

## Underground Loose Tube Fibre Optic Cable

### Cable Construction

ACMA – AS/CA S008

- **Multi – loose tube construction**
- **Sheath** : UV Stabilised polyethylene in compliance with AS1049
- **Longitudinal Water Tightness** : Water swellable Elements ( Drycore )
- **Tube** : Thermoplastic material , containing up to 12 fibres with thixotropic gel.
- **Central Strength Member** : Glass fibre reinforced plastic ( GRP )
- **Outer Jacket** : UV Stabilised polymide ( Nylon ) in compliance with AS1049 integrally bonded to PE Sheath



### Technical Information

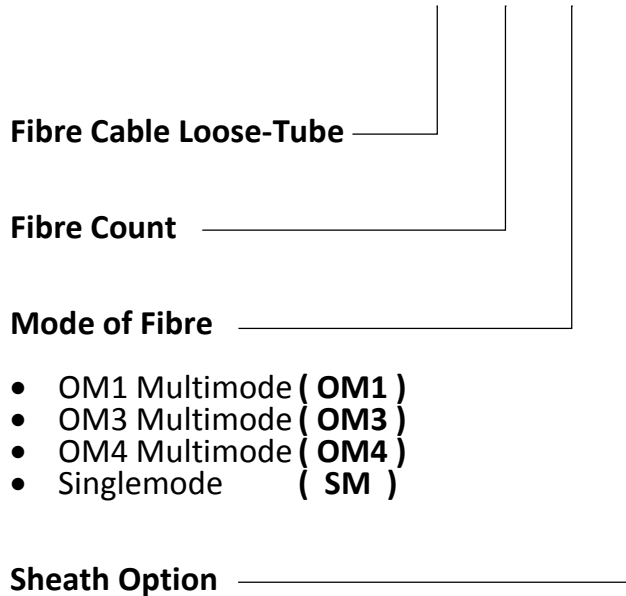
Fibre Count:	2-72	84-96	108-120	132-144
Cable Nominal Diameter (mm)	10.0	10.7	12.2	13.6
Tube / Filler Diameter (mm)	2.1	2.1	2.1	2.1
Cable Nominal Weight (kg/km)	105	128	165	196
Number of Elements	6 x 12	8 x 12	10 x 12	12 x 12
Installation Tension in kN (Max)	2.0	2.0	2.5	2.5
Crush Resistance kN/100mm (Max)	2.0 ( Short term) / 1.0 ( Long term )			
Minimum Bending Radius (mm)	At full load : 20 x Cable OD At no load : 10 x Cable OD			
Temperature Range ( °C )	Installation -0->+50 Transport & Storage – 20-> +70 Operation – 10-> +70			

## Ordering Information

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### Dataflow Part Number :













**FCLT-XX-XXX-XX**



*\* Various sheath options and constructions available \**

### Identification for Buffer and Tube Colours

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No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
												

### Main Mechanical Characteristics

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#### Tensile Strength

**Test Method :** IEC 60794-1-2-E1

**Test Condition :** Load as per cable maximum tensile strength. ( In table above )

**Acceptance Criteria :** After 30 minutes the maximum strain on the fibre should not exceed 0.6% and no attenuation increase greater than 0.1dB occurs.

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## Crush

<b>Test method :</b>	IEC 60794-1-2-E3
<b>Test Condition :</b>	Short Time : 10 min / Long Time 120 min Load as per maximum crush resistance in table above. Number of positions : 3 Adjacent sections. ( Ensuring one over tube and one over lay reversal )
<b>Acceptance Criteria :</b>	No damage to sheath or to core structure and no attenuation increase greater than 0.1dB occurs.

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## Impact

<b>Test method :</b>	IEC 60794-1-2-E4
<b>Test Condition :</b>	Weight 1.5kg / Height 1.0m / Anvil Radius 12.5mm / Impacts 1
<b>Acceptance Criteria :</b>	After 5 minutes no fibre breaks , no damage to the sheath or to the core structure and no attenuation increase greater than 0.1dB occurs

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## Torsion

<b>Test Method :</b>	IEC 60794-1-2-E7
<b>Test Condition :</b>	Sample Length : 1mtr ,Tension as per above table , Rotation: A) 180° clockwise , B) Return to starting position C) 180° Anti-clockwise , D) Return to starting position. Four movements constitute 1 cycle. Complete 10 cycles A to D in one minute maximum.
<b>Acceptance Criteria :</b>	During the final tenth cycle at A) , C) and after completion ( No rotation ) check transmitting fibres. No fibre breaks , No damage to sheath or to the core structure and no attenuation increase greater than 0.1dB occurs.

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## Bend

<b>Test Method :</b>	IEC 60794-1-2-E11
<b>Test Condition :</b>	Mandrel diameter : 20 x Cable OD Bend 360° ( 1 Turn )
<b>Acceptance criteria :</b>	No attenuation increase greater than 0.1dB occurs.

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## Bend under tension

<b>Test Method :</b>	Concurrent to tensile test : IEC 60794-1-2-E18
<b>Test Condition :</b>	Mandrel Diameter : 40 x Cable OD Bend : 360° ( 1 Turn )
<b>Acceptance criteria</b>	After 1 minute no fibre breaks , no damage to sheath or to the core structure and no attenuation increase greater than 0.1dB occurs from no load to full load.

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## Temperature Cycling

**Test Method :** IEC 60794-1-2-F1

**Test Condition :** Sample length : 1000m ( Minimum )  
Temperature range : From -10°C to +70 °C

**Acceptance criteria :** There should be no average attenuation increase at the temperature extremes when compared to the attenuation at ambient temperature. No individual fibre should measure an attenuation greater than 0.15dB/km

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## Water Penetration

**Test Method :** IEC 60794-1-2-F5B

**Test Condition :** Sample length = 3m , Water Height = 1m

**Acceptance criteria :** No water leakage after 24 hours.

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