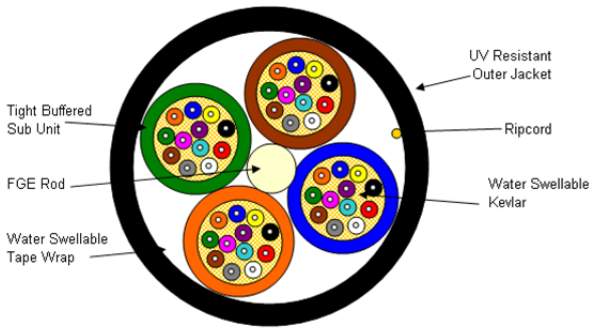
TIGHT BUFFER PLENUM FIBER OPTIC CABLE
PRODUCT SPECIFICATION
9914476EKBSLON

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: 900µm, 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 GROUP 99, FIBER OPTIC CABLE, # of fibers-SM, MM/YY (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	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
9914476EKBSLON	144	26.9	1.059	586	394

3.0 FIBER CHARACTERISTICS - Physical Parameters (nominal)

Fiber Type	Single mode*
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^2-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:
- Installation: 2700N / 607lbf
- Long Term: 890N / 200lbf

Minimum bending radius:
- Loaded: 20 x diameter
- Unloaded: 10 x diameter

Crush Resistance: 220N/cm

Impact Resistance: 25 Impacts (min.)
Flexing, ±90°: 25 Cycles (min.)
Temperature Rating*:
- Operation: -40°C to +85°C
- Installation: 0°C to +75°C
- Storage: -40°C to +85°C

**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
GR-409-CORE