



**TECHNICAL DETAILS OF 48 FIBRE (G652D)
MULTI LOOSE TUBE DESIGN, SINGLE SHEATH, ARM OFC**

INTRODUCTION

ECCS Tape Armoured, Rodent protected, Fibre optic cable containing LWP-SMF in full compliance with ITU-T G652D. The offered cables are fully compliant to the relevant IEC specifications.

(1) CABLE DESIGN:

- * Singlemode fibre in full compliance with ITU-T G652D
- * Dielectric anti-buckling FRP rod used as Central Strength Member
- * Loose buffer tubes fully filled Thixotropic Jelly
- * Loose buffer tubes S-Z Stranded
- * Polyester tape & Water Blocking tape wrapping over S-Z core
- * Corrugated ECCS Tape Armoured
- * UV Stabilized HDPE Outer sheath, black

(2) APPLICATION:

- * Inside Duct pulled or blown

(3) SPECIAL FEATURES:

- * Single layer stranded construction
- * Flexible buffer tubes provide easy fibre routing inside closure
- * Rodent Protected

(4) MECHANICAL CHARACTERISTICS:

Temperature Range (IEC 60794-1-2-F1)

Laying and Installation -10° to +50°C

Operation -10° to +70°C

Transport and Storage -10° to +70°C

Cable Bending Radius (IEC 60794-1-2-E11)

During Installation (Full Load) 20 x D, D = Cable Diameter

Installed (No Load) 10 x D, D = Cable Diameter

Repeated Bending (IEC 60794-1-2-E6) 30 Cycle, 20 X D, 5 Kg Load, D = Cable Diameter

Tensile Force (IEC 60794-1-2-E1) 1.25W @ 0.33% fibre strain

Torsion Resistance (IEC 60794-1-2-E7) 10 Cycle ($\pm 180^\circ$) 5 Kg Weight, L= 2 Mtr

Crush Resistance (IEC 60794-1-2-E3) 3000 N (100 X 100 mm) for 60 sec

Impact Resistance (IEC 60794-1-2-E4) 4.4Nm, 20no. Impact, R=12.5mm

Kink Resistance (IEC 60794-1-2-E10) 20 x D, D = Cable Diameter

Water Penetration (IEC 60794-1-2-F5) 1 Mtr Water Head, 3 Meter Cable Sample, 24 Hours

(5) OPTICAL CHARACTERISTICS:

Optical fibre used in the cable manufacturing fully comply to ITU-T-Rec G 652 D.

at 1310 nm < 0.36 dB/Km

at 1550 nm < 0.23 dB/Km

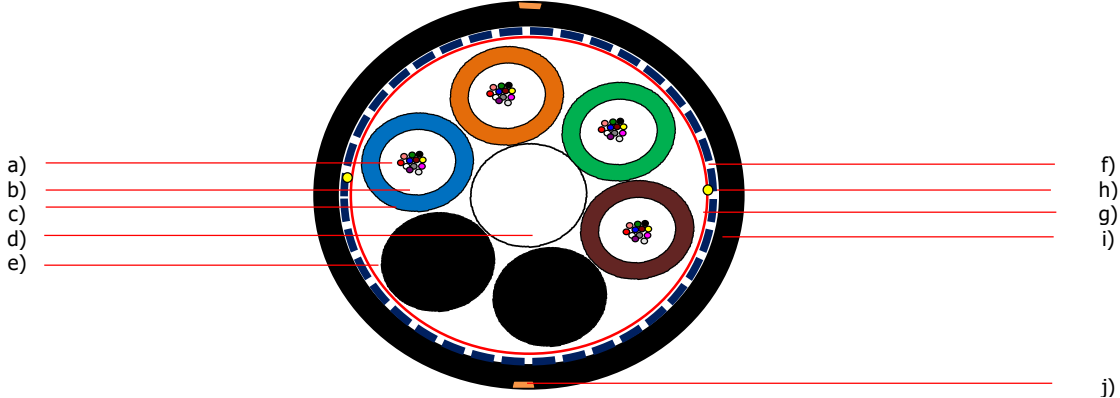
(6) COLOUR CODING:

Colour of Fibres in a Tube : Blue, Orange, Green, Brown, Slate, White, Red, Black
Yellow, Violet, Pink, Aqua.

Colour of Loose Tubes: Blue, Orange, Green, Brown

(7) CABLE CONSTRUCTIONAL DETAILS:

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|---|--|
| a) Primary Coated Fibre | Single Mode - G652D (12 Fibres Per Tube) |
| b) Tube Filling Compound | Thixotropic Jelly |
| c) Loose Tubes | PBTP |
| d) Central Strength Member | FRP Rod-2.1mm |
| e) | Thixotropic Jelly |
| f) Armour | ECCS Tape |
| g) Core Wrapping over S-Z core & Water Blocking | Polyster Tape & Water Swellable Tape |
| h) Rip cord | 2no.s suitable to rip open Armour & outer sheath |
| i) Outer Sheath (T = 1.8 mm Nom) | UV stabilized black HDPE |
| j) Strip Marking | 2no. Diagonally opposite 3mm width in orange clr |



(8) DELIVERY INFORMATION:

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|--------------------------------|------------|
| Nominal Cable Weight (Kg/Km) | 120 |
| Nominal Cable Diameter (mm) | 11.2 ± 0.5 |
| Standard Length per Drum (Mtr) | 2000 ± 5 % |

(9) CABLE SHEATH MARKING:

Cable sheath shall be marked in white colour with Hot Foil Indentation method. Marking details can be customized. Below mentioned details are generally marked on the cable sheath.

Telephone Symbol, Laser Symbol, Number of Fibres, Type of Fibre , Month & Year of Manufacturer, Manufacturer Name, India, Customer Name, Sequential Meter Marking & Drum Number

(10) CABLE DRUM PACKING:

Every length will be delivered on non-returnable wooden drums. Generally the cable drum flange will be marked with following: These details can also be customised.

- * Arrow showing the direction, the drum can be rolled.
- * Country of origin.
- * Birla Cable Ltd. (the manufacturer's name)
- * Number of fibers.
- * Nominal cable length in meters
- * Net and gross weight.
- * Drum number
- * Customer's name and destination

Both ends of the cable shall be sealed to prevent the ingress of moisture during transportation and storage, physical damage.

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