54-Series Single Armor/Single Jacket Outdoor Central Tube Gel Filled Loose Tube Fiber Optic Cable

Cable Cross Section

(Representation of a standard 12 fiber construction)

Scope
This document establishes the specification requirements for an outdoor, armored dry block fiber optic cable in a gel filled loose buffer tube.

Applications
Outdoors direct burial, Duct 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
  3.0 mm (0.118 in.), nominal
- Central Tube Color Code:
  White
- Fiber Color Code:
  As per TIA/EIA-598 standard or per customer requirement
- Filling Compound
  Non-toxic dermatological safe antioxidant hydrocarbon based gel
- Cable Core:
  The cable core consists of buffer tube with water-blocking tape
- Moisture Resistance:
  A water blocking tape is applied over the central tube with a 25% nominal overlap
- Cable Strength:
  Circumferential strength members are placed over the water blocking tape and under the steel tape.
- Armor:
  Corrugated flexible steel bonded to jacket. The armor of each length of 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
- Overall Sheath: UV Resistant Polyethylene

Continued
### Nominal Cable Dimensions & Weights

<table>
<thead>
<tr>
<th>Remee Products Part Number</th>
<th>Number of Fibers</th>
<th>Cable OD in (mm)</th>
<th>Weight lb/1000ft (kg/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>54-002-XXX-EXCBNN</td>
<td>2</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
<tr>
<td>54-004-XXX-EXCDNN</td>
<td>4</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
<tr>
<td>54-006-XXX-EXCFNN</td>
<td>6</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
<tr>
<td>54-008-XXX-EXCHNN</td>
<td>8</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
<tr>
<td>54-010-XXX-EXCJNN</td>
<td>10</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
<tr>
<td>54-012-XXX-EXCLNN</td>
<td>12</td>
<td>0.346 (8.8)</td>
<td>51 (76)</td>
</tr>
</tbody>
</table>

*Cables printed in meters will have a "-MR" suffix on the part number.

### Jacket Color

<table>
<thead>
<tr>
<th>Designation</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Black</td>
</tr>
<tr>
<td>Y</td>
<td>Yellow</td>
</tr>
<tr>
<td>Z</td>
<td>Orange</td>
</tr>
<tr>
<td>A</td>
<td>Aqua</td>
</tr>
<tr>
<td>M</td>
<td>Violet</td>
</tr>
</tbody>
</table>

### Fiber Type (P/N)

<table>
<thead>
<tr>
<th>Fiber Type (P/N)</th>
<th>Maximum Attenuation dB/km</th>
<th>Overfill Launch Min Bandwidth ( MHz-km)</th>
<th>EMBc (MHz-km)</th>
<th>Gigabit Ethernet Minimum Link Distance (Meters)</th>
<th>10 Gigabit Ethernet Minimum Link Distance (Meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>850 nm</td>
<td>1300 nm</td>
<td>1310 nm</td>
<td>1550 nm</td>
<td>850 nm</td>
</tr>
<tr>
<td>62.5µm OM1 1GIG (22J)</td>
<td>3.2</td>
<td>1.0</td>
<td>N/A</td>
<td>N/A</td>
<td>200</td>
</tr>
<tr>
<td>50µm OM2 10GIG (12D)</td>
<td>3.0</td>
<td>1.0</td>
<td>N/A</td>
<td>N/A</td>
<td>750</td>
</tr>
<tr>
<td>50µm OM3 10GIG (12N)</td>
<td>3.0</td>
<td>1.0</td>
<td>N/A</td>
<td>N/A</td>
<td>1500</td>
</tr>
<tr>
<td>50µm OM4 10GIG (12V)</td>
<td>3.0</td>
<td>1.0</td>
<td>N/A</td>
<td>N/A</td>
<td>3500</td>
</tr>
<tr>
<td>SM OS2 G.652.D (76K)</td>
<td>N/A</td>
<td>N/A</td>
<td>0.40</td>
<td>0.30</td>
<td>N/A</td>
</tr>
<tr>
<td>SM OS2 G.652.D (74K)</td>
<td>N/A</td>
<td>N/A</td>
<td>0.35</td>
<td>0.25</td>
<td>N/A</td>
</tr>
<tr>
<td>SM OS2 G.652.D/G.657.A1 BIF (76U)*</td>
<td>N/A</td>
<td>N/A</td>
<td>0.40</td>
<td>0.30</td>
<td>N/A</td>
</tr>
<tr>
<td>SM OS2 G.652.D/G.657.A1 BIF (76U)**</td>
<td>N/A</td>
<td>N/A</td>
<td>0.40</td>
<td>0.30</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* 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: 1335N / 300lbf
  - Long Term: 600N / 135lbf

- **Minimum Bending Radius**
  - Loaded: 20 x Diameter
  - Unloaded: 10 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.

**Note:** While Remee Products Corp. has made every reasonable effort to ensure the accuracy of the information in this document, Remee Products Corp. does not guarantee that it is error-free, nor does Remee Products Corp. make any other representation, warranty, or guarantee that the information is accurate, correct, reliable or current. Remee Products Corp. reserves the right to make any adjustments to the information contained herein at any time without notice. Remee Products Corp. expressly disclaims all implied warranties regarding the information contained herein, including but not limited to, any implied warranties of merchantability or fitness for particular purpose. The dimensions in this documents are for reference purposes only and are subject to change without notice.

**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: __________________