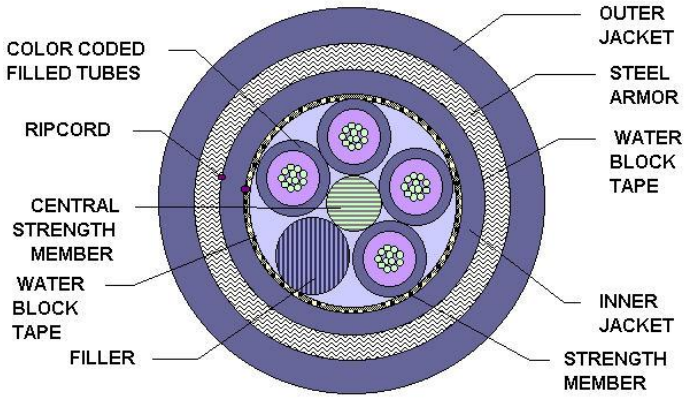
OSP LOOSE TUBE DIRECT BURIAL FIBER OPTIC CABLE
PRODUCT SPECIFICATION
43XXX12AMBSXWN

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
43XXX12AMBSFWN 6-30 Fibers	6	15.7	.619	214	144
4303612AMBSFWN	6	16.5	.649	235	158
4303612AMBSLWN	12	15.7	.619	214	144
4304812AMBSLWN	12	15.7	.619	215	145
4306012AMBSLWN	12	15.7	.619	215	145
4307212AMBSLWN	12	16.5	.649	235	158
4308412AMBSLWN	12	17.5	.689	268	180
4309612AMBSLWN	12	18.4	.724	280	188
4310812AMBSLWN	12	19.8	.779	333	224
4312012AMBSLWN	12	20.7	.814	356	239
4314412AMBSLWN	12	22.5	.884	415	279
4321612AMBSLWN	12	23.1	.910	428	288
4328812AMBSLWN	12	25.9	1.020	508	341

3.0 FIBER CHARACTERISTICS

Fiber Type	**Multimode Graded Index**
Maximum Attenuation @ 850/1300nm	3.00 /1.00 dB/km
Minimum Bandwidth @850/1300nm	400/400MHz-km
Core Diameter, nominal	50 ± 3 µm
Cladding Diameter	125.0 ± 2.0 µm
Primary Coating Diameter	245 ± 10 µm
Cladding Non-circularity	<2%
Core-Clad Concentricity	≤3 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	1.490/1.486
Proof Test	100 kpsi

4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Maximum Tensile Load for:
- Installation: 2700N / 607lbf
- Long Term: 890N / 200lbf

Minimum bending radius:
- Loaded: 20 x diameter
- Unloaded: 10 x diameter

Crush Resistance: 440N/cm

Impact Resistance: 25 Impacts (min.)
Flexing, ±90°: 25 Cycles (min.)
Temperature Rating:

Operation:	-40°C to +70°C
Installation:	-40°C to +55°C
Storage:	-50°C to +70°C

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