

OSP LOOSE TUBE, DOUBLE JACKET, SINGLE ARMOR, CENTRAL TUBE DESIGN FIBER OPTIC WIRE PRODUCT SPECIFICATION 63XXX22JMBCXNN

This document establishes the specifications for a multimode, single 3mm central tube design with single armor and double polyethylene jacket suitable for direct burial, duct or lashed aerially. 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 CABLE CROSS SECTION



2.0 OVERALL CABLE CONSTRUCTION

2.1 <u>Buffer tube</u>

High Modulus Polymeric material Dimension: 3.0 mm. nominal. Tube color: white Fiber color code: per TIA/EIA-598 Filling compound: A non-toxic and de

Filling compound: A non-toxic and dermatological safe antioxidant hydrocarbon based gel.

2.2 Cable Core

The cable core consists of the buffer tube with a moisture resistant water-blocking tape applied over the tube to prevent water ingress and migration with a nominal of a 25% overlap.

2.3 Cable strength

Circumferential strength members are placed over the cable core and under the inner sheath.

2.4 <u>Inner Sheath</u> Black Polyethylene



2.5 Moisture Resistance

A moisture resistant water-blocking tape applied over the inner sheath to prevent water ingress and migration with a nominal of a 25% overlap.

2.6 Steel Armor Tape

Tape is flexible steel with plastic coating for bonding to sheath. The armor of each length of cable shall be electrically continuous with no more than one joint or splice allowed per kilometer of cable. The breaking strength of any section of an armor tape containing a factory splice joint, shall not be less than 80% of the breaking strength of an adjacent section of the armor of equal length without a joint. A ripcord is applied under the armor tape.

2.7 Outer Sheath

Black Polyethylene (UV Resistant) Wall thickness (nominal): 1.52mm.

2.8 Cable Markings

Indent printed: CCT GROUP63, FIBER OPTIC CABLE, # of fibers-62.5/125, MM/YY (month and year of manufacture), sequentially meter marked. Special print as required by customer.

2.9 Nominal Cable Dimensions & Weights

| CCT Part Number | No. of Fibers | Cable OD (in.) | Cable OD (mm) | Weight LB/MFT | Weight KG/KM |
|--------------------|---------------|-------------------|------------------|------------------|-----------------|
| 6300222JMBCBNN | 2 | .437 | 11.1 | 79 | 118 |
| 6300422JMBCDNN | 4 | .437 | 11.1 | 79 | 118 |
| 6300622JMBCFNN | 6 | .437 | 11.1 | 79 | 118 |
| 6300822JMBCHNN | 8 | .437 | 11.1 | 79 | 118 |
| 6301022JMBCJNN | 10 | .437 | 11.1 | 79 | 118 |
| 6301222JMBCLNN | 12 | .437 | 11.1 | 79 | 118 |

3.0 FIBER CHARACTERISTICS – Physical Parameters

| Fiber Type | Multimode Graded Index | | | |
|---|------------------------|--|--|--|
| Maximum Attenuation @ 850/1300nm | 3.2 /1.0 dB/km | | | |
| Minimum Bandwidth @850/1300nm | 200/600MHz-km | | | |
| Core Diameter, nominal | $62.5 \pm 3 \ \mu m$ | | | |
| Cladding Diameter | $125.0\pm1.0~\mu m$ | | | |
| Primary Coating Diameter | $245\pm10~\mu m$ | | | |
| Cladding Non-circularity | <2% | | | |
| Core/Clad Offset | 3 µm | | | |
| Zero Dispersion Wavelength | 1320-1365nm | | | |
| Numerical Aperture | $0.275\pm.015$ | | | |
| Group Refractive Index @ 850/1300nm | 1.496/1.491 | | | |
| Proof Test | 100 kpsi | | | |
| *Guaranteed Gigabit Ethernet Distance of 300/550mtr per IEEE802.3z. | | | | |



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4.0 MECHANICAL & ENVIRONMENTAL PERFORMANCE

Maximum Tensile Load for: Installation: 1335N / 300lbf Long Term: 600N / 135lbf Minimum bending radius: Loaded: 20 x diameter Unloaded: 10 x diameter Crush Resistance: 440N/cm Impact Resistance: 25 Impacts (min.)Flexing, ±90°: 25 Cycles (min.)Temperature rating:Operation:-40°C to +70°CInstallation:-40°C to +55°CStorage:-50°C to +70°C

5.0 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.

6.0 APPLICABLE DOCUMENTS

Reference Documents:

TIA/EIA FOTP Standards 455 Color Coding of Fiber Optic Cables TIA/EIA-598