



TIGHT BUFFER OFNR CABLES PRODUCT SPECIFICATION 77XXX12HABNOOF

This document establishes the specification requirements for a distribution indoor/outdoor (suitable for duct outdoors) 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 Cable strength

Aramid yarns with water swellable characteristics are pulled in with the tight-buffered fibers under the outer jacket.

1.3 Outer Sheath

Pressure extruded black UV resistant riser rated PVC jacket (or color per customer request)

1.4 Cable Markings

Indent printed: CCT GROUP77, FIBER OPTIC CABLE, # of fibers-50/125,10GIG OM4, MM/YY (month and year of manufacture), OFNR C(ETL)US, sequentially meter marked. Special print as required by customer.

1.5 Nominal Cable Dimensions & Weights

CCT Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
7700212HABNOOF	2	4.6	.180	19	13
7700412HABNOOF	4	5.0	.195	22	15
7700612HABNOOF	6	5.3	.210	27	18
7700812HABNOOF	8	5.7	.225	31	21
7701212HABNOOF	12	6.6	.260	40	27



2.0 FIBER CHARACTERISTICS

2.1 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: 2&4-fiber 1405N/315lbf, 6&8-fiber 1610N/362lbf
12-fiber 2700N/600lbf
Long Term: 2&4-fiber 455N/102lbf, 6&8-fiber 535N/120lbf
12-fiber 600N/135lbf

Minimum bending radius:

Loaded: 20 x diameter
Unloaded: 10 x diameter

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

Crush Resistance: 100N/cm

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