

**1.0 SCOPE**

This document establishes the specification requirements for an indoor/outdoor distribution fiberoptic cable. This cable construction consists of singlemode OS2 fibers in a distribution tight-buffered design with an interlocking armor and a plenum rated jacket.

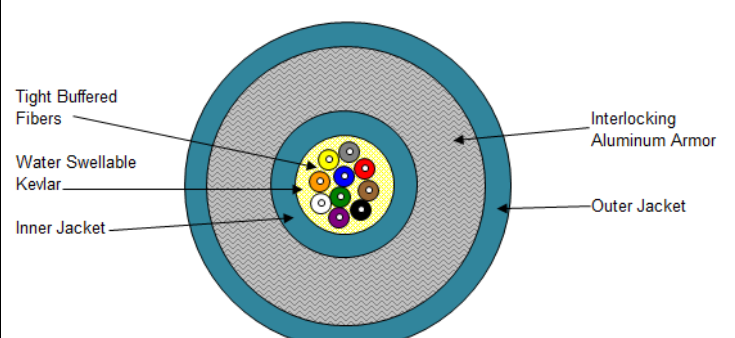
**2.0 APPLICABLE DOCUMENTS**

Reference Documents: TIA/EIA FOTP Standards 455  
Color Coding of Fiber Optic Cables TIA/EIA-598  
GR-409-CORE  
UL 910

**3.0 REQUIREMENTS**

This document contains test values for all-important mechanical, optical, and environmental parameters and as such, is the basis for all-incoming inspection and acceptance.

**4.0 CABLE CROSS SECTION** (representative of standard construction)

Cross Section		Components
		Tight Buffered Fibers Water Swellable Kevlar Inner Jacket Interlocking Aluminum Armor Outer Jacket

**5.0 OVERALL CABLE CONSTRUCTION**

**5.1 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-purple, 11-pink and 12-aqua

**5.2 Cable strength**

Water swellable aramid yarns are pulled in with the tight-buffered fibers under the inner sheath.

**5.3 Inner Sheath**

UV Resistant aqua plenum rated jacket (or color per customer request)

**5.4 Cable Markings**

CCT GROUP 99, FIBER OPTIC CABLE, XX(No. of fibers)-SM OS2, CONVERGENT CONNECTIVITY TECHNOLOGY, MM/YY (Month & Year of Manufacture), OFNP C(ETL)US SEQUENTIAL METER MARKINGS

**5.5 Armor**

Aluminum Interlocking Armor Tape

**5.6 Outer Sheath**

Aqua plenum rated jacket (or color per customer request)

**5.7 Cable Markings**

GROUP AJ99, FIBER OPTIC CABLE, XX(No. of Fibers)-SM OS2, CONVERGENT CONNECTIVITY TECHNOLOGY., MM/YY (month & year of manufacture), OFCP C(ETL)US, Sequentially meter marked. Special print as required by customer.

5.8 Nominal Cable Dimensions without the armor:

CCT Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
9900276ERANOOP	2	4.3	.170	18	12
9900476ERANOOP	4	4.4	.185	21	14
9900676ERANOOP	6	4.6	.200	27	18
9900876ERANOOP	8	5.0	.215	31	20
9901276ERANOOP	12	5.8	.250	39	26

Dimensions and weights including the armored jacket

CCT Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
AJ9900276EIALR	2	15.4	0.605	185	124
AJ9900476EIALR	4	15.4	0.605	188	126
AJ9900676EIALR	6	15.4	0.605	193	130
AJ9900876EIALR	8	15.4	0.605	196	132
AJ9901276EIALR	12	15.4	0.605	205	138

5.0 FIBER CHARACTERISTICS

5.1 Physical Parameters (nominal)

Fiber Type	Single mode*
Maximum Attenuation:	0.40/0.30 dB/km**
Cladding Diameter:	125.0 ± 7 µm
Maximum Core/Clad Concentricity Error	0.5 µm
Maximum Cladding Non-circularity:	0.7%
Primary Coating Diameter:	242 ± 7 µm
Cabled Cutoff Wavelength:	<1260nm
Mode Field Diameter:	9.0 ± 0.4µm @ 1310nm 10.1 ± 0.5µm @ 1550nm
Temperature Dependence:	≤0.05dB/km (-60°C to 85°C)
Zero Dispersion Slope:	0.090ps/nm <sup>2</sup> -km
Maximum PMD Link Design Value:	0.06ps/√km
Group Refractive Index @ 1310/1550:	1.467 / 1.468
Proof Test:	100 kpsi

\*According to ITU G.652.d

\*\* Measured attenuations on shipping reels will not exceed the nominal values by .75dB/km (Tight Buffered Cables Only)

## 6.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Cable only without armor:

Maximum Tensile Load for:

Installation: 4-fiber 1405N/315lbf, 6&8-fiber 1610N/362lbf  
12-fiber 2700N/600lbf

Long Term: 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.)

Crush Resistance: 100N/cm

Temperature rating:

Operation, -20°C to +85°C

Installation, 0°C to +75°C

Storage, -40°C to +85°C

Overall over armor:

Maximum Tensile Load for the Interlock Armored Jacket: Temperature rating:

600N / 150lbf

Crush Resistance (Over Armor): 1000N/cm

## 7.0 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.

### Customer Signature of Approval for Acceptance of this Custom Cable Design

Your signature constitutes that you have read and agreed to this specification sheet and upon confirmation of your order; this item may be non-cancelable and non-returnable.

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_