

Tender No.	:	Spec. No.:	LGCE-2197-01DTD13.06.19-01
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Tender Title	:	PE sheathed Micro Air Blown Cable 96f 8 x12F	
Bidder	:		

Specification

For

Fiber Optic Cable
Micro Air Blown Cable
(Multi Loose Tube)

01	01-03-2020	Colour change to DIN VDE 0888	HtB	MvE	HtB
00	01-10-2019	Initial specification	HtB	MvE	HtB
Rev. No.	Date	Descriptions	Prepared By	Reviewed By	Approved By

1. SCOPE

1.1 Application

This specification covers the general requirements of single mode multi loose tube fiber optic telecommunication cables. The cable designs described herein are capable of transmitting telephone, data and video signals in micro duct installations utilizing single mode optical fibers.

2. OPTICAL FIBER

The optical, geometrical, mechanical and environmental performance of the optical fiber shall be in accordance with Table 1 below.

3. Table 1. Performance of the Enhanced Single Mode Fiber

ITEMS	UNITS	SPECIFICATION
		G.657.A1
Attenuation	dB/km	≤ 0.36 at 1310nm ≤ 0.22 at 1550nm
Chromatic Dispersion	ps/nm.km	≤ 3.5 at 1285nm ~ 1330nm ≤ 18.0 at 1550nm
Zero Dispersion Wavelength	nm	1300 ~ 1324
Zero Dispersion Slope	ps/nm ² .km	≤ 0.092
Cable PMD (PMD ₀)	ps/ $\sqrt{\text{km}}$	≤ 0.20
Cut-off Wavelength (λ_{cc} , Cabled fiber)	nm	≤ 1260
Mode Field Diameter	μm	8.9 ± 0.4 at 1310nm
Core/Cladding Concentricity Error	μm	≤ 0.5
Cladding Diameter	μm	125 ± 0.7
Cladding Non-circularity	%	≤ 1.0
Coating Diameter (uncolored)	μm	245 ± 10
Proof Test	GPa	≥ 0.69

4. CABLE CONSTRUCTION

The construction of the cable shall be in accordance with Table 2.

Table 2. Cable construction

ITEMS		DESCRIPTION
Number of Fibers		96
Type of Fiber		Single Mode G.657A1
Loose Buffer Tube	Material PBTP (Polybutylene Terephthalate)	
Filling Compound in Loose Buffer Tube		Thixotropic Jelly Compound
Outer Jacket	Material	HDPE
	Thickness	Nom. 0.5mm

5. FIBER IDENTIFICATION

The color code of the individual fibers within the loose buffer tube shall be in accordance with Table 3.

Table 3. The Color Code of the Individual Fibers and Tubes, according DIN VDE 0888

Nr.	Color	Tube Nr.	Color
1	Red	1	Red
2	Green	2	Green
3	Blue	3	Blue
4	Yellow	4	Yellow
5	White	5	White
6	Grey	6	Grey
7	Brown	7	Brown
8	Violet	8	Violet
9	Turquoise		
10	Black		
11	Orange		
12	Pink		

7. PACKING AND MARKING

7.1 Cable Marking

The jacket shall be marked with white characters at intervals of one meter with following information. Other marking is also available if requested by customer.

- 1) Cable type and fiber number
- 2) Name of the manufacturer
- 3) Laser Symbol
- 4) Number of fibers
- 5) Type of fibers
- 6) Year of manufacture
- 7) Production batch
- 8) Length marking

Ex.1) For 96-fiber cable

0001m	Micro ABC 96F 250mu	LGCE Laser symbol 8 x 12F G.657A1 2019-1002	0002m
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7.2 Cable Packing

7.2.1 Standard length of cable shall be 8000 meters +/- 5%. Other cable length is also available if required by customer.

7.2.2 Each length of the cable shall be wound on a wooden drum.

7.2.3 Both ends of the cable shall be sealed with a suitable plastic cap to prevent the entry of moisture during shipping, handling and storage.

7.2.4 The cable ends shall be securely fastened to the reel to prevent the cable from becoming loose in transit or during placing operations.

7.2.5 The inner end of the cable is housed on the side of the reel without extra cable length for testing.

7.2.6 Wood-fiber or plastic board shall be secured with steel bands to protect the cable during normal handling and shipping.

7.3 Cable Reel

7.3.1 Details given below shall be distinctly marked with a weather proof material on the both outer sides of the reel flange. Other shipping mark is also available if requested by customer.



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- 1) Length of cable in meter
- 2) Number of fibers and size
- 3) Gross weight in kg
- 4) Reel number
- 5) Name of the manufacturer
- 6) Year of manufacture
- 7) Arrow showing the direction the drum shall be rolled

7.3.2 The cable shall be shipped on reels designed to prevent damage to the cable during shipment and installation.

8. SAFETY

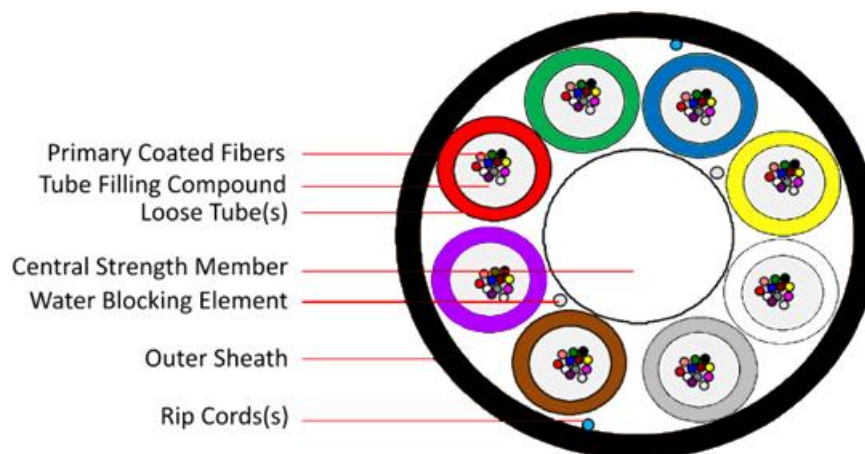
8.1 RoHS DIRECTIVE

All cables and any associated packing and labeling materials shall meet RoHS(Restriction of the use of certain Hazardous Substances) regulation as appropriate.

8.2 ISPM 15 DIRECTIVE

All wooden packing materials shall meet ISPM (International Standards for Phytosanitary Measures) regulations as appropriate.

< Cross-sectional Drawing of Cable >



* The drawing appearing on this page is not a warranty, and may be subject to change or modification without any prior notice

2. Diameter, Weight and Minimum Bending Radius

No. of Fibers	Nom. Cable Diameter	Approx. Weight (kg/km)	Minimum Bending Radius (mm)	
	(mm)		During Installation	Installed
96	6.5±0.3	38	130	100

*) Actual values for cable weight and diameter may deviate from the calculated values given in the table above.

== End of Specification ==