and telecommunications cabling.
- Diameter: 2.9mm

**5. Aramid strength member/ Kevlar** - Provides inner sheathed section with tensile strength and crush resistance for optimum installation, bending & stapling to various surfaces within a building premises

**6. Fibre tight jacket** - 900µm.

**7. Fibre primary coating** - 235-245µm.

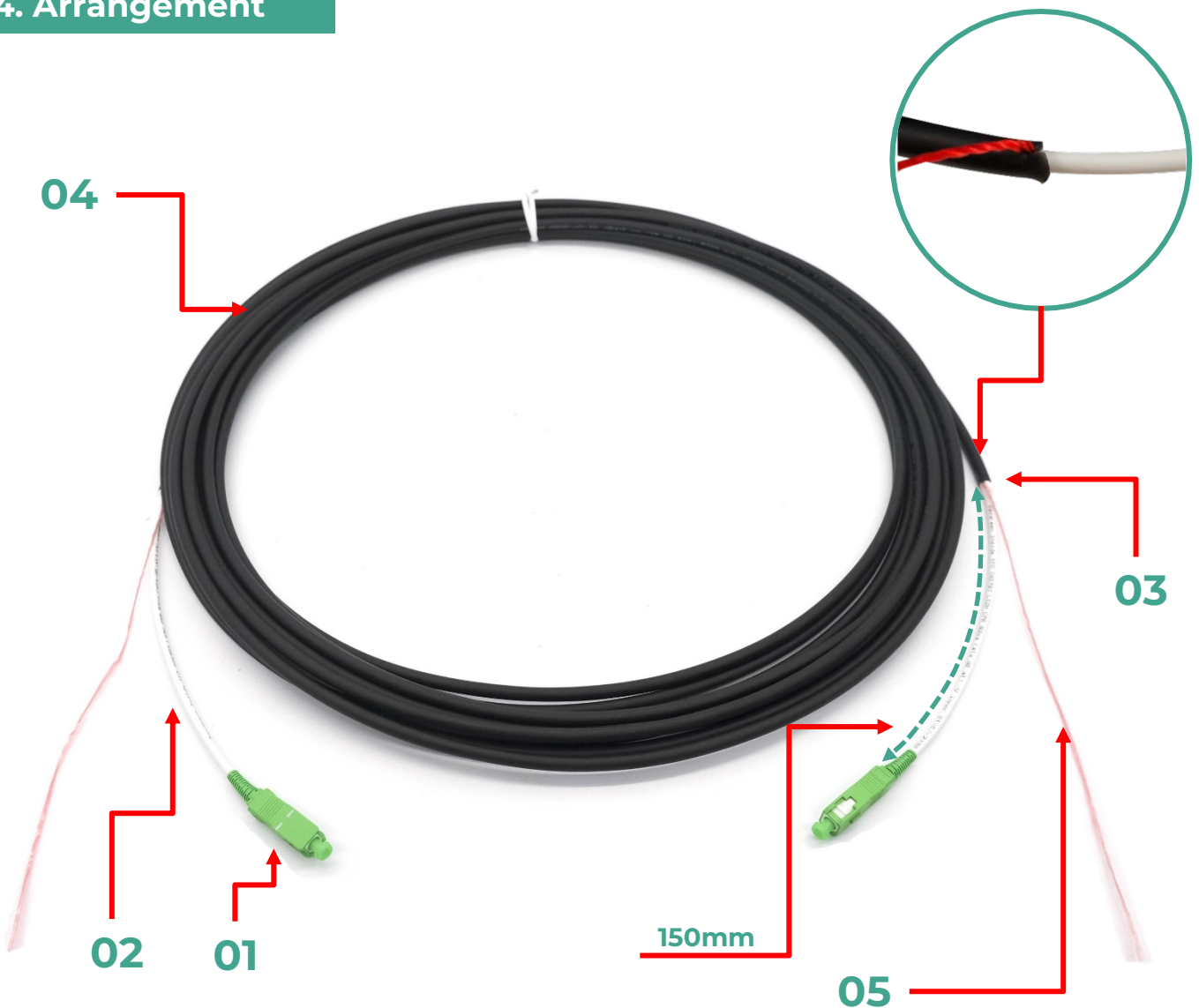
**8. Fibre cladding**

**9. Fibre type** - ITU-T G657.B3 (bend insensitive).

**10. Connectorized** - at both ends for quick & more reliable connection with factory tested short boot SC/APC connector. This ensures SC/APC connector can be placed within compact termination boxes. There is 150mm inner sheathing exposed with ripcord to facilitate stripping of outer sheathing by installer.

**11. Dust Cap**

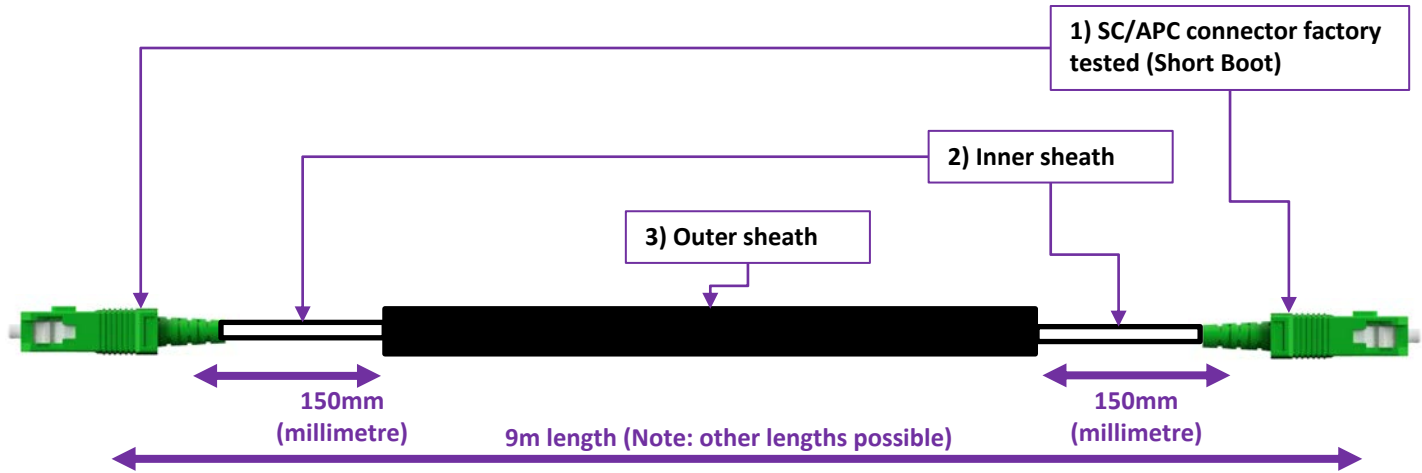
**4. Arrangement**



1. **Short boot SC/APC Connector factory tested**
2. **Inner sheath LSZH (UV resistant)**
3. **Pre-Cut slit for rip cord to make easier peeling of outer sheath**
4. **Outer Sheath LSZH (Easy Peel). 9m length (Note: other lengths possible)**
5. **Rip Cord Exposed for easier stripping**

**Note: SC/APC Connectorised at both ends (Available in different lengths)**

**4. Arrangement**



**5. Labelling**

- **Outer sheathing 5mm –**  
Dexgreen Inside/Out IFO G657B3 LSZH <Production Date> <metres>
- **Inner sheathing 2.9mm –**  
Dexgreen Inside IFO G657B3 LSZH CPR B2ca (s1a d0 a1) UV inner <Production Date> <metres>

## 6. CPR Explanation

- **CPR Explanation** - CPR Euroclass **B2ca - s1a d0 a1**
  - **Smoke protection – s1a – Low + light transmission > 60%**
  - **Flaming droplets / particles – d0 – few**
  - **Acidity (pH and conductivity) – a1 (limited)**

## 7. Euroclass Classification

Classes	Classification criteria				Additional classification (only for classes B1 <sub>ca</sub> , B2 <sub>ca</sub> , C <sub>ca</sub> and D <sub>ca</sub> )			
	EN ISO 1716	EN 50399	EN 50399	EN 60332-1-2	EN 50399	EN 61034	EN 50399	EN 60754-2
	Calorific value	Heat emission and Fire growth rate	Non-fire propagation	Non-flame propagation	Smoke production	Smoke transmittance	Burning droplets and particles	Acidity
A <sub>ca</sub>	█							
B1 <sub>ca</sub>		█	█	█	s1	s1a s1b	d0	a1
<b>B2<sub>ca</sub></b>		█	█	█	s2		d1	a2
C <sub>ca</sub>		█	█	█	s3		d2	a3
D <sub>ca</sub>		█		█				
E <sub>ca</sub>				█				
F <sub>ca</sub>								

## 8. Fibre Properties

- ITU-T G.657.B3 fibre, bending radius 5mm and full compatibility with ITU-T fibres G.652.D, G657.A1 and G.657A2. G.657B3
- Cable bending radius – 10 x D (Short term) / 20 x D (Long term) @ D = Cable Diameter
- Low attenuation satisfying the operation demand of O-E-S-C-L band
- Low bending loss for highly demanding cable designs.
- Accurate geometrical parameters and MFD which ensure low splicing loss and high splicing efficiency

SPECIFICATIONS

Characteristics	Conditions	Specified Values	Units
<b>Fibre Optical &amp; Mechanical Characteristics</b>			
Attenuation	1310nm	≤0.35	[dB/km]
	1383nm (after H <sub>2</sub> -aging)	≤0.35	[dB/km]
	1550nm	≤0.21	[dB/km]
	1625nm	≤0.23	[dB/km]
Attenuation vs. Wavelength Max. α difference	1285-1330nm, in reference to 1310nm	≤0.03	[dB/km]
	1525-1575nm, in reference to 1550nm	≤0.02	[dB/km]
Zero Dispersion Wavelength (λ <sub>0</sub> )	--	1300-1324	[nm]
Zero Dispersion Slope (S <sub>0</sub> )	--	≤0.092	[ps/(nm <sup>2</sup> -km)]
PMD	--	--	--
Maximum Individual Fibre	--	≤0.1	[ps/√km]
Link Design Value (M=20, Q=0.01%)	--	≤0.06	[ps/√km]
Typical Value	--	0.04	[ps/√km]
Cable Cut-off Wavelength (λ <sub>cc</sub> )	--	≤1250	[nm]
Mode Field Diameter (MFD)	1310nm	8.8±0.4	[μm]
	1550nm	9.8±0.5	[μm]
Effective Group Index of Refraction (N <sub>eff</sub> )	1310nm	1.468	--
	1550nm	1.469	--
Point Discontinuities	1310nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]
Proof Test	--	≥1.0	[%]
Macro-bend Induced Loss	--	--	--
1 turn around 10mm radius mandrel	1550nm	≤0.03	[dB]
1 turn around 10mm radius mandrel	1625nm	≤0.1	[dB]
1 turn around 7.5mm radius mandrel	1550nm	≤0.08	[dB]
1 turn around 7.5mm radius mandrel	1625nm	≤0.25	[dB]
1 turn around 5mm radius mandrel	1550nm	≤0.15	[dB]
1 turn around 5mm radius mandrel	1625nm	≤0.45	[dB]
Coating Strip Force	Typical Average Force	1.5	[N]
	Peak Force	1.3-8.9	[N]
Dynamic Fatigue Parameter (nd)	--	≥20	--

**SPECIFICATIONS CONTINUED**

**Fibre Geometrical Characteristics**

Cladding Diameter	--	125.0±0.7	[µm]
Cladding Non-Circularity	--	≤0.7	[%]
Coating Diameter	--	235-245	[µm]
Coating-Cladding Concentricity Error	--	≤12.0	[µm]
Coating Non-Circularity	--	≤6.0	[%]
Core-Cladding Concentricity Error	--	≤0.5	[µm]

**Environmental Characteristics**

Temperature Dependence Induced Attenuation	-60°C to +85°C	≤0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation	-10°C to +85°C, 98% RH	≤0.05	[dB/km]
Water soak Dependence Induced Attenuation	23°C, for 30 days	≤0.05	[dB/km]
Damp Heat Dependence Induced Attenuation	85°C and 85% RH, for 30 days	≤0.05	[dB/km]

**Cable Mechanical Performance IEC 60794-1-21, testing at 1550nm or otherwise stated**

Tensile Strength	Long term 80N (Max strain value < 0.2%)	Short term 150N (Max strain value < 0.4%)	[N]
Elongation Attachment Attenuation	Long term 80N (Max strain value < 0.1%)	Short term 150N (Max strain value < 0.3%)	[N]
Crush Strength	Long term 300N (Max Attenuation value < 0.3dB)	Short term 1000N (Max Attenuation value < 0.4dB)	[N]
Impact	10Nm impact x 5 impacts (Max Attenuation value < 0.4dB)		[Nm]
Repeated Bending	Load 150N; Mandrel radius: 25 x D, Bending times; 25 times (Max Attenuation value < 0.4dB)		[N]
Torsion / Twist	Axial tension 150N , angle: ±180 degrees; Number of twists – 10 times (Max Attenuation Value < 0.4dB)		[N]
Temperature Cycling	Temperature Cycling -20°C ~ +65°C (Max Attenuation Value < 0.25dB)		[°C]



**SPECIFICATIONS** *CONTINUED*

**Connector Properties, testing at 1550nm or otherwise stated**

Insertion Loss	0.25dB	[dB]
Return Loss	60dB	[dB]
Mechanical Pull Out Force	50	[N]

**Geometric Parameters**

Contact Type	APC	[-]
ROC – Radius of Curvature	5 – 12	[mm]
Fibre Height	100	[um]
Apex offset	0 – 50	[um]
APC angle	8 ± 0.5	Degrees
Key Error	-0.5 - +0.5	Degrees