

1.0 SCOPE

This document establishes the specification requirements for a distribution multimode Clearcurve OM4, fiberoptic cable. This cable construction consists of multimode fibers in a distribution tight-buffered design with a plenum rated jacket.

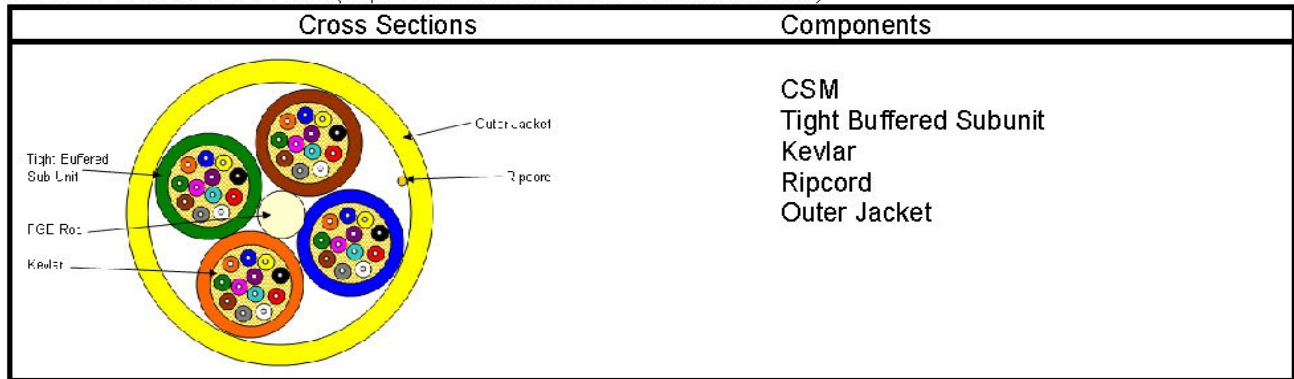
2.0 APPLICABLE DOCUMENTS

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

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 *(Representation of a standard 48 fiber construction)*



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-violet, 11-rose, and 12-aqua.

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

5.3 Cable strength Member

Fiberglass Epoxy Rod (dielectric)

An up coat of plenum material (if necessary per construction for symmetry).

5.4 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.

5.5 Outer Sheath

Yellow plenum rated jacket (or color per customer request)

5.6 Cable Markings .50/125 OM4 CORNING MM/YY (month & year of manufacture), OFNP C(ETL)US,

Sequentially marked. Special print as required by customer.

5.7 Nominal Cable Dimensions & Weights

| Part Number | No. of Fibers | Cable OD (mm) | Cable OD (in.) | Weight KG/KM | Weight LB/1000ft |
|----------------|---------------|---------------|----------------|--------------|------------------|
| 9901812HRYSXSP | 18 | 13.9 | 0.546 | 173 | 116 |
| 9902412HRYSXSP | 24 | 13.9 | 0.546 | 170 | 114 |
| 9903612HRYSXSP | 36 | 16.7 | 0.656 | 253 | 170 |
| 9904812HRYSXSP | 48 | 16.1 | 0.634 | 225 | 151 |
| 9906012HRYSXSP | 60 | 17.7 | 0.696 | 275 | 185 |
| 9907212HRYSXSP | 72 | 19.2 | 0.756 | 334 | 224 |
| 9909612HRYSXSP | 96 | 23.5 | 0.926 | 520 | 349 |

6.0 FIBER CHARACTERISTICS

6.1 Physical Parameters (nominal)

| Fiber Type | Corning Clearcurve OM4 Multimode* |
|---|-----------------------------------|
| Maximum Attenuation @ 850/1300nm** | 3.0 /1.0 dB/km |
| LED Performance (Overfilled Launch Bandwidth) | 3500/500MHz-km@850/1300 |
| Laser EMB Performance @850nm | 4700MHz-km |
| Core Diameter, nominal | 50 ± 2.5 µm |
| Cladding Diameter | 125.0 ± 1.0 µm |
| Primary Coating Diameter | 245 ± 5 µm |
| Cladding Non-circularity | <1% |
| Core-Clad Concentricity | ≤1.5 µm |
| Macro Bend Loss | Induced Attenuation |
| Mandrel Radius 37.5mm/100 turns | ≤0.05/0.15dB@850/1300nm |
| Mandrel Radius 15mm/2 turns | ≤0.1/0.3dB@850/1300nm |
| Mandrel Radius 7.5mm/2 turns | ≤0.2/0.5dB@850/1300nm |
| Zero Dispersion Wavelength | 1295-1315nm |
| Maximum Zero Dispersion Slope | 0.101 ps/nm ² -km |
| Numerical Aperture | 0.20 ± .015 |
| Group Refractive Index @ 850/1300nm | 1.480/1.479 |
| Proof Test | 100 kpsi |

*Guaranteed Gigabit Ethernet Distance of 550mtr at 850nm for 10 Gb/s per IEEE802.3ae. ITU G.651.1

**Measured attenuations on shipping reels will not exceed the nominal values by .75dB/km.

7.0 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, -20°C to +85°C

Installation, 0°C to +75°C

Storage, -40°C to +85°C

8.0 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.