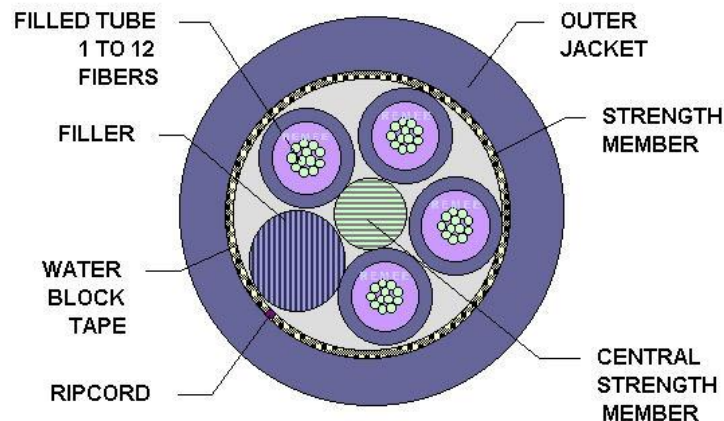




## OSP LOOSE TUBE ALL DIELECTRIC FIBER OPTIC CABLE PRODUCT SPECIFICATION 42XXX12CEBSXWN

This document establishes the specifications for an outdoor, all dielectric, multimode, 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-50/125, (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
4200212CEBSBWN	2	2	9.6	.379	50	34
4200412CEBSDWN	4	4	9.8	.386	52	35
4200612CEBSFWN	6	6	11.3	.443	90	61
4200812CEBSHWN	8	8	11.3	.443	90	61
4201212CEBSFWN	12	6	11.3	.443	91	61
4201212CEBSLWN	12	12	11.3	.443	91	61
4201812CEBSFWN	18	6	11.3	.443	91	62
4202412CEBSFWN	24	6	11.3	.443	92	62
4202412CEBSLWN	24	12	11.3	.443	93	61
4203012CEBSFWN	30	6	11.3	.443	94	63
4203612CEBSFWN	36	6	12.0	.473	110	74
4203612CEBSLWN	36	12	11.3	.443	90	61
4204812CEBSLWN	48	12	11.3	.443	90	61
4206012CEBSLWN	60	12	11.3	.443	90	61
4207212CEBSLWN	72	12	12.0	.473	110	74
4208412CEBSLWN	84	12	13.0	.513	127	85
4209612CEBSLWN	96	12	13.9	.548	140	94
4210812CEBSLWN	108	12	15.1	.593	168	113
4212012CEBSLWN	120	12	16.0	.628	188	127
4214412CEBSLWN	144	12	17.7	.698	231	155
4216812CEBSLWN	168	12	17.9	.704	209	140
4219212CEBSLWN	192	12	17.9	.704	211	142
4221612CEBSLWN	216	12	18.6	.734	235	158
4224012CEBSLWN	240	12	19.7	.774	255	171
4228812CEBSLWN	288	12	21.4	.844	317	213



### **3.0 FIBER CHARACTERISTICS**

Fiber Type	Multimode*
Maximum Attenuation @ 850/1300nm	3.0 /1.0 dB/km
Minimum Bandwidth @850/1300nm	500/500MHz-km
Core Diameter, nominal	50 ± 2.5 µm
Cladding Diameter	125.0 ± 2.0 µm
Primary Coating Diameter	245 ± 10 µm
Cladding Non-circularity	<1%
Core-Clad Concentricity	≤1.5 µm
Zero Dispersion Wavelength	1300-1320nm
Numerical Aperture	0.20 ± .015
Group Refractive Index @ 850/1300nm	1.483/1.478
Proof Test	100 kpsi

*\*Guaranteed Gigabit Ethernet Distance of 600/600mtr at 850/1300nm for 1 Gb/s per IEEE802.3z.*

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

Maximum Tensile Load for:	Impact Resistance: 25 Impacts (min.)
Installation: 2700N / 607lbf	Flexing, ±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