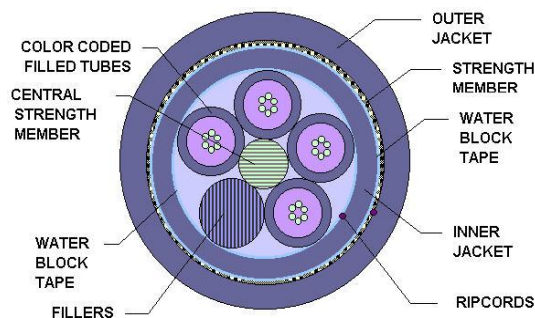




## OSP LOOSE TUBE INDOOR/OUTDOOR FIBER OPTIC CABLE PRODUCT SPECIFICATION 47XXX74EMBSXWN

This document establishes the specifications for an outdoor, heavy duty, all-dielectric, dry block fiber optic cable in a 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** *(representation of standard construction)*



### **2.0 OVERALL CABLE CONSTRUCTION**

#### **2.1 Buffer tube**

High Modulus Polymeric material

Dimension: 2.8 mm for  $\geq 6$  fiber cable, 2.23mm for 4 fiber cables and 1.98mm for 2 fiber cables, 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.

#### **2.2 Dielectric Central strength member**

Epoxy fiberglass 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: A water blocking tape is applied over the cable core to prevent water ingress and migration with a nominal of 25% overlap.

Non-wicking binder yarns are applied over the core tape.

#### **2.4 Inner Sheath**

UV Resistant MD Black Polyethylene (or color per customer request)

A ripcord is applied under the sheath.

#### **2.5 Moisture Resistance**

A water blocking tape is applied over the inner sheath to prevent water ingress and migration with a nominal of 25% overlap.



**2.6 Cable strength**

Circumferential strength members are placed over the water blocking tape and under the outer sheath.

**2.7 Outer Sheath**

UV Resistant MD Black Polyethylene (or color per customer request)

A ripcord is applied under the outer sheath.

**2.8 Cable Markings**

Indent printed: CCT GROUP47, 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.

**2.9 Nominal Cable Dimensions & Weights**

CCT Part Number	No. of Fibers	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
4700274EMBSBWN	2	2	11.9	.470	102	69
4700474EMBSDWN	4	4	11.6	.456	101	68
4700674EMBSFWN	6	6	13.6	.534	128	86
4700874EMBSHWN	8	8	13.6	.534	128	86
4701274EMBSFWN	12	6	13.6	.534	129	87
4701274EMBSLWN	12	12	13.6	.534	128	86
4701674EMBSHWN	16	8	13.6	.534	129	86
4701874EMBSFWN	18	6	13.6	.534	129	87
4702474EMBSFWN	24	6	13.6	.534	130	88
4702474EMBSLWN	24	12	13.6	.534	129	87
4703074EMBSFWN	30	6	13.6	.534	130	88
4703674EMBSFWN	36	6	14.3	.564	150	101
4703674EMBSLWN	36	12	13.6	.534	129	87
4704874EMBSLWN	48	12	13.6	.534	130	88
4706074EMBSLWN	60	12	13.6	.534	131	88
4707274EMBSLWN	72	12	14.3	.564	146	98
4708474EMBSLWN	84	12	15.3	.604	169	114
4709674EMBSLWN	96	12	16.2	.639	185	124
4710874EMBSLWN	108	12	17.9	.704	226	152
4712074EMBSLWN	120	12	18.5	.729	241	162
4714474EMBSLWN	144	12	20.3	.799	292	196
4721674EMBSLWN	216	12	21.0	.825	264	178
4728874EMBSLWN	288	12	23.7	.935	372	250



### **3.0 FIBER CHARACTERISTICS** - Physical Parameters

<u>Fiber Type</u>	<u>Singlemode*</u>
Maximum Attenuation @ 1310/1550nm	.35/.25 dB/km
Core Diameter, nominal	8.3 $\mu\text{m}$
Cladding Diameter	125.0 $\pm$ 1.0 $\mu\text{m}$
Primary Coating Diameter	245 $\pm$ 10 $\mu\text{m}$
Maximum Dispersion Slope	0.092 ps/nm <sup>2</sup> -km
Fiber Cutoff Wavelength	1150-1350nm
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter @ 1310nm	9.2 $\pm$ 0.4 $\mu\text{m}$
Mode Field Diameter @ 1550nm	10.5 $\pm$ 1.0 $\mu\text{m}$
Cladding Non-circularity	<1%
Core/Clad Offset	<.80 $\mu\text{m}$
Zero Dispersion Wavelength	1300-1322nm
Numerical Aperture	0.13
Group Refractive Index @ 1310/1550nm	1.467/1.4675
Proof Test	100 kpsi

*\*According to ITU G.652b*

### **4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE**

Maximum Tensile Load for:	Impact Resistance: 25 Impacts (min.)
Installation: 2700N / 607lbf	Flexing, $\pm 90^\circ$ : 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: 220N/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