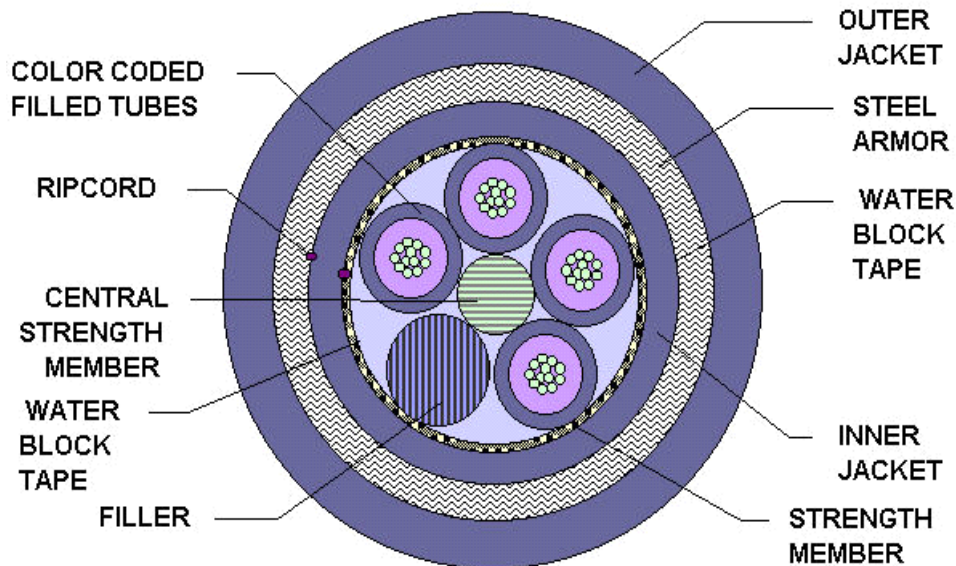


OSP LOOSE TUBE DIRECT BURIAL FIBER OPTIC CABLE PRODUCT SPECIFICATION 43XXX76EMBSXWN

This document establishes the specifications for an outdoor, direct burial, armored single mode fiber optic cable, in a dry block loose buffer tube design.

This document 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.

2.2 Dielectric Central strength member

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

Water swellable yarns are to be pulled in with the CSM.

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 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.

2.6 Moisture Resistance

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

2.7 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.

2.8 Outer Sheath

UV Resistant Black Polyethylene

2.9 Cable Markings

Indent printed: CCT GROUP 43, FIBER OPTIC CABLE, # of fibers-SM, TELEPHONE HANDSET SYMBOL, MM/YY (month and year of manufacture), sequentially meter marked. Special print as required by customer

2.10 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
4300476EMBSDWN	4	4	14.3	.562	181	122
4300676EMBSFWN	6	6	15.7	.619	214	144
4300876EMBSHWN	8	8	15.7	.619	213	143
4301276EMBSFWN	12	6	15.7	.619	214	144
4301276EMBSLWN	12	12	15.7	.619	213	143
4301676EMBSHWN	16	8	15.7	.619	214	144
4301876EMBSFWN	18	6	15.7	.619	214	144
4302476EMBSFWN	24	6	15.7	.619	216	145
4302476EMBSLWN	24	12	15.7	.619	218	147
4303076EMBSFWN	30	6	15.7	.619	216	145
4303676EMBSFWN	36	6	16.5	.649	235	158
4303676EMBSLWN	36	12	15.7	.619	214	144
4304876EMBSFWN	48	6	18.4	.724	280	188
4304876EMBSLWN	48	12	15.7	.619	215	145
4306076EMBSLWN	60	12	15.7	.619	215	145
4307276EMBSLWN	72	12	16.5	.649	235	158
4308476EMBSLWN	84	12	17.5	.689	268	180
4309676EMBSLWN	96	12	18.4	.724	280	188
4310876EMBSLWN	108	12	19.8	.779	333	224
4312076EMBSLWN	120	12	20.7	.814	356	239
4314476EMBSLWN	144	12	22.5	.884	415	279
4321676EMBSLWN	216	12	23.1	.910	428	288
4328876EMBSLWN	288	12	25.9	1.020	508	341



3.0 FIBER CHARACTERISTICS

Fiber Type	Singlemode*
Maximum Attenuation @ 1310/1550nm	0.40/0.30 dB/km
Cladding Diameter	125.0 ± 0.7 µm
Maximum Core/Clad Concentricity Error	0.5 µm
Maximum Cladding Non-circularity	0.7%
Primary Coating Diameter	245 ± 7 µm
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.0 ± 0.4µm @1310nm 10.1 ± 0.5µm @1550nm
Temperature Dependence	≤0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope	0.090ps/nm ² -km
Maximum PMD Link Design Value	0.06ps/√km
Group Refractive Index @ 1310/1550	1.467 / 1.468
Proof Test	100 kpsi

**ITU G.652.d*

4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Maximum Tensile Load for:	Impact Resistance: 25 Impacts (min.)
Installation: 2700N / 607lbf	Flexing, ±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