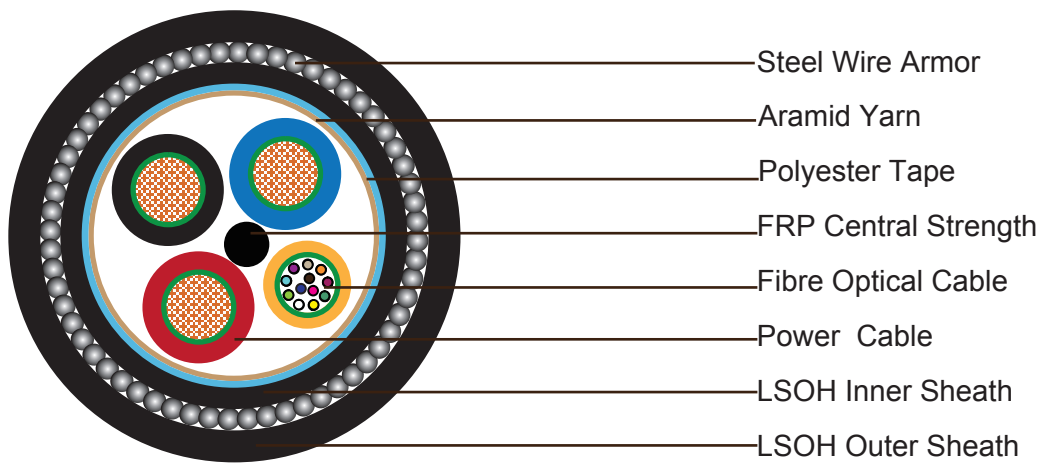




### 3x2.5 Power Cable+12C Fiber Optic Cable SWB Fire Resistant Composite Cable

#### Construction:



#### 3x2.5mm<sup>2</sup> Power Cable

|                     |  |
|---------------------|--|
| <b>Conductor</b>    | 7/0.67mm Stranded bare copper wire                 |
| <b>Fire barrier</b> | Mica tape wrapped copper conductor                 |
| <b>Insulation</b>   | XLPE. Thickness is 0.7mm. Outer diameter 4.6-4.7mm |

#### 12C Optic Fiber Cable, G652D ( around central member )

|                                   |   |
|-----------------------------------|---|
| <b>No of fibers in loose tube</b> | 12 fibers   |
| <b>Loose tube</b>                 | outer diameter: 3.8mm (PE or PVC Sheath would be used over the loose tube if necessary) |
| <b>Fire barrier</b>               | Mica tape wrapped loose tube  |

#### Element Assembly

|                                |  |
|--------------------------------|--|
| <b>Central Strength Member</b> | 1.9mm FRP central strength member with PE/PVC coating if necessary |
| <b>Strength member</b>         | Aramid yarn helically is applied over cable core.                  |
| <b>Inner Jacket</b>            | LSZH, thickness is 1.0mm   |
| <b>Armor</b>                   | SWB  |



## Composite Cables

|              |   |
|--------------|---|
| Sheath       | LSZH, thickness is 1.8mm, nominal outer diameter 18.2±1.0mm |
| Sheath Color | Black   |

## Optical Characteristics

### 12C Optic Fiber Cable, G652D ( around central member )

| Parameter                                      |                                  | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units                    |
|--|----------------------------------|---|---|---|--------------------------|
| Fiber Code                                     |                                  | 9   | 8   | 7   |                          |
| Attenuation, Loose Tube Cables                 | @1310nm                          | ≤0.35                                       | N/A   | N/A   | dB/km                    |
|  | @1550nm                          | ≤0.22                                       | ≤0.22   | ≤0.22   | dB/km                    |
|  | @1625nm                          | ≤0.25                                       | ≤0.26   | ≤0.26   | dB/km                    |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm                          | ≤0.38                                       | N/A   |   | dB/km                    |
|  | @1550nm                          | ≤0.28                                       | N/A   |   | dB/km                    |
| Chromatic Dispersion                           | between 1260 and 1360nm (O Band) | ≤3.5  | N/A   | N/A   | ps/(nm*km)               |
|  | between 1460 and 1530nm (S Band) | N/A   | N/A   | 2.0-7.0   | ps/(nm*km)               |
|  | between 1530 and 1565nm (C Band) | ≤18   | 1.0-10.0  | 7.0-10.0  | ps/(nm*km)               |
|  | between 1565 and 1625nm (L Band) | ≤22   | 7.0-12.0  | 10.0-14.0   | ps/(nm*km)               |
| Zero Dispersion Wavelength                     |                                  | 1310±11                                     | 1530-1560   | 1460-1565   | nm                       |
| Zero Dispersion Slope                          |                                  | 0.093                                       | 0.093   | 0.093   | ps/(nm <sup>2</sup> .km) |
| Point Discontinuity at 1300nm & 1550nm         |                                  | 0.1   | 0.1   | 0.1   | dB                       |
| Mode Field Diameter                            | @1300nm                          | 9.3±0.5                                     | N/A   | N/A   | um                       |
|  | @1550nm                          | 10.4±0.8                                    | 8.5±0.6   | 9.0±0.5   | um                       |
| Cable Cut-off Wavelength                       |                                  | ≤1260                                       | ≤1450   | ≤1450   | nm                       |
| PMD (Individual fiber)                         |                                  | ≤0.2  | ≤0.2  | ≤0.2  | ps/km <sup>1/2</sup>     |
| Cladding Diameter                              |                                  | 125±1                                       | 125±1   | 125±1   | um                       |



|   |           |           |           |            |
|---|-----------|-----------|-----------|------------|
| <b>Core/Cladding Concentricity Error</b>                              | ≤0.5      | ≤0.5      | ≤0.6      | um         |
| <b>Cladding Non-Circularity</b>                                       | ≤1.0      | ≤1.0      | ≤1.0      | %          |
| <b>Coating Non-Circularity</b>  | ≤6.0      | ≤6.0      | ≤6.0      | %          |
| <b>Primary Coating Diameter</b>                                       | 245±10    | 245±10    | 245±10    | um         |
| <b>Proof-Test Level</b>   | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m2 |
| <b>Fatigue Coefficient</b>  | ≥20       | ≥20       | ≥20       |            |
| <b>Temperature Dependence between 0°C ~ +70°C @ 1310 &amp; 1550nm</b> | 0.1       | 0.1       | 0.1       | Db/km      |

The fibers contain no splices.

## Mechanical Properties:

### Tensile load:

Operating: 600N

Installation: 1500N

### Bending radius:

Operating: 12.5×OD

Installation: 25×OD

### Compressive load:

Short term: 1000N

Long term: 300N

## Fire Characteristics:

**Fire Resistance:** IEC 60331

**Flame Propagation:** IEC60332

**Low Smoke Capacity:** IEC61034-1/2

**Halogen Free:** IEC60754-1/2

\* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.