

## Technical Data Sheet

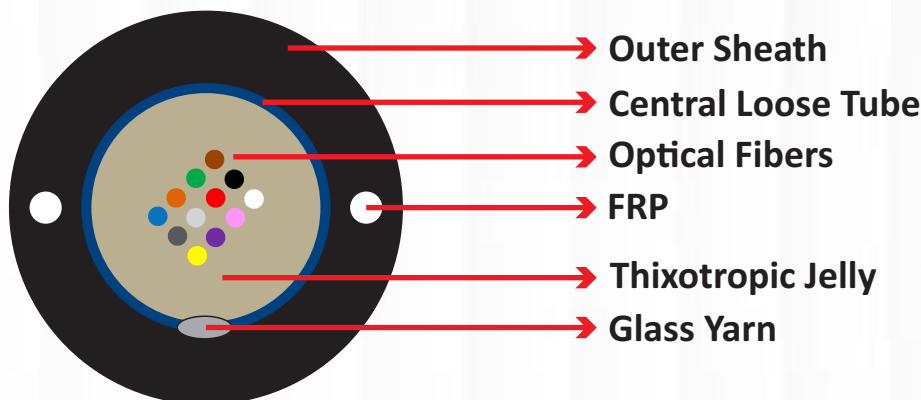
UNITUBE SM 2F, 4F, 6F, 12F G.652D  
Un-Armoured OPTICAL FIBRE CABLE

# GOLD SERIES

### Construction Details

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| No of Fiber and Color | : 02F per Tube - Blue, Natural.                                                                         |
|                       | : 04F per Tube - Blue, Orange, Green and Natural.                                                       |
|                       | : 06F per Tube - Blue, Orange, Green, Brown, Gray and Natural.                                          |
|                       | : 12F per Tube - Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink and Natural. |
| FRP                   | : UV-Cured Coated FRP                                                                                   |
| Loose Tube            | : PBT Loose Tube Filled With Thixotropic Jelly                                                          |
| HDPE Coating          | : Super / Super Double Coating                                                                          |
| Yarn Count            | : 1200 TEX                                                                                              |
| No of Loose Tube      | : 1 Loose Tube                                                                                          |
| Tube Identification   | : Natural                                                                                               |
| Strength Member       | : 2/3 Nos. (0.8mm / 1mm) - FRP Embedded in Sheath                                                       |
| Outer Jacket          | : PE Black Color                                                                                        |

### Schematic Diagram Not to Scale



### Fibre Characteristics (As per ITU-T Rec. G. 652 D)

| Attenuation (Transmission Characteristics)        |                                       | Geometrical Characteristics            |                                              |
|---------------------------------------------------|---------------------------------------|----------------------------------------|----------------------------------------------|
| @ 1310 nm                                         | : $\leq 0.4$ (dB/Km)                  | Mode Field Diameter @ 1310 nm          | : $9.2 \pm 0.4 \mu\text{m}$                  |
| @ 1550 nm                                         | : $\leq 0.2$ (dB/Km)                  | Mode Field Diameter @ 1550 nm          | : $10.3 \pm 0.5 \mu\text{m}$                 |
| Dispersion                                        |                                       | Cladding Diameter                      | : $125 \pm 1 \mu\text{m}$                    |
|                                                   |                                       | Cladding Non Circularity               | : $\leq 1\%$                                 |
| A. Total Dispersion (Chromatic Dispersion)        |                                       | Core Clad Concentricity Error          | : $\leq 0.5 \mu\text{m}$                     |
| 1285-1330nm                                       | : $\leq 3.5$ ps/nm.km                 | Coating Diameter(Uncolored)            | : $245 \pm 10 \mu\text{m}$                   |
| 1270-1340nm                                       | : $\leq 5.3$ ps/nm.km                 | Coating/Cladding Concentricity         | : $\leq 12 \mu\text{m}$                      |
| 1550nm                                            | : $\leq 18$ ps/nm.km                  | Cut Off Wavelength                     |                                              |
| 1625nm                                            | : $\leq 22.0$ ps/nm.km                | Fiber Cut Off Wavelength               | : $\leq 1320$ nm                             |
| B. Polarization Mode Dispersion at 1310 & 1550 nm |                                       | Cable Cut Off Wavelength               | : $\leq 1260$ nm                             |
| At Fibre Stage                                    | : $\leq 0.2$ ps/sqrt.km               | Mechanical & Operating Characteristics |                                              |
| At Cable Stage                                    | : $\leq 0.3$ ps/sqrt.km               | Operating Temperature                  | : $-20^\circ\text{C}$ to $+70^\circ\text{C}$ |
| C. Dispersion Slope & Wave Length                 |                                       | Fibre Proof Test                       | : 1%                                         |
| Zero Dispersion Wavelength                        | : 1300-1324 nm                        | Stripability Force                     | : $1.3 < F < 8.9$ N                          |
| Zero Dispersion Slope                             | : $\leq 0.092$ ps/nm <sup>2</sup> .km | Fibre Curl                             | : 4 meter radius of curvature                |

### Cable Mechanical & Physical Characteristics

| Cable Mechanical Characteristics |                              | Cable Physical Characteristics |                             |
|----------------------------------|------------------------------|--------------------------------|-----------------------------|
| Max. Tensile Strength            | : 350 N (Short Term)         | Cable Diameter                 | : 5.8mm / 6mm / 6.5mm / 7mm |
| Crush Resistance                 | : 1000 N/10 CM (Short Term)  | Nominal Cable Weight           | : Approx. 28 kg/km          |
| Impact Resistance                | : 10 N 0.5 m                 | Packing Length                 | : $1/2$ km $\pm 5\%$        |
| Min. Bending Radius (Long Term)  | : 20D (D= Cable Diameter mm) | Packing Details                | : Coil Form                 |

All Tests Shall be Carried out as per IEC Standards. Change in attenuation Shall be  $\leq 0.05$  dB/km

Cable Printing Details:  
(Hot Foil White Emb.)

OFC wwY OPTRONIX GOLD xxF DC CFRP YW12 UT SM G652D Month YYYY Length Code Meter Marking  
Note: ww will be replaced with outer diameter of 58, 60, 65, 70.  
xx will be replaced with Fiber Count 02, 04, 06, 12.