BIRLA ERICSSON OPTICAL LIMITED

TECHNICAL DETAILS OF 48/72/96/144 FIBRE (G652D), DRY CORE, DIELECTRIC MULTI LOOSE TUBE DESIGN, SINGLE SHEATH, UNARMOURED OPTICAL FIBRE CABLE SUITABLE FOR UNDERGROUND INSTALLATION

INTRODUCTION

Unarmoured fibre optic cable containing upto 96 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 96 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 (PE Coated)
* 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 as peripheral strength member
* Outer sheath of HDPE, Black

(2) APPLICATION:

* Inside Duct
* In areas with particularly high mechanical loads

(3) SPECIAL FEATURES:

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

(4) MECHANICAL CHARACTERISTICS:

Temperature Range (IEC 60794-1-2-F1)	
Laying and Installation	-5° to +40°C
Operation	-30° to +60°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	2500 N
Installed	2000 N
Torsion Resistance (IEC 60794-1-2-E7)	10 Cycle (± 360°) 10 Kg Weight, L= 2 Mtr
Crush Resistance (IEC 60794-1-2-E3)	2000 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	$\leq$ 0.36 dB/Km
at 1550 nm	$\leq$ 0.22 dB/Km
at 1625 nm	$\leq$ 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 48F Cable):	Blue, Orange, Green, Brown & 2 Dummies
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 120F Cable):	Blue, Orange, Green, Brown, Grey, White, Red & Black Yellow & violet
Colour of Loose Tubes (for 144F Cable):	Blue, Orange, Green, Brown, Grey, White, Red & Black Yellow, violet , Pink & Aqua

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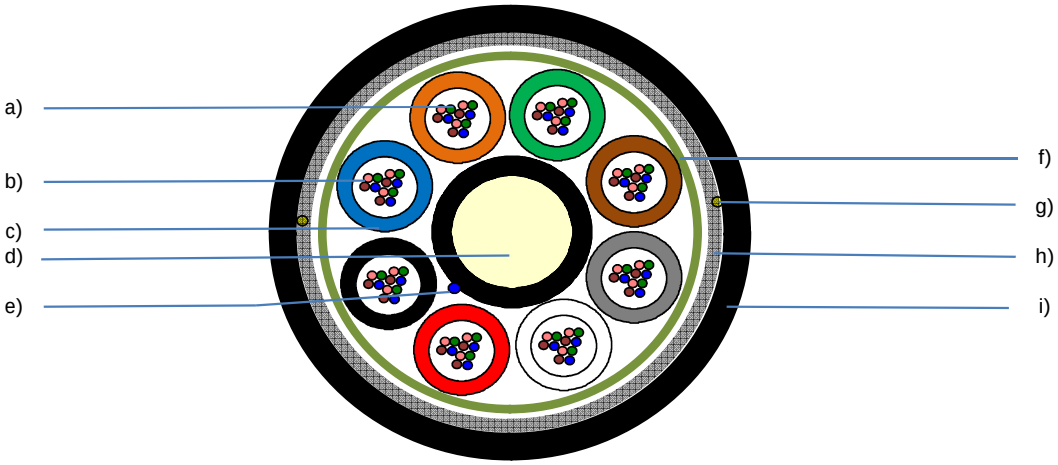
(7) CABLE CONSTRUCTIONAL DETAILS:

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)**
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)	Periphral Strength Member	Glass Yarns
i)	Outer Sheath (T = 1.5 mm Nom)	HDPE , Black

TYPICAL CROSS-SECTION OF 96 F OFC



(8) DELIVERY INFORMATION :

	upto 72F	96F	144F
Nominal Cable Weight (Kg/Km)	86	100	155
Nominal Cable Diameter (mm)	10.0	11.5	14.0
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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