

BIRLA ERICSSON OPTICAL LIMITED

TECHNICAL DETAILS OF 24/48/96/144 FIBRE (G652D), DRY CORE, DIELECTRIC MULTI LOOSE TUBE DESIGN, SINGLE SHEATH, GLASS YARNS ARMoured OPTICAL FIBRE CABLE SUITABLE FOR UNDERGROUND DUCT & DIRECT BURIAL INSTALLATION

INTRODUCTION

Rodent Protected, Glass yarn armoured Fibre optic cable containing upto 144 LWP-SMF in full compliance with ITU-T G.652. D. The offered cables are fully compliant to the relevant IEC specifications.

(1) CABLE DESIGN:

- * Upto 144 enhance low water peak single mode fibers in full compliance with ITU-T-G.652.D
- * Non-metallic and anti-buckling element FRP rod used as Central Strength Member.
- * Water swellable yarn helically wrapped over central strength member
- * Loose buffer tubes fully filled Thixotropic Jelly
- * Loose buffer tubes S-Z Stranded
- * Water Swellable Tape for water blocking
- * Glass Yarns used for armouring
- * Outer sheath of HDPE, Black

(2) APPLICATION:

- * Direct burial / Inside Duct
- * In areas with particularly high mechanical loads
- * In areas with rodents

(3) SPECIAL FEATURES:

- * Single layer stranded construction
- * Particularly robust cable
- * Flexible buffer tubes provide easy fibre routing inside closure
- * All dielectric armoured

(4) MECHANICAL CHARACTERISTICS:

Temperature Range (IEC 60794-1-2-F1)	-40° to +70°C
Laying and Installation	-10° to +50°C
Operation	-40° to +70°C
Transport and Storage	-30° to +70°C
Cable Bending Radius (IEC 60794-1-2-E11A)	
During Installation (Full Load)	20 x D, D = Cable Diameter
Installed (No Load)	15 x D, D = Cable Diameter
Repeated Bending (IEC 60794-1-2-E6)	30 Cycle, r= 20 X D, 10 Kg Load, D = Cable Diameter
Tensile Force (IEC 60794-1-2-E1)	
During Installation	4000 N
Installed	3000 N
Torsion Resistance (IEC 60794-1-2-E7)	10 Cycle (± 360°) 10 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)	Height 500 mm, Weight = 5 Kg, 3 Nos
Kink Resistance (IEC 60794-1-2-E10)	10 x D, D = Cable Diameter
Water Penetration (IEC 60794-1-2-F5B)	1 Mtr Water Head, 3 Meter Cable Sample, 24 Hours

(5) OPTICAL CHARACTERISTICS:

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

at 1310 nm	≤ 0.35 dB/Km
at 1550 nm	≤ 0.22 dB/Km
at 1625 nm	≤ 0.25 dB/Km

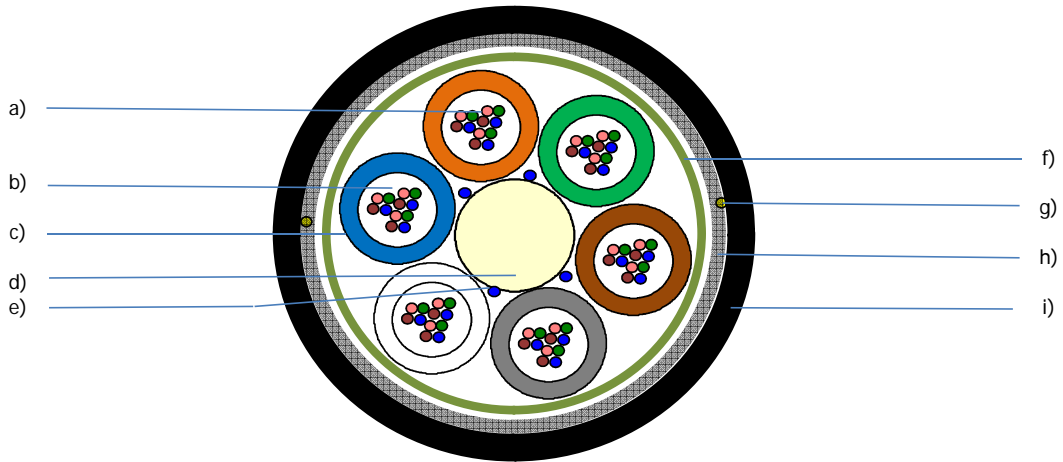
(6) COLOUR CODING:

Colour of Fibres in a Tube(12F/T):	Blue, Orange, Green, Brown, Grey, White, Red & Black Yellow, violet , Pink & Aqua
Colour of Loose Tubes (for 24F Cable):	Blue, Orange & four black fillers
Colour of Loose Tubes (for 48F Cable):	Blue, Orange, Green, Brown & two black fillers
Colour of Loose Tubes (for 72F Cable):	Blue, Orange, Green, Brown, Grey & White
Colour of Loose Tubes (for 96F Cable):	Blue, Orange, Green, Brown, Grey, White, Red & Black
Colour of Loose Tubes (for 144F Cable):	Blue, Orange, Green, Brown, Grey, White, Red & Black Yellow, violet , Pink & Aqua

(7) CABLE CONSTRUCTIONAL DETAILS:

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|----------------------------------|--|
| a) Primary Coated Fibre | Single Mode - G 652 D (12 Fibres Per Tube) |
| b) Tube Filling Compound | Thixotropic Jelly |
| c) Loose Tube(s) | PBTP |
| d) Central Strength Member | FRP Rod (PE Upcoated for 96 & 144F Cable) |
| e) Water Blocking Yarn | Helically wrapped over FRP |
| f) Water Blocking media | Water Swellable Tape |
| g) Rip Cords | Suitable to rip open outer sheath |
| h) Armouring | Glass Yarns |
| i) Outer Sheath (T = 1.5 mm Nom) | HDPE , Black |

TYPICAL CROSS-SECTION OF 72 F OFC



(8) DELIVERY INFORMATION :

	upto 72F	96F	144F
Nominal Cable Weight (Kg/Km)	120	145	200
Nominal Cable Diameter (mm)	12.5	14.0	16.5
Standard Length Per Drum (Mtr)	4000 ± 5%	4000 ± 5%	2000 ±10%

(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 (G 652 D), Arm, Month & Year of Manufacturer, Manufacturer's 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.
- * 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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