



## TIGHT BUFFER OFNR CABLES PRODUCT SPECIFICATION 77XXX12AAZNONF

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 Cable strength

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

#### 1.3 Outer Sheath

Orange riser rated PVC jacket (or color per customer request)

#### 1.4 Cable Markings

Indent printed: CCT GROUP77, FIBER OPTIC CABLE, # of fibers-50/125, 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 |
|-----------------|---------------|---------------|----------------|--------------|------------------|
| 7700212AAZNONF  | 2             | 4.3           | .170           | 16           | 11               |
| 7700412AAZNONF  | 4             | 4.7           | .185           | 19           | 13               |
| 7700612AAZNONF  | 6             | 5.1           | .200           | 24           | 16               |
| 7700812AAZNONF  | 8             | 5.3           | .210           | 27           | 18               |
| 7701212AAZNONF  | 12            | 6.4           | .250           | 34           | 23               |



## **2.0 FIBER CHARACTERISTICS**

### **2.1 Physical Parameters (nominal)**

|                                     |                               |
|-------------------------------------|-------------------------------|
| Fiber Type                          | Multimode Graded Index        |
| Attenuation @ 850/1300nm*           | ≤3.0 /1.0 dB/km               |
| Bandwidth @850/1300nm               | ≥400/400MHz-km                |
| Core Diameter, nominal              | 50 ± 3 μm                     |
| Cladding Diameter                   | 125.0 ± 2.0 μm                |
| Primary Coating Diameter            | 245 ± 10 μm                   |
| Cladding Non-circularity            | <2%                           |
| Core-Clad Concentricity             | ≤3 μm                         |
| Zero Dispersion Wavelength          | 1297-1316nm                   |
| Zero Dispersion Slope               | ≤0.101 ps/nm <sup>2</sup> -km |
| Numerical Aperture                  | 0.20 ± .015                   |
| Group Refractive Index @ 850/1300nm | 1.490/1.486                   |
| Proof Test                          | 100 kpsi                      |

*\*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                                    |