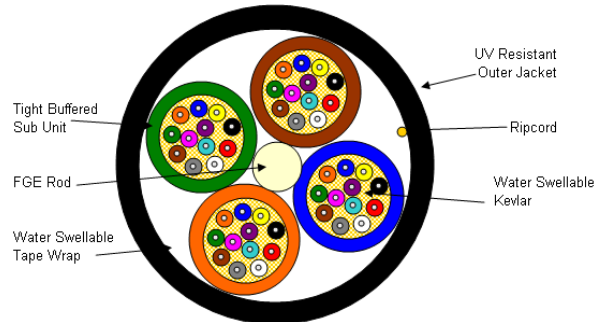




## **TIGHT BUFFER PLENUM FIBER OPTIC CABLE PRODUCT SPECIFICATION 99XXX76EKBSXOP**

This document establishes the specification requirements for an indoor/outdoor plenum distribution fiber optic cable. This cable construction consists of single mode fibers in a distribution tight-buffered design with a plenum rated jacket. 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 Tight Buffered Fiber**

Dimension: 900 $\mu$ m, nominal.

Tight buffered fiber color code: 1-blue, 2-orange, 3-green, 4-brown, 5-slate, 6-white, 7-red, 8-black, 9-yellow, 10-violet, 11-rose, and 12-aqua.

#### **2.2 Sub-unit consists of water swellable aramid yarns that are pulled in with the tight-buffered fibers under a sub-unit jacket that is uniquely identified.**

#### **2.3 Cable strength Member**

Fiberglass Epoxy Rod (dielectric)

An up coat of plenum material (if necessary per construction for symmetry)

#### **2.4 Cable Core**

Sub-units and fillers (if needed) 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.

#### **2.5 Outer Sheath**

UV Resistant black plenum rated PVDF jacket (or color per customer request)

#### **2.6 Cable Markings Indent printed: CCT GROUP99, FIBER OPTIC CABLE, # of fibers-SM, MM/YY (month and year of manufacture), OFNP C(ETL)US, sequentially meter marked. Special print as required by customer.**



2.7 Nominal Cable Dimensions & Weights

CCT Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
9902476EKBSFOP	24	13.2	0.521	142	95
9903676EKBSFOP	36	15.9	0.626	216	145
9904876EKBSLOP	48	15.5	0.609	188	127
9907276EKBSLOP	72	18.6	0.731	295	198
9909676EKBSLOP	96	22.6	0.891	457	307

**3.0 FIBER CHARACTERISTICS - Physical Parameters (nominal)**

<u>Fiber Type</u>	<u>Single mode*</u>
Maximum Attenuation @ 1310/1550nm**	0.40/0.30 dB/km
Core Diameter	8.2 μm
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
Cabled Cutoff Wavelength	<1260nm
Mode Field Diameter	9.2 ± 0.4μm @1310nm 10.4 ± 0.5μm @1550nm
Temperature Dependence	≤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/√km
Group Refractive Index @ 1310/1550	1.4677 / 1.4682
Proof Test	100 kpsi

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

\*\*Measured attenuations on shipping reels will not exceed the nominal values by .75dB/km.

**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 +85°C
Loaded: 20 x diameter	Installation: 0°C to +75°C
Unloaded: 10 x diameter	Storage: -40°C to +85°C
Crush Resistance: 220N/cm	*Must be the temperature of the cable



## **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  
   UL 910  
   GR-409-CORE