

1.0 SCOPE

This document establishes the specifications for an outdoor, all dielectric, Corning Leaf Singlemode, dry block fiber optic cable in a loose buffer tube design.

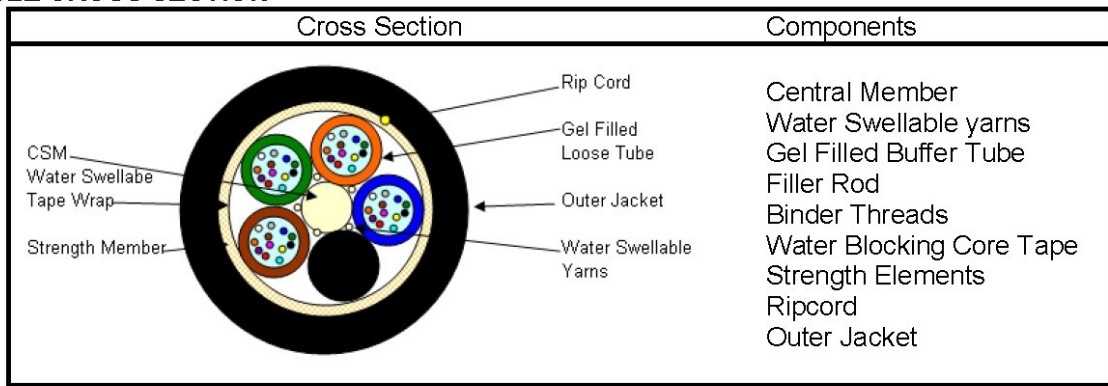
2.0 APPLICABLE DOCUMENTS

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

3.0 REQUIREMENTS

This document contains test values for all-important mechanical, optical, and environmental parameters and as such, is the basis for all-incoming inspection and acceptance.

4.0 CABLE CROSS SECTION



5.0 OVERALL CABLE CONSTRUCTION

- 5.1 Buffer tube
 High Modulus Polymeric material.
 Dimension: 2.8 mm, nominal for ≥6 fibers, 2.2mm, nominal for a 4 fiber cable and 1.98mm, nominal for a 2 fiber cable.
 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.
- 5.2 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.
- 5.3 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.
- 5.4 Cable strength
 Circumferential strength members are placed over the cable core and under the outer sheath.
- 5.5 Outer Sheath
 UV Resistant Black Polyethylene. (or color per customer request)
 A ripcord is applied under the outer sheath.
- 5.6 Cable Markings

Indent printed- **CCT FIBER OPTIC CABLE**, # of fibers-SM LEAF G.655, CONVERGENT CONNECTIVITY TECHNOLOGY, TELEPHONE HANDSET SYMBOL, MM/YY (Month & Year of manufacture), Sequentially meter marked. Special print as required by customer.

Date: July 27, 2012

5.7 Nominal Cable Dimensions & Weights

Part Number	No. of Fibers	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft	
4200274LEBSFWN	2	2	9.6	.379	50	34	
	4	4	9.8	.386	52	35	
	6	6	11.3	.443	90	61	
	8	8	11.3	.443	90	61	
4201274LEBSFWN	12	6	11.3	.443	91	61	
4201274LEBSLWN	12	12	11.3	.443	91	61	
	18	6	11.3	.443	91	62	
	24	6	11.3	.443	92	62	
	24	12	11.3	.443	93	61	
	30	6	11.3	.443	94	63	
	4203674LEBSFWN	36	6	12.0	.473	110	74
	4203674LEBSLWN	36	12	11.3	.443	90	61
48		12	11.3	.443	90	61	
60		12	11.3	.443	90	61	
72		12	12.0	.473	110	74	
84		12	13.0	.513	127	85	
96		12	13.9	.548	140	94	
108		12	15.1	.593	168	113	
120		12	16.0	.628	188	127	
144		12	17.7	.698	231	155	
168		12	17.9	.704	209	140	
216	12	18.6	.734	235	158		
240	12	19.7	.774	255	171		
4228874LEBSXWN	288	12	21.4	.844	317	213	

6.0 FIBER CHARACTERISTICS

Fiber Type	Corning Leaf Single mode*
Maximum Attenuation @ 1550/1625nm**	0.25/0.27 dB/km
Cladding Diameter	125.0 ± 0.7 μm
Maximum Core/Clad Concentricity Error	0.5 μm
Maximum Cladding Non-circularity	0.7%
Primary Coating Diameter	245 ± 5 μm
Mode Field Diameter	9.6 ± 0.4 μm @1550nm
Temperature Dependence	≤0.05dB/km (-60°C to 85°C)
Dispersion	
1530nm	2.0 to 5.5 ps/nm-km
1565nm	4.5 to 6.0 ps/nm-km
1625nm	5.8 to 11.2 ps/nm-km
Maximum PMD Link Design Value @ 1550nm	0.04ps/√km
Group Refractive Index @ 1550nm	1.469
Proof Test	100 kpsi

*According to ITU G.655

*** Please note that the attenuation will be measured only at 1550nm and will not be measured at the 1625nm wavelength.



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7.0 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: 220N/cm

Impact Resistance: 25 Impacts (min.)

Flexing, $\pm 90^\circ$: 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.)

8.0 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.

