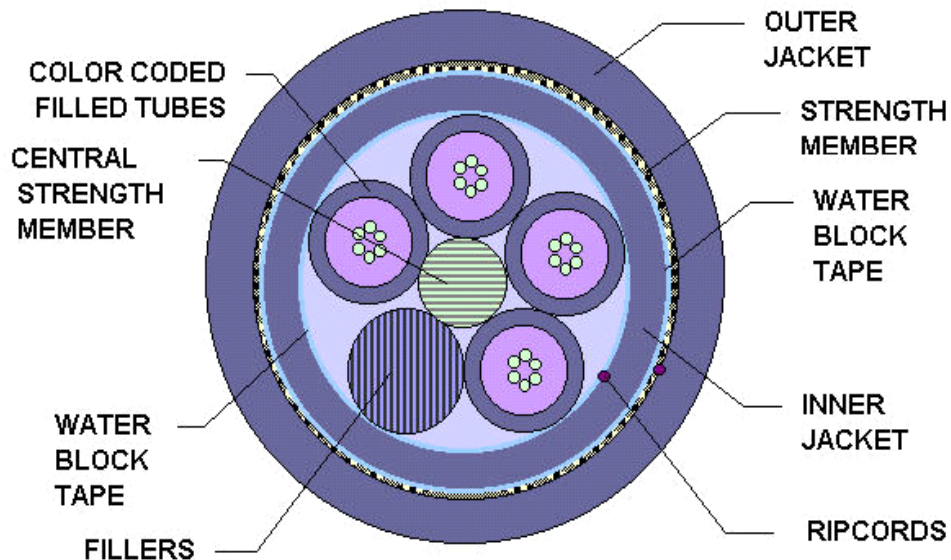




OSP LOOSE TUBE HEAVY DUTY FIBER OPTIC CABLE PRODUCT SPECIFICATION 45XXX74EMBSLWN

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
4513274EMBSLWN	132	12	19.5	0.769	271	185
4518074EMBSLWN	180	12	20.4	.805	274	184



3.0 FIBER CHARACTERISTICS

Physical Parameters

Fiber Type	Singlemode*
Maximum Attenuation @ 1310/1550nm	.35/.25 dB/km
Core Diameter, nominal	8.3 μm
Cladding Diameter	125.0 \pm 1.0 μm
Primary Coating Diameter	245 \pm 10 μm
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 μm
Mode Field Diameter @ 1550nm	10.5 \pm 1.0 μm
Cladding Non-circularity	<1%
Core/Clad Offset	<.80 μm
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