TIGHT BUFFER OFNR CABLES
PRODUCT SPECIFICATION
77XXX12HGBSXXF

This document establishes the specification requirements for a indoor/outdoor distribution fiber optic cable. This cable construction consists of multimode OM4 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 water swellable aramid yarns that are pulled in with the tight-buffered fibers under a sub-unit jacket. The subunits are colored per TIA/EIA-598 or orange and are numbered for identification.

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.
Binder yarns are applied over the cable core.

1.5 Outer Sheath
UV Resistant Black riser rated PVC jacket (or color per customer request)

1.6 Cable Markings
Indent printed: CCT GROUP77, FIBER OPTIC CABLE, # of fibers-50/125, 10GIG OM4, MM/YY (month and year of manufacture), OFNP 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
7701812HGBSFXF	18	13.7	0.540	142	96
7702412HGBSFXF	24	13.7	0.540	142	96
7703612HGBSFXF	36	16.8	0.660	221	148
7704812HGBSLXF	48	16.0	0.628	198	133
7706012HGBSLXF	60	17.7	0.696	233	157

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)	3500/500MHz-km@850/1300
Laser EMB Performance	4700/500MHz-km@850/1300
Core Diameter, nominal	50 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Primary Coating Diameter	245 ± 10 µm
Cladding Non-circularity	<1%
Core-Clad Concentricity	≤1.5 µm
Zero Dispersion Wavelength	1295-1320nm
Maximum Zero Dispersion Slope	0.11 ps/nm^2-km
Numerical Aperture	0.20 ± .015
Group Refractive Index @ 850/1300nm	1.483/1.478
Proof Test	100 kpsi

**Guaranteed Gigabit Ethernet Distance of 550mtr 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