

### 1.0 SCOPE

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

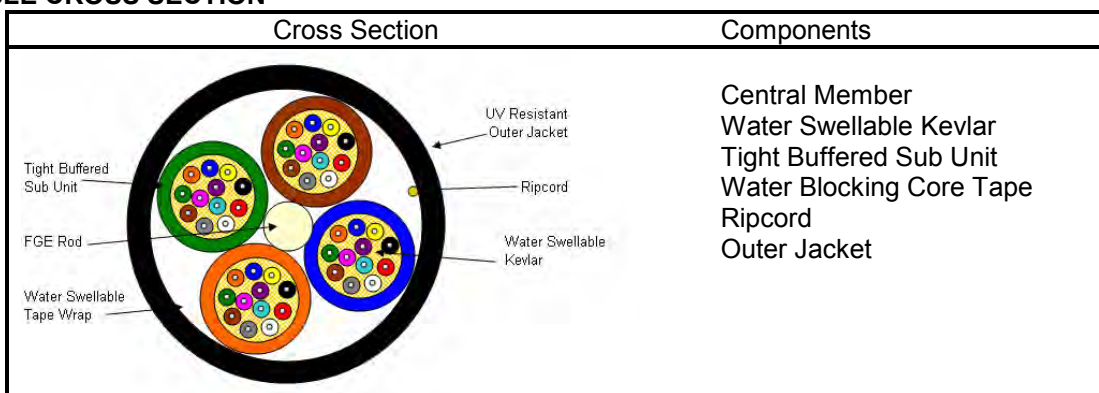
### 2.0 APPLICABLE DOCUMENTS

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



### 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 water swellable 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.

Moisture Resistance: A water blocking tape is applied over the cable core to prevent water ingress and migration with a nominal of 25% overlap.

#### 5.5 Outer Sheath

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

#### 5.6 Cable Markings

REMFO 33 SERIES, FIBER OPTIC CABLE, XX (denotes number of fibers)-50/125 10GIG OM4, REMEE PRODUCTS CORP., MM/YY (month & year of manufacture), OFNP C(ETL)US, Sequentially marked. Special print as required by customer.

5.7 Nominal Cable Dimensions & Weights

Remeo Products Part Number	No. of Fibers	Cable OD (mm)	Cable OD (in.)	Weight KG/KM	Weight LB/1000ft
33-024-12H-KBSFOP	24	13.2	0.521	142	95
33-036-12H-KBSFOP	36	15.9	0.626	216	145
33-048-12H-KBSLOP	48	15.5	0.609	195	131
33-072-12H-KBSLOP	72	18.6	0.731	295	198
33-096-12H-KBSLOP	96	22.6	0.891	457	307

6.0 FIBER CHARACTERISTICS

6.1 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 <sup>2</sup> -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.

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.



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