



FIGURE 8 CONSTRUCTION OUTSIDE PLANT WITH MESSENGER PRODUCT SPECIFICATION 58XXX22JEBSXWN

This document establishes the specifications for an aerial self-supporting fiber optic cable, loose buffer tube, dry block, 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 (The 4 fiber cable is 2.2mm, 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

Epoxy glass rod with an up-coat of polymer (if necessary per construction).

Water swellable yarns are to be pulled in with the CSM.

1.3 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.

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-62.5/125, 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
5800222JEBSBWN	2	0.389 x 0.854	9.9 X 21.7	198	294
5800422JEBSDWN	4	0.396 x 0.861	10.1 x 21.9	196	291
5800622JEBSFWN	6	0.453 x 0.918	11.5 x 23.3	212	316
5800822JEBSHWN	8	0.453 x 0.918	11.5 x 23.3	212	316
5801222JEBSFWN	6	0.453 x 0.918	11.5 x 23.3	212	316
5801222JEBSLWN	12	0.453 x 0.918	11.5 x 23.3	212	316
5801622JEBSHWN	8	0.453 x 0.918	11.5 x 23.3	212	316
5801822JEBSFWN	6	0.453 x 0.918	11.5 x 23.3	212	316
5802422JEBSFWN	6	0.453 x 0.918	11.5 x 23.3	212	316
5802422JEBSLWN	12	0.453 x 0.918	11.5 x 23.3	212	316
5803022JEBSFWN	6	0.453 x 0.918	11.5 x 23.3	212	316
5803622JEBSFWN	6	0.483 x 0.948	12.3 x 24.0	225	334
5803622JEBSLWN	12	0.453 x 0.918	11.5 x 23.3	212	316
5804822JEBSLWN	12	0.453 x 0.918	11.5 x 23.3	212	316
5806022JEBSLWN	12	0.453 x 0.918	11.5 x 23.3	212	316
5807222JEBSLWN	12	0.483 x 0.948	12.3 x 24.0	225	334
5808422JEBSLWN	12	0.523 x 0.988	13.3 x 25.1	242	360
5809622JEBSLWN	12	0.558 x 1.023	14.2 x 26.0	245	364
5810822JEBSLWN	12	0.603 x 1.078	15.3 x 27.4	266	396
5812022JEBSLWN	12	0.638 x 1.113	16.2 x 28.3	279	416
5814422JEBSLWN	12	0.708 x 1.183	18.0 x 30.0	311	462

2.0 FIBER CHARACTERISTICS - Physical Parameters

<u>Fiber Type</u>	<u>Multimode Graded Index</u>
Maximum Attenuation @ 850/1300nm	3.2 /1.0 dB/km
Minimum Bandwidth @850/1300nm	200/600MHz-km
Core Diameter, nominal	62.5 ± 3 µm
Cladding Diameter	125.0 ± 1.0 µm
Primary Coating Diameter	245 ± 10 µm
Cladding Non-circularity	<2%
Core/Clad Offset	3 µm
Zero Dispersion Wavelength	1320-1365nm
Numerical Aperture	0.275 ± .015
Group Refractive Index @ 850/1300nm	1.496/1.491
Proof Test	100 kpsi

**Guaranteed Gigabit Ethernet Distance of 300/550mtr per IEEE802.3z.*



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