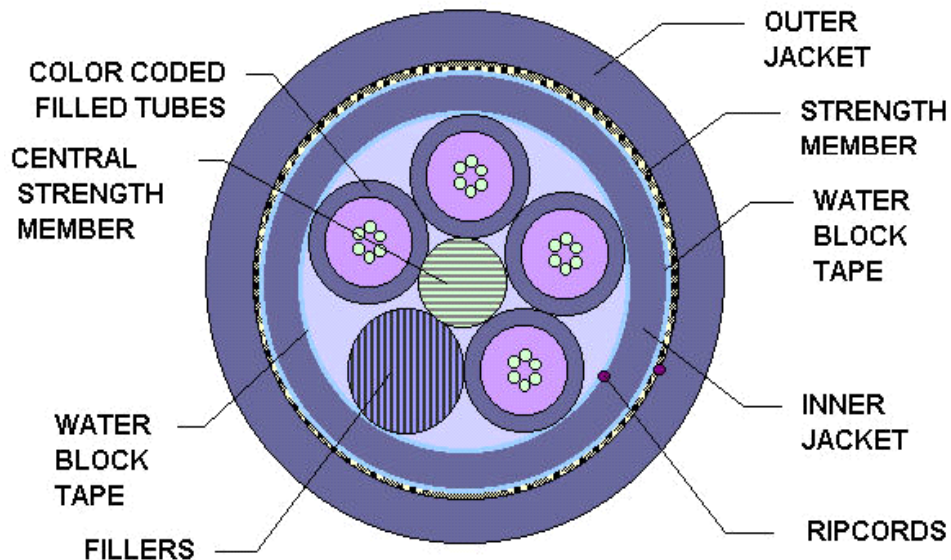




OSP LOOSE TUBE HEAVY DUTY FIBER OPTIC CABLE PRODUCT SPECIFICATION 45XXX76EMBSXWN

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 ≥ 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 GROUP45, 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.

2.9 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
4500276EMBSBWN	2	2	11.9	.470	102	69
4500476EMBSDWN	4	4	11.6	.456	101	68
4500676EMBSFWN	6	6	13.6	.534	128	86
4500876EMBSHWN	8	8	13.6	.534	128	86
4501276EMBSFWN	12	6	13.6	.534	129	87
4501276EMBSLWN	12	12	13.6	.534	128	86
4501676EMBSHWN	16	8	13.6	.534	129	86
4501876EMBSFWN	18	6	13.6	.534	129	87
4502476EMBSFWN	24	6	13.6	.534	130	88
4502476EMBSLWN	24	12	13.6	.534	129	87
4503076EMBSFWN	30	6	13.6	.534	130	88
4503676EMBSFWN	36	6	14.3	.564	150	101
4503676EMBSLWN	36	12	13.6	.534	129	87
4504876EMBSLWN	48	12	13.6	.534	130	88
4506076EMBSLWN	60	12	13.6	.534	131	88
4507276EMBSLWN	72	12	14.3	.564	146	98
4508476EMBSLWN	84	12	15.3	.604	169	114
4509676EMBSLWN	96	12	16.2	.639	185	124
4510876EMBSLWN	108	12	17.9	.704	226	152
4512076EMBSLWN	120	12	18.5	.729	241	162
4514476EMBSLWN	144	12	20.3	.799	292	196
4521676EMBSLWN	216	12	21.0	.825	264	178
4528876EMBSLWN	288	12	23.7	.935	372	250



3.0 FIBER CHARACTERISTICS

Physical Parameters

Fiber Type	Singlemode*
Maximum Attenuation @ 1310/1550nm	.40/.30 dB/km
Core Diameter, nominal	8.3 μ m
Cladding Diameter	125.0 \pm 1.0 μ m
Primary Coating Diameter	245 \pm 10 μ m
Maximum Dispersion Slope	0.092 ps/nm ² -km
Fiber Cutoff Wavelength	1150-1350nm
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter @ 1310nm	9.2 \pm 0.4 μ m
Mode Field Diameter @ 1550nm	10.5 \pm 1.0 μ m
Cladding Non-circularity	<1%
Core/Clad Offset	<.80 μ 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°: 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