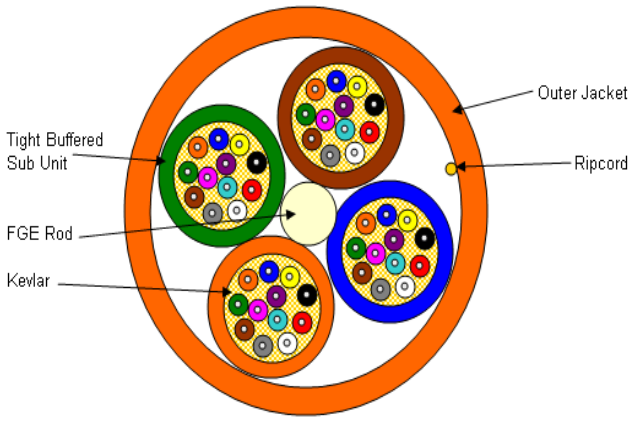
TIGHT BUFFER PLENUM FIBER OPTIC CABLES
PRODUCT SPECIFICATION
99XXX12CRZSXNP

This document establishes the specification requirements for a distribution fiber optic cable. This cable construction consists of multimode 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 *(Representation of a standard 48 fiber construction)*



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 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.
A non-wicking and non-hygroscopic tape is applied longitudinally with a nominal 25% overlap.
Binder yarns are applied over the core tape.

2.5 Outer Sheath
Orange plenum rated jacket (or color per customer request)

2.6 Cable Markings
Indent printed: CCT GROUP99, FIBER OPTIC CABLE, # of fibers-50/125, 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
9901812CRZSFNP	18	13.9	0.546	173	116
9902412CRZSFNP	24	13.9	0.546	170	114
9903612CRZSFNP	36	16.7	0.656	253	170
9904812CRZSLNP	48	16.1	0.634	225	151
9906012CRZSLNP	60	17.7	0.696	275	185
9907212CRZSLNP	72	19.2	0.756	334	224

3.0 FIBER CHARACTERISTICS- Physical Parameters (nominal)

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.*

***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, -20°C to +85°C
- Installation, 0°C to +75°C

Storage, -40°C to +85°C

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