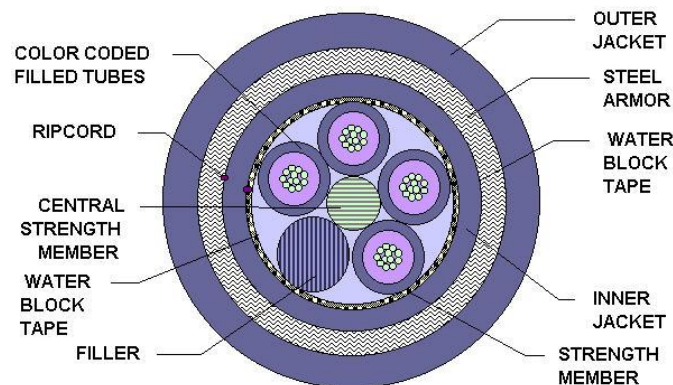




OSP LOOSE TUBE DIRECT BURIAL FIBER OPTIC CABLE PRODUCT SPECIFICATION 43XXX12GMBSXWN

This document establishes the specifications for an outdoor, direct burial, armored multimode fiber optic cable, in a dry block 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.

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 GROUP43, FIBER OPTIC CABLE, # of fibers-50/125, 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 per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
4300612GMBSFWN	6	15.7	.619	214	144
4300812GMBSHWN	8	15.7	.619	213	143
4301212GMBSFWN	6	15.7	.619	214	144
4301212GMBSLWN	12	15.7	.619	213	143
4301612GMBSHWN	8	15.7	.619	214	144
4301812GMBSFWN	6	15.7	.619	214	144
4302412GMBSFWN	6	15.7	.619	216	145
4302412GMBSLWN	12	15.7	.619	218	147
4303012GMBSFWN	6	15.7	.619	216	145
4303612GMBSFWN	6	16.5	.649	235	158
4303612GMBSLWN	12	15.7	.619	214	144
4304812GMBSLWN	12	15.7	.619	215	145
4306012GMBSLWN	12	15.7	.619	215	145
4307212GMBSLWN	12	16.5	.649	235	158
4308412GMBSLWN	12	17.5	.689	268	180
4309612GMBSLWN	12	18.4	.724	280	188
4310812GMBSLWN	12	19.8	.779	333	224
4312012GMBSLWN	12	20.7	.814	356	239
4314412GMBSLWN	12	22.5	.884	415	279
4321612GMBSLWN	12	23.1	.910	428	288
4328812GMBSLWN	12	25.9	1.020	508	341



3.0 FIBER CHARACTERISTICS

Fiber Type	Multimode Graded Index*
Maximum Attenuation @ 850/1300nm	3.0 /1.0 dB/km
Overfilled Bandwidth @850/1300nm	550/600MHz-km
1 Gigabit Ethernet Guaranteed Distance	600/600mtrs
Core Diameter, nominal	50 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Primary Coating Diameter	245 ± 10 µm
Cladding Non-circularity	<1%
Core-Clad Concentricity Error (Offset)	≤1.0 µm
Zero Dispersion Wavelength	1297-1316nm
Maximum Zero Dispersion Slope	0.101 ps/nm ² -km
Numerical Aperture	0.20 ± .015
Group Refractive Index @ 850/1300nm	1.483/1.479
Proof Test	100 kpsi

*IEEE 802.3

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