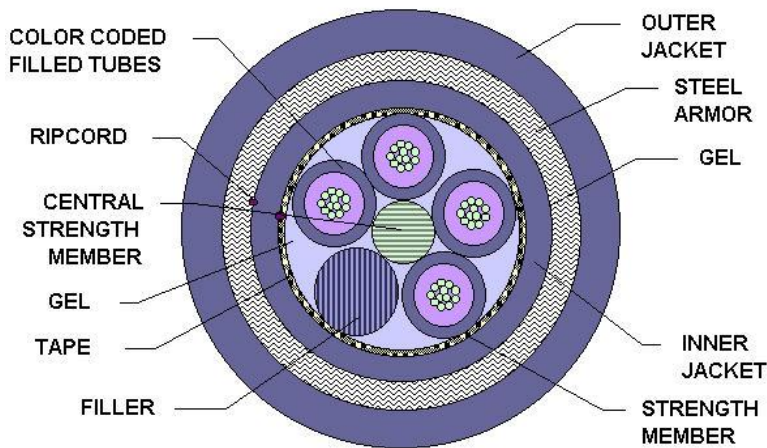




## OSP LOOSE TUBE DIRECT BURIAL FIBER OPTIC CABLE PRODUCT SPECIFICATION 43XXX74EMBSXNN

This document establishes the specifications for an outdoor, direct burial, armored single mode fiber optic cable, in a flooded loose buffer tube design. It contains test values for all-important mechanical, optical, and environmental parameters and as such, is the basis for all-incoming inspection and acceptance.

### 1.0 CABLE CROSS SECTION



### 2.0 OVERALL CABLE CONSTRUCTION

#### 2.1 Buffer tube

High Modulus Polymeric material

Dimension: 2.8 mm. nominal.

Tube and fiber color code per EIA/TIA-598 or as specified by customer.

Filling compound: A non-toxic and dermatological safe antioxidant hydrocarbon based gel.

#### 1. 2.2 Dielectric Central strength member.

Epoxy glass rod with an up-coat of polymer (if necessary per construction).

#### 2.3 Cable Core

The cable elements are stranded around the CSM, using reverse oscillation.

Moisture Resistance: The interstices are flooded with a homogeneous, non-hygroscopic, non-conductive and non-toxic, dermal safe polyolefin based compound to prevent water ingress and migration of moisture through the cable core. Then a non-wicking and non-hygroscopic polypropylene tape is applied longitudinally with a nominal 25% overlap.

Binder yarns are applied over the core tape.

#### 2.4 Cable strength

Circumferential strength members are placed over the cable core and under the outer sheath.



2.5 Inner Sheath

Polyethylene

A ripcord is applied under the inner sheath.

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2.6 Steel Armor tape

Corrugated flexible steel with plastic coating for bonding to sheath. The armor of each length of cable shall be electrically continuous with no more than one splice allowed per kilometer of cable. The breaking strength of any section of an armor tape containing a factory splice joint, shall not be less than 80% of the breaking strength of an adjacent section of the armor of equal length without a joint.

A ripcord is applied under the armor tape.

2.7 Outer Sheath

UV Resistant Black Polyethylene

2.8 Cable Markings

Indent printed: CCT GROUP43, FIBER OPTIC CABLE, # of fibers-SM, MM/YY (month and year of manufacture), TELEPHONE HANDSET SYMBOL sequentially meter marked. Special print as required by customer.

1. 2.9 Nominal Cable Dimensions & Weights

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CCT Part Number	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
4300674EMBSFNN	6	14.7	.580	207	139
4300874EMBSHNN	8	14.7	.580	211	142
4301274EMBSFNN	6	14.7	.580	208	140
4301274EMBSLNN	12	14.7	.580	207	139
4301874EMBSFNN	6	14.7	.580	208	140
4302474EMBSFNN	6	14.7	.580	209	141
4302474EMBSLNN	12	14.7	.580	207	139
4303074EMBSFNN	6	14.7	.580	205	138
4303274EMBSHNN	8	14.7	.580	204	137
4303674EMBSFNN	6	15.5	.610	239	160
4303674EMBSLNN	12	14.7	.580	213	143
4304874EMBSLNN	12	14.7	.580	205	138
4306074EMBSLNN	12	14.7	.580	205	138
4307274EMBSLNN	12	15.5	.610	238	160
4308474EMBSLNN	12	16.5	.650	251	169
4309674EMBSLNN	12	17.4	.685	281	189
4310874EMBSLNN	12	18.8	.740	334	224
4312074EMBSLNN	12	19.7	.775	349	234
4314474EMBSLNN	12	21.5	.845	412	277
4321674EMBSLNN	12	21.7	.853	426	286
4328874EMBSLNN	12	24.5	.963	523	351



### 1. 3.0 FIBER CHARACTERISTICS

Fiber Type	Single mode*
Maximum Attenuation @ 1310/1550nm	0.35/0.25 dB/km
Core Diameter	8.2 $\mu$ m
Cladding Diameter	125.0 $\pm$ 0.7 $\mu$ m
Maximum Core/Clad Concentricity Error	0.5 $\mu$ m
Maximum Cladding Non-circularity	1.0%
Primary Coating Diameter	245 $\pm$ 5 $\mu$ m
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.2 $\pm$ 0.4 $\mu$ m @ 1310nm 10.4 $\pm$ 0.8 $\mu$ m @ 1550nm
Temperature Dependence	$\leq$ 0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope	$\leq$ 0.092ps/nm <sup>2</sup> -km
Maximum PMD Link Design Value	0.08ps/ $\sqrt$ km
Group Refractive Index @ 1310/1550	1.4677 / 1.4682
Proof Test	100 kpsi

*\*According to ITU G.652c,d*

### 4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Maximum Tensile Load for:	Impact Resistance: 25 Impacts (min.)
Installation: 2700N / 607lbf	Flexing, $\pm$ 90°: 25 Cycles (min.)
Long Term: 890N / 200lbf	Temperature Rating:
Minimum bending radius:	Operation: -40°C to +70°C
Loaded: 20 x diameter	Installation: -40°C to +55°C
Unloaded: 10 x diameter	Storage: -50°C to +70°C
Crush Resistance: 440N/cm	Twist Test: 25 Cycles (min.)

### 5.0 PREPARATION FOR DELIVERY

The cable shall be packaged to preclude the inducement of damage due to handling and transportation, and shall be in accordance with the best commercial practices available.

### 6.0 APPLICABLE DOCUMENTS

Reference Documents:	TIA/EIA FOTP Standards 455 Color Coding of Fiber Optic Cables TIA/EIA-598 RUS 1755.900 GR-20-CORE
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