

## 1.0 SCOPE

This document establishes the specifications for an outdoor, direct burial, armored, singlemode OS2, fiberoptic cable, in a dry block loose buffer tube design.

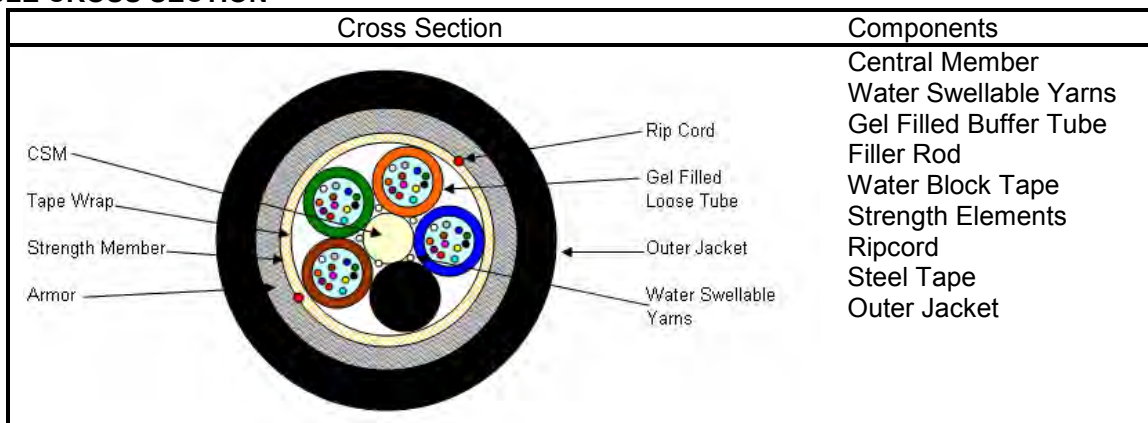
## 2.0 APPLICABLE DOCUMENTS

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.

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 armored tape.

### 5.5 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.

5.6 Outer Sheath

UV Resistant Black Polyethylene

5.7 Cable Markings

Indent printed- REMFO 28 SERIES, FIBER OPTIC CABLE, # of fibers-SM, REMEE PRODUCTS CORP., TELEPHONE HANDSET SYMBOL, MM/YY (Month & Year of manufacture), Sequentially meter marked.

Special print as required by customer.

5.8 Nominal Cable Dimensions & Weights

Remee Products Part Number	No. of Fibers	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
28-006-76E-EBSFWN	6	6	13.4	.528	160	108
28-008-76E-EBSHWN	8	8	13.4	.528	160	108
28-012-76E-EBSFWN	12	6	13.4	.528	165	111
28-012-76E-EBSLWN	12	12	13.4	.528	165	111
28-016-76E-EBSHWN	16	8	13.4	.528	165	111
28-018-76E-EBSFWN	18	6	13.4	.528	166	112
28-024-76E-EBSFWN	24	6	13.4	.528	167	112
28-024-76E-EBSLWN	24	12	13.4	.528	165	111
28-030-76E-EBSFWN	30	6	13.4	.528	163	110
28-036-76E-EBSFWN	36	6	14.2	.558	185	124
28-036-76E-EBSLWN	36	12	13.4	.528	166	112
28-048-76E-EBSLWN	48	12	13.4	.528	167	112
28-060-76E-EBSLWN	60	12	13.4	.528	163	109
28-072-76E-EBSLWN	72	12	14.2	.558	184	124
28-084-76E-EBSLWN	84	12	15.2	.598	205	138
28-096-76E-EBSLWN	96	12	16.1	.633	224	151
28-108-76E-EBSLWN	108	12	17.2	.678	258	173
28-120-76E-EBSLWN	120	12	18.1	.713	287	193
28-144-76E-EBSLWN	144	12	19.9	.783	342	230
28-216-76E-EBSLWN	216	12	20.5	.809	328	221
28-288-76E-EBSLWN	288	12	23.3	.919	429	288



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## 6.0 FIBER CHARACTERISTICS

Fiber Type	Single mode*
Maximum Attenuation @ 1310/1550nm	0.40/0.30 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 ± 7 µm
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.0 ± 0.4µm @1310nm 10.1 ± 0.5µm @1550nm
Temperature Dependence	≤0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope	0.090ps/nm <sup>2</sup> -km
Maximum PMD Link Design Value	0.06ps/√km
Group Refractive Index @ 1310/1550	1.467 / 1.468
Proof Test	100 kpsi

\*According to ITU G.652.d

## 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: 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.)

## 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.



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