



FIGURE 8 CONSTRUCTION OUTSIDE PLANT WITH MESSENGER PRODUCT SPECIFICATION 58XXX12AEBSXNN

This document establishes the specifications for an aerial self-supporting fiber optic cable, loose buffer tube, flooded, with steel messenger and a polyethylene jacket. 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 OVERALL CABLE CONSTRUCTION

1.1 Buffer tube

High Modulus Polymeric material.

Dimension: 2.8 mm., nominal.

Tube and fiber color code per TIA/EIA-598

Filling compound: A non-toxic and dermatological safe antioxidant hydrocarbon based gel.

1.2 Central strength member

Fiberglass Epoxy Rod (Dielectric)

An up-coat of polymer (if necessary per construction)

1.3 Cable Core

Tubes and fillers (if needed for symmetry) are stranded around the CSM, using reverse oscillation.

Moisture Resistance: The interstices are flooded with a homogeneous, non-hygroscopic, non-conductive and non-toxic, dermal safe polyolefin based compound to prevent water ingress and migration of moisture through the cable core. Then a non-wicking and non-hygroscopic polypropylene tape is applied longitudinally with a nominal 25% overlap.

Binder yarns are applied over the core tape.

1.4 Cable strength

Circumferential strength members are placed over the cable core and under the outer sheath.

1.5 Outer Sheath

UV Resistant Black Polyethylene (or color per customer request)

A ripcord is applied under the outer sheath.

1.6 Messenger

7 strand steel messenger with a nominal O.D. of .245in. (per ASTM A640-97)

Breaking Strength: 6600lbs

UV Resistant Black Polyethylene.

Web: .080 x .100in.

1.7 Cable Markings

Indent printed: CCT GROUP58, FIBER OPTIC CABLE, # of fibers-50/125, MM/YY (month and year of manufacture), sequentially meter marked. Special print as required by customer.



1.8 Nominal Cable Dimensions & Weights

CCT Part Number	No. of Fibers Per Tube	Cable OD (in.)	Cable OD (mm)	Weight LB/MFT	Weight KG/KM
5800612AEBSFNN	6	0.435 x 0.900	11.0 x 22.9	214	318
5800812AEBSHNN	8	0.435 x 0.900	11.0 x 22.9	214	318
5801212AEBSFNN	6	0.435 x 0.900	11.0 x 22.9	214	318
5801212AEBSLNN	12	0.435 x 0.900	11.0 x 22.9	214	318
5801612AEBSHNN	8	0.435 x 0.900	11.0 x 22.9	214	318
5801812AEBSFNN	6	0.435 x 0.900	11.0 x 22.9	214	318
5802412AEBSFNN	6	0.435 x 0.900	11.0 x 22.9	214	318
5802412AEBSLNN	12	0.435 x 0.900	11.0 x 22.9	214	318
5803012AEBSFNN	6	0.435 x 0.900	11.0 x 22.9	214	318
5803612AEBSFNN	6	0.465 x 0.930	11.8 x 23.6	226	336
5803612AEBSLNN	12	0.435 x 0.900	11.0 x 22.9	214	318
5804812AEBSLNN	12	0.435 x 0.900	11.0 x 22.9	214	318
5806012AEBSLNN	12	0.435 x 0.900	11.0 x 22.9	214	318
5807212AEBSLNN	12	0.465 x 0.930	11.8 x 23.6	226	336
5808412AEBSLNN	12	0.505 x 0.970	12.8 x 24.6	244	363
5809612AEBSLNN	12	0.540 x 1.005	13.7 x 25.5	247	368
5810812AEBSLNN	12	0.585 x 1.060	14.8 x 26.9	269	401
5812012AEBSLNN	12	0.620 x 1.095	15.7 x 27.8	283	422
5814412AEBSLNN	12	0.690 x 1.165	17.5 x 29.5	316	471

2.0 FIBER CHARACTERISTICS - Physical Parameters

<u>Fiber Type</u>	<u>Multimode Graded Index</u>
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



3.0 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	

4.0 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.

5.0 APPLICABLE DOCUMENTS

Reference Documents:	TIA/EIA FOTP Standards 455
	Color Coding of Fiber Optic Cables TIA/EIA-598
	RUS 1755.900
	GR-20-CORE