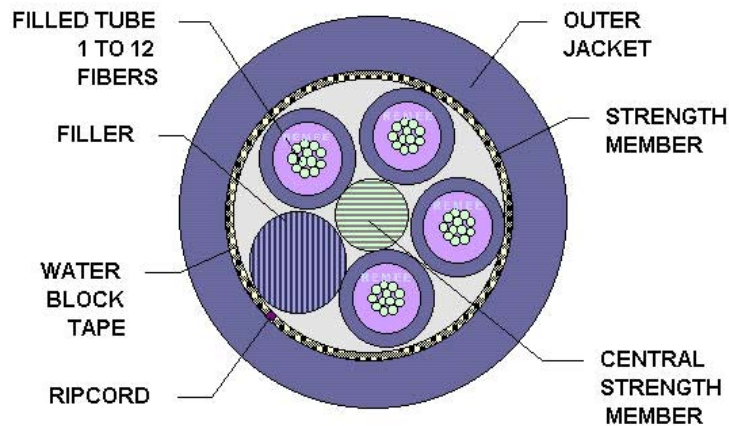




## OSP LOOSE TUBE ALL DIELECTRIC FIBER OPTIC CABLE PRODUCT SPECIFICATIONS 42XXX74EEBSXWN

This document establishes the specifications for an outdoor, all dielectric, single mode, dry block fiber optic cable in a 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 for  $\geq 6$  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.

#### 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 Outer Sheath**

UV Resistant Black Polyethylene (or color per customer request).

A ripcord is applied under the outer sheath.

**2.6 Cable Markings**

Indent printed: CCT GROUP42, FIBER OPTIC CABLE, # of fibers-SM, TELEPHONE HANDSET SYMBOL (month and year of manufacture), sequentially meter marked. Special print as required by customer.

**2.7 Nominal Cable Dimensions & Weights**

CCT Part Number	No. of Fibers	No. of Fibers per Tube	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
4200274EEBSBWN	2	2	9.6	.379	50	34
4200474EEBSDWN	4	4	9.8	.386	52	35
4200674EEBSFWN	6	6	11.3	.443	90	61
4200874EEBSHWN	8	8	11.3	.443	90	61
4201274EEBSFWN	12	6	11.3	.443	91	61
4201274EEBSLWN	12	12	11.3	.443	91	61
4201874EEBSFWN	18	6	11.3	.443	91	62
4202474EEBSFWN	24	6	11.3	.443	92	62
4202474EEBSLWN	24	12	11.3	.443	93	61
4203074EEBSFWN	30	6	11.3	.443	94	63
4203674EEBSFWN	36	6	12.0	.473	110	74
4203674EEBSLWN	36	12	11.3	.443	90	61
4204874EEBSLWN	48	12	11.3	.443	90	61
4206074EEBSLWN	60	12	11.3	.443	90	61
4207274EEBSLWN	72	12	12.0	.473	110	74
4208474EEBSLWN	84	12	13.0	.513	127	85
4209674EEBSLWN	96	12	13.9	.548	140	94
4210874EEBSLWN	108	12	15.1	.593	168	113
4212074EEBSLWN	120	12	16.0	.628	188	127
4214474EEBSLWN	144	12	17.7	.698	231	155
4216874EEBSLWN	168	12	17.9	.704	209	140
4221674EEBSLWN	216	12	18.6	.734	235	158
4224074EEBSLWN	240	12	19.7	.774	255	171
4228874EEBSLWN	288	12	21.4	.844	317	213



### **3.0 FIBER CHARACTERISTICS**

Fiber Type	Single mode*
Maximum Attenuation @ 1310/1550nm	0.35/0.25 dB/km
Core Diameter	8.2 $\mu\text{m}$
Cladding Diameter	125.0 $\pm$ 0.7 $\mu\text{m}$
Maximum Core/Clad Concentricity Error	0.5 $\mu\text{m}$
Maximum Cladding Non-circularity	0.7%
Primary Coating Diameter	245 $\pm$ 7 $\mu\text{m}$
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.0 $\pm$ 0.4 $\mu\text{m}$ @1310nm 10.1 $\pm$ 0.5 $\mu\text{m}$ @1550nm
Temperature Dependence	$\leq$ 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/ $\sqrt{\text{km}}$
Group Refractive Index @ 1310/1550	1.467 / 1.468
Proof Test	100 kpsi

*\*According to ITU G.652.d*

### **4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE**

Maximum Tensile Load for:	Impact Resistance: 25 Impacts (min.)
Installation: 2700N / 607lbf	Flexing, $\pm$ 90°: 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	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