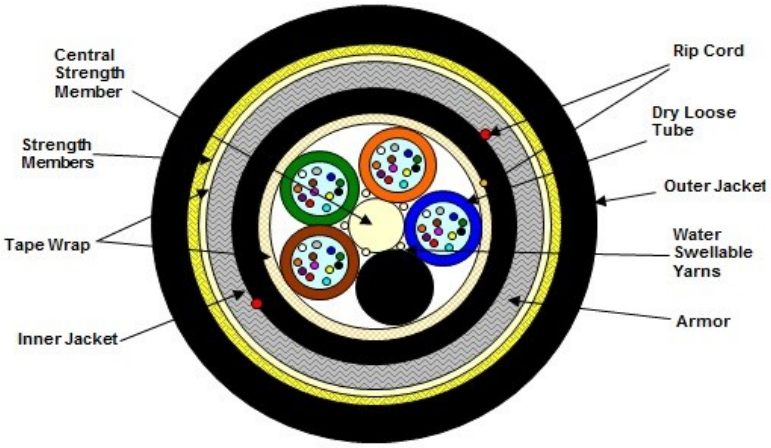
**Part No: 23D-XXX-XXX-MXSXWN** Issue Date: 08/30/2018 Revision #: 00

# 23D-Series Single Armor/Double Jacket Gel Free Loose Tube Fiber Optic Cable

## Cable Cross Section




*(Representation of a standard 48 fiber construction)*

## Scope

This document establishes the specification requirements for an outdoor, armored fiber optic cable utilizing Remee's AquaLock loose tube design.

## Applications

Outdoors in Duct, Direct Burial or Aerial Lashed

## Applicable Documents

-TIA/EIA FOTP Standards 455
-Color Coding of Fiber Optic Cables TIA/EIA-598
-RUS 1755.900
-GR-20-CORE
-Compliant with ANSI/TIA-568-C.3 standard

## Cable Construction Details

•Buffer Tube
High Modulus Polymeric Material
•Buffer Tube Dimensions
2.50 mm (0.098 in.), nominal
•Dry Loose Tube/Fiber Color Code:
As per TIA/EIA-598 standard or per customer requirement
•Dielectric Central Strength Member:
Epoxy Glass Rod (up-coated as required per construction)
•Cable Core:
The cable elements with water swellable yarns are stranded around the CSM, using reverse oscillation.
•Moisture Resistance:
A water blocking tape is applied over the cabled core with a 25% nominal overlap
•Inner Sheath: UV resistant Polyethylene
A ripcord applied under the inner sheath.
•Armor:
Corrugated flexible steel bonded to jacket. The armor pf each each length pf cable shall be electrically continuous with no more than one 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.
Ripcords are applied under the armor tape.
•Cable Strength:
Circumferential strength members are placed over the water blocking tape and under the outer sheath.
•Overall Sheath: UV resistant Polyethylene

*Continued*

| Nominal Cable Dimensions & Weights | | | | |
|---|---|---|---|---|
| Remee Products Part Number | Number of Fibers | Number of Fibers Per Sub Unit | Cable OD in (mm) | Weight lb/1000ft (kg/km) |
| **23D-006-XXX-MXSFWN** | 6 | 6 | 0.590 (15.0) | 125 (185) |
| **23D-008-XXX-MXSHWN** | 8 | 8 | 0.590 (15.0) | 125 (185) |
| **23D-012-XXX-MXSFWN** | 12 | 6 | 0.590 (15.0) | 124 (183) |
| **23D-012-XXX-MXSLWN** | 12 | 12 | 0.590 (15.0) | 125 (185) |
| **23D-016-XXX-MXSHWN** | 16 | 8 | 0.590 (15.0) | 124 (183) |
| **23D-018-XXX-MXSFWN** | 18 | 6 | 0.590 (15.0) | 124 (183) |
| **23D-024-XXX-MXSFWN** | 24 | 6 | 0.590 (15.0) | 122 (180) |
| **23D-024-XXX-MXSLWN** | 24 | 12 | 0.590 (15.0) | 124 (183) |
| **23D-030-XXX-MXSFWN** | 30 | 6 | 0.590 (15.0) | 121 (179) |
| **23D-036-XXX-MXSFWN** | 36 | 6 | 0.613 (15.6) | 135 (199) |
| **23D-036-XXX-MXSLWN** | 36 | 12 | 0.590 (15.0) | 123 (182) |
| **23D-048-XXX-MXSFWN** | 48 | 6 | 0.685(17.4) | 161 (238) |
| **23D-048-XXX-MXSHWN** | 48 | 8 | 0.613 (15.6) | 132 (195) |
| **23D-048-XXX-MXSLWN** | 48 | 12 | 0.590 (15.0) | 123 (182) |
| **23D-060-XXX-MXSLWN** | 60 | 12 | 0.590 (15.0) | 122 (180) |
| **23D-072-XXX-MXSLWN** | 72 | 12 | 0.613 (15.6) | 134 (198) |
| **23D-084-XXX-MXSLWN** | 84 | 12 | 0.650 (16.5) | 146 (215) |
| **23D-096-XXX-MXSLWN** | 96 | 12 | 0.685 (17.4) | 160 (236) |
| **23D-108-XXX-MXSLWN** | 108 | 12 | 0.715 (18.0) | 173 (255) |
| **23D-120-XXX-MXSLWN** | 120 | 12 | 0.770 (19.6) | 200 (295) |
| **23D-132-XXX-MXSLWN** | 132 | 12 | 0.800 (20.3) | 212 (313) |
| **23D-144-XXX-MXSLWN** | 144 | 12 | 0.830 (21.0) | 228 (337) |
| **23D-156XXX-MXSLWN** | 156 | 12 | 0.827 (21.0) | 212 (313) |
| **23D-192-XXX-MXSLWN** | 192 | 12 | 0.827 (21.0) | 210 (310) |
| **23D-216-XXX-MXSLWN** | 216 | 12 | 0.850 (21.6) | 224 (331) |
| **23D-288-XXX-MXSLWN** | 288 | 12 | 0.952 (24.0) | 272 (401) |
| *****Cables printed in meters will have a "-MR" suffix on the part number.* | | | | |

| Jacket Color | |
|---|---|
| Designation | Color |
| B | Black |
| Y | Yellow |
| Z | Orange |
| A | Aqua |
| M | Violet |

*Continued*

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Engineered With You In Mind

| Fiber Type (P/N) | Maximum Attenuation dB/km | | | | Overfill Launch Min Bandwidth ( MHz-km) | | EMBc (MHz-km) | Gigabit Ethernet Minimum Link Distance (Meters) | | 10 Gigabit Ethernet Minimum Link Distance (Meters) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 850 nm | 1300 nm | 1310 nm | 1550 nm | 850 nm | 1300 nm | | 850 nm | 1300 nm | 850 nm | 1300 nm |
| **62.5µm OM1 1GIG (22J)** | 3.2 | 1.0 | N/A | N/A | 200 | 600 | N/A | 300 | 550 | 32 | - |
| **50µm OM2 10GIG (12D)** | 3.0 | 1.0 | N/A | N/A | 750 | 500 | N/A | 800 | 550 | 150 | - |
| **50µm OM3 10GIG (12N)** | 3.0 | 1.0 | N/A | N/A | 1500 | 500 | 2000 | 1000 | 550 | 300 | - |
| **50µm OM4 10GIG (12V)** | 3.0 | 1.0 | N/A | N/A | 3500 | 500 | 4700 | 1040 | 550 | 550 | - |
| **SM OS2 G.652.D (76K)** | N/A | N/A | 0.40 | 0.30 | N/A | N/A | N/A | N/A | 5000 | N/A | 10000 |
| **SM OS2 G.652.D (74K)** | N/A | N/A | 0.35 | 0.25 | N/A | N/A | N/A | N/A | 5000 | N/A | 10000 |
| **SM OS2 G.652.D/G.657.A1 BIF (76U)*** | N/A | N/A | 0.40 | 0.30 | N/A | N/A | N/A | N/A | 5000 | N/A | 10000 |
| **SM OS2 G.652.D/G.657.A2, B2 BIF (76F)**** | N/A | N/A | 0.40 | 0.30 | N/A | N/A | N/A | N/A | 5000 | N/A | 10000 |

** G.657.A1 (76U) Mandrel Radius of 10mm, 1 turn at 1550nm with an induced attenuation of ≤0.50dB*

*** G.657.A2,B2 (76F) Mandrel Radius of 7.5mm, 1 turn at 1550nm with an induced attenuation of ≤0.40dB*

*Please call the factory for all other fiber types*

## Mechanical & Environmental Performance

- Maximum Tensile Load
  Installation : 2700N / 607lbf
  Long Term : 890N / 200lbf

- Minimum Bending Radius
  Loaded : 20 x Diameter
  Unloaded : 15 x Diameter

- Crush Resistance
  440 N/cm

- Impact Resistance (min.)
  25 Impacts

- Flexing ± 90° (min.)
  25 Cycles

- Temperature Rating
  Operation : -40°C to +70°C
  Installation : -40°C to +55°C
  Storage : -50°C to +70°C

## Warranty Information

All warranty information can be viewed at www.remee.com. This product is RoHS compliant and is directive 2002/95/EC. It is the sole responsibility of the user to have the most current specification. Specifications are subject to change without notice.

## Preparation for Shipment

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. Shipping containers shall be constructed as to eliminate any possible damage to the cables due to shipment.

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## Spec Approval (Custom Designs Only)

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:_____Date:_____