

1.0 SCOPE

This document establishes the specification requirements for an indoor/outdoor plenum distribution multimode OM2, fiberoptic cable. This cable construction consists of multimode fibers in a distribution tight-buffered design with a plenum rated jacket.

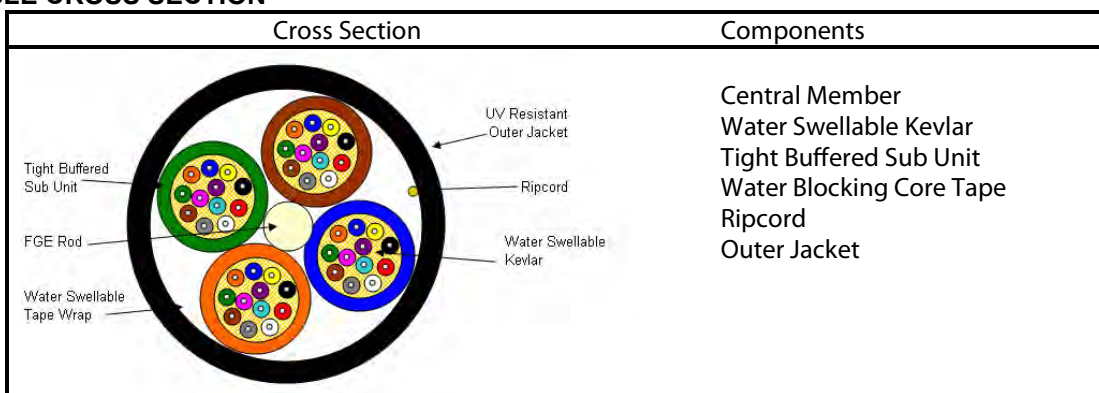
2.0 APPLICABLE DOCUMENTS

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 OM2, 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
33-024-12D-KB SF OP	24	13.2	0.521	142	95
33-036-12D-KB SF OP	36	15.9	0.626	216	145
33-048-12D-KB SL OP	48	15.5	0.609	195	131
33-072-12D-KB SL OP	72	18.6	0.731	295	198
33-096-12D-KBSLOP	96	22.6	0.891	457	307

6.0 FIBER CHARACTERISTICS

6.1 Physical Parameters (nominal)

Fiber Type	Multimode OM2*
Maximum Attenuation @ 850/1300nm**	3.0 /1.0 dB/km
Minimum Bandwidth @850/1300nm [Overfilled Launch, LED based sources]	750/500MHz -km
Transmission Link Lengths at 850nm & 1300nm(LX4) for 10Gb/s*	150/150mtrs
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
Numerical Aperture	0.20 ± .015
Group Refractive Index @ 850/1300nm	1.483/1.478
Proof Test	100 kpsi

*At 850nm operating wavelength with transmitters meeting encircled flux of ≤30% at radius 4.5µm and ≥86% at radius 19.0µm.

**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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