TIGHT BUFFER OFNR CABLES
PRODUCT SPECIFICATION
77XXX12SAASXNF

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 riser rated PVC 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 OVERALL CABLE CONSTRUCTION

1.1 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.

1.2 Sub-unit consists of aramid yarns that are pulled in with the tight-buffered fibers under a sub-unit jacket.

1.3 Cable strength Member
Fiberglass Epoxy Rod (dielectric)
An up coat of PVC (if necessary per construction for symmetry)

1.4 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.

1.5 Outer Sheath
Aqua riser rated PVC jacket (or color per customer request)

1.6 Cable Markings
Indent printed: CCT GROUP77, FIBER OPTIC CABLE, # of fibers-50/125 10 GIG OM3, MM/YY (month and year of manufacture), OFNR C(ETL)US sequentially meter marked. Special print as required by customer.

1.7 Nominal Cable Dimensions & Weights

CCT Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
7701812SAASFNF	18	13.9	0.546	155	104
7702412SAASFNF	24	13.9	0.546	151	101
7703612SAASFNF	36	16.9	0.666	230	155
7704812SAASLNF	48	16.1	0.634	201	135
7706012SAASLNF	60	17.7	0.696	246	165
7707212SAASLNF	72	19.2	0.756	304	204
7709612SAASLNF	96	23.5	0.926	471	316
7714412SAASLNF	144	27.4	1.078	580	390

2.0 FIBER CHARACTERISTICS - Physical Parameters (nominal)

Fiber Type	Multimode*
Maximum Attenuation @ 850/1300nm**	3.0 /1.0 dB/km
LED Performance (Overfilled Launch Bandwidth)	1500/500MHz-km@850/1300
Laser EMB Performance	2000/500MHz-km@850/1300
Core Diameter, nominal	50 ± 3.0 µm
Cladding Diameter	125.0 ± 2.0 µm
Primary Coating Diameter	245 ± 5 µm
Cladding Non-circularity	<2%
Core-Clad Concentricity	≤3.0 µm
Zero Dispersion Wavelength	1300-1320nm
Maximum Zero Dispersion Slope	0.101 ps/nm^2-km
Numerical Aperture	0.20 ± .015
Group Refractive Index @ 850/1300nm	1.481/1.476
Proof Test	100 kpsi

*Guaranteed Gigabit Ethernet Distance of 300mtr at 850nm for 10 Gb/s per IEEE802.3ae and 1000mtr at 850nm for 1 Gb/s per IEEE802.3z.
**Measured attenuations on shipping reels will not exceed the nominal values by .75dB/km.

3.0 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: -55°C to +85°C

4.0 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.

5.0 APPLICABLE DOCUMENTS

Reference Documents: TIA/EIA FOTP Standards 455
Color Coding of Fiber Optic Cables TIA/EIA-598
UL 1666
GR-409-CORE