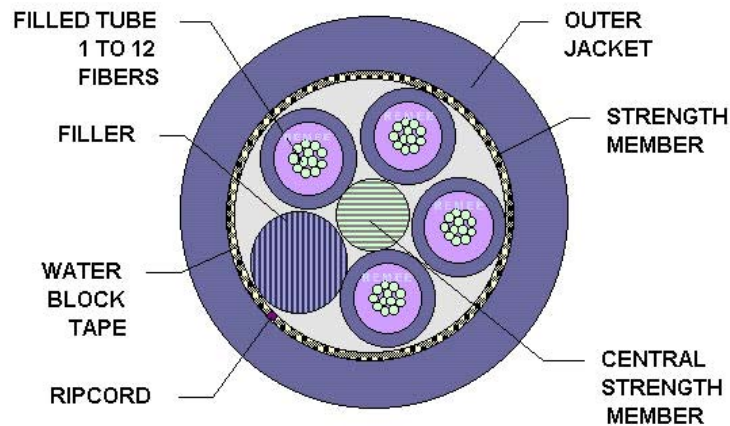




## OSP LOOSE TUBE ALL DIELECTRIC FIBER OPTIC CABLE PRODUCT SPECIFICATIONS 42XXX76EEZSXWN

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 Orange Polyethylene.

A ripcord is applied under the outer sheath.

**2.6 Cable Markings**

Indent printed: NCDPW FIBER OPTIC CABLE, # of fibers-SM, TELEPHONE HANDSET SYMBOL (month and year of manufacture), sequentially meter marked.

**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
4200276EEZSBWN	2	2	9.6	.379	50	34
4200476EEZSDWN	4	4	9.8	.386	52	35
4200676EEZSFWN	6	6	11.3	.443	90	61
4200876EEZSHWN	8	8	11.3	.443	90	61
4201276EEZSFWN	12	6	11.3	.443	91	61
4201276EEZSLWN	12	12	11.3	.443	91	61
4201876EEZSFWN	18	6	11.3	.443	91	62
4202476EEZSFWN	24	6	11.3	.443	92	62
4202476EEZSLWN	24	12	11.3	.443	93	61
4203076EEZSFWN	30	6	11.3	.443	94	63
4203676EEZSFWN	36	6	12.0	.473	110	74
4203676EEZSLWN	36	12	11.3	.443	90	61
4204876EEZSLWN	48	12	11.3	.443	90	61
4206076EEZSLWN	60	12	11.3	.443	90	61
4207276EEZSLWN	72	12	12.0	.473	110	74
4208476EEZSLWN	84	12	13.0	.513	127	85
4209676EEZSLWN	96	12	13.9	.548	140	94
4210876EEZSLWN	108	12	15.1	.593	168	113
4212076EEZSLWN	120	12	16.0	.628	188	127
4214476EEZSLWN	144	12	17.7	.698	231	155
4216876EEZSLWN	168	12	17.9	.704	209	140
4221676EEZSLWN	216	12	18.6	.734	235	158
4224076EEZSLWN	240	12	19.7	.774	255	171
4228876EEZSLWN	288	12	21.4	.844	317	213



### **3.0 FIBER CHARACTERISTICS**

Fiber Type	Single mode*
Maximum Attenuation @ 1310/1550nm	0.40/030 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 10.4 $\pm$ 0.5 $\mu\text{m}$ @1550nm
Temperature Dependence	$\leq$ 0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope	0.089ps/nm <sup>2</sup> -km
Maximum PMD Link Design Value	0.06ps/ $\sqrt{\text{km}}$
Group Refractive Index @ 1310/1550	1.4677 / 1.4682
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