

# LMR®-900 Flexible Low Loss Communications Coax

## Ideal for...

- Medium Antenna Feeder runs (no jumpers required)
- Jumper Assemblies for 1-5/8" & 2-1/4" Feeders
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable



| Part Description |                          |        |       | Stock |
|------------------|--------------------------|--------|-------|-------|
| Part Number      | Application              | Jacket | Color | Code  |
| LMR-900-DB       | Outdoor/Watertight       | PE     | Black | 54094 |
| LMR-900-FR       | Indoor/Outdoor Riser CMR | FRPE   | Black | 54033 |

PVC: Poly Vinyl Chloride

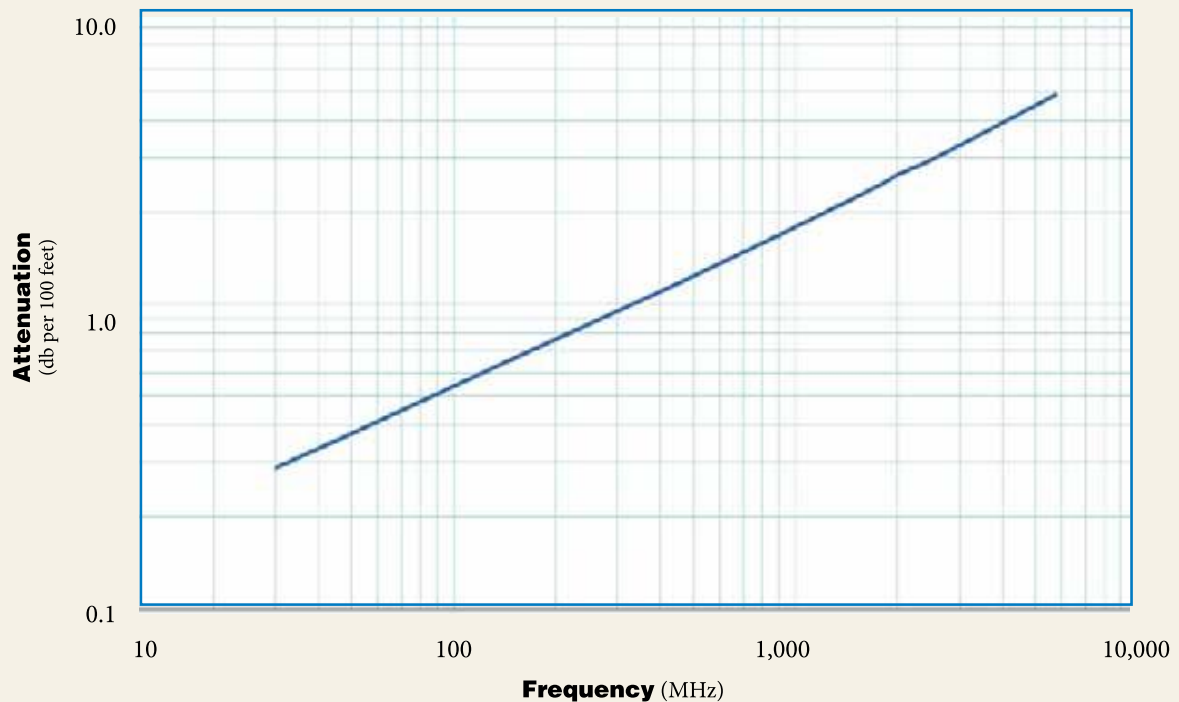
| Mechanical Specifications |                |       |          |
|---------------------------|----------------|-------|----------|
| Performance Property      | Units          | US    | (metric) |
| Bend Radius: installation | in. (mm)       | 3.00  | (76.2)   |
| Bend Radius: repeated     | in. (mm)       | 9.0   | (228.6)  |
| Bending Moment            | ft-lb (N-m)    | 9.0   | (12.20)  |
| Weight                    | lb/ft (kg/m)   | 0.266 | (0.40)   |
| Tensile Strength          | lb (kg)        | 750   | (340.5)  |
| Flat Plate Crush          | lb/in. (kg/mm) | 100   | (1.79)   |

| Construction Specifications |                    |       |         |
|-----------------------------|--------------------|-------|---------|
| Description                 | Material           | In.   | (mm)    |
| Inner Conductor             | BC Tube (.222" ID) | 0.262 | (6.65)  |
| Dielectric                  | Foam PE            | 0.680 | (17.27) |
| Outer Conductor             | Aluminum Tape      | 0.686 | (17.42) |
| Overall Braid               | Tinned Copper      | 0.732 | (18.59) |
| Jacket                      | (see table)        | 0.870 | (22.10) |

| Environmental Specifications   |          |         |  |
|--------------------------------|----------|---------|--|
| Performance Property           | °F       | °C      |  |
| Installation Temperature Range | -40/+185 | -40/+85 |  |
| Storage Temperature Range      | -94/+185 | -70/+85 |  |
| Operating Temperature Range    | -40/+185 | -40/+85 |  |

| Electrical Specifications |                   |       |          |
|---------------------------|-------------------|-------|----------|
| Performance Property      | Units             | US    | (metric) |
| Velocity of Propagation   | %                 | 87    |          |
| Dielectric Constant       | NA                | 1.32  |          |
| Time Delay                | nS/ft (nS/m)      | 1.17  | (3.83)   |
| Impedance                 | ohms              | 50    |          |
| Capacitance               | pF/ft (pF/m)      | 23.4  | (76.6)   |
| Inductance                | uH/ft (uH/m)      | 0.058 | (0.19)   |
| Shielding Effectiveness   | dB                | >90   |          |
| DC Resistance             |                   |       |          |
| Inner Conductor           | ohms/1000ft (/km) | 0.54  | (1.77)   |
| Outer Conductor           | ohms/1000ft (/km) | 0.55  | (1.8)    |
| Voltage Withstand         | Volts DC          | 5000  |          |
| Jacket Spark              | Volts RMS         | 8000  |          |
| Peak Power                | kW                | 62    |          |

**Attenuation vs. Frequency (typical)**



| Frequency (MHz)              | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Attenuation dB/100 ft</b> | 0.3  | 0.4  | 0.7  | 0.8  | 1.2  | 1.7  | 2.2  | 2.5  | 2.6  | 3.0  | 4.9  |
| <b>Attenuation dB/100 m</b>  | 0.9  | 1.2  | 2.2  | 2.6  | 3.8  | 5.6  | 7.4  | 8.2  | 8.6  | 9.8  | 16.0 |
| <b>Avg. Power kW</b>         | 8.89 | 6.85 | 3.89 | 3.19 | 2.19 | 1.51 | 1.14 | 1.03 | 0.97 | 0.86 | 0.52 |

**Calculate Attenuation =**

$(0.051770) \cdot \sqrt{\text{FMHz}} + (0.000160) \cdot \text{FMHz}$  (interactive calculator available at [http://www.timesmicrowave.com/cable\\_calculators](http://www.timesmicrowave.com/cable_calculators))

**Attenuation:**

VSWR=1.0 ; Ambient = +25°C (77°F)

**Power:**

VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F); Sea Level; dry air; atmospheric pressure; no solar loading

# LMR®-900 Flexible Low Loss Communications Coax



| Connectors         |               | Part Number      | Stock Code | VSWR    | **Coupling Freq. (GHz) | Nut       | Inner Contact Attach | Outer Contact Attach | Finish* Body /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|--------------------|---------------|------------------|------------|---------|------------------------|-----------|----------------------|----------------------|-------------------|----------------|---------------|---------------|
| 1. 7-16 DIN Female | Straight Jack | EZ-900-716FC-2   | 3190-1550  | <1.25:1 | (2.5)                  | NA        | Press Fit            | Clamp                | S/S               | 2.0 (51)       | 1.38 (35.1)   | 0.379 (171.9) |
| 2. 7-16 DIN Male   | Straight Plug | EZ-900-716MC-2   | 3190-1641  | <1.25:1 | (2.5)                  | Hex       | Press Fit            | Clamp                | S/S               | 2.0 (51)       | 1.44 (36.6)   | 0.485 (220.0) |
| 3. 7-16 DIN Male   | Right Angle   | EZ-900-716-MC-RA | 3190-614   | <1.35:1 | (2.5)                  | Hex       | Press Fit            | Clamp                | S/S               | 2.7 (69)       | 2.15 (55.0)   | 1.150 (521.6) |
| 4. 7/8 EIA Male    | Straight Plug | EZ-900-78EIA-2   | 3190-1282  | <1.25:1 | (2.5)                  | NA        | Press Fit            | Clamp                | S/S               | 3.0 (76)       | 2.24 (56.9)   | 1.013 (459.5) |
| 5. 7/8 EIA Male    | Right Angle   | EZ-900-78EIA-RA  | 3190-1450  | <1.25:1 | (1)                    | Flange    | Press Fit            | Clamp                | S/S               | 2.95 (75.0)    | 2.60 (66.0)   | 1.50 (680.4)  |
| 6. N Female        | Straight Jack | EZ-900-NFC-2     | 3190-1263  | <1.25:1 | (6)                    | NA        | Press Fit            | Clamp                | S/S               | 2.0 (51)       | 1.38 (35.1)   | 0.443 (200.9) |
| 7. N Male          | Straight Plug | EZ-900-NMC-2     | 3190-1262  | <1.25:1 | (6)                    | Hex/Knurl | Press Fit            | Clamp                | S/S               | 2.0 (51)       | 1.38 (35.1)   | 0.463 (210.0) |

\* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy \*\*VSWR spec based on 3 foot cable with a connector pair



## Install Tools

| Type               | Part Number | Stock Code | Description                        |
|--------------------|-------------|------------|------------------------------------|
| Strip Tool         | ST-900C     | 3190-1310  | For LMR 900 Clamp Style Connectors |
| Midspan Strip Tool | GST-900A    | 3190-435   | For Ground Strap Attachment        |
| Wrenches           | WR-900      | 3190-509   | 1-1/4" Box Wrench (2 required)     |
| Cutting Tool       | CCT-02      | 3192-165   | Cable end flush cut tool           |
| Replacement Blade  | RB-02       | 3192-166   | Replacement blade for cutting tool |



## Accessories

| Type                             | Part Number | Stock Code | Description                                                |
|----------------------------------|-------------|------------|------------------------------------------------------------|
| Ground Kit                       | GK-S900TT   | GK-S900TT  | Standard Grounding Kit (each)                              |
| Hoisting Grip                    | HG-900T     | HG-900T    | Split/Laced Type (each)                                    |
| Cold Shrink                      | CS-A900T    | CS-A900T   | Cable to Antenna Junction (each)                           |
| Cold Shrink                      | CS-90120T   | CS-90120T  | LMR-900 to -1200 Junction (each)                           |
| Cold Shrink                      | CS-90170T   | CS-90170T  | LMR-900 to -1700 Junction (each)                           |
| Stand. Entry Port Cushion        | SC-900T-3   | SC-900T-3  | Three Cables (each)                                        |
| Standard Entry Panels            |             |            | Full Range of Port Styles/Combinations Available           |
| Hanger Blocks                    | CB-900T     | CB-900T    | Dual Cable Support Block (kit of 10)                       |
| Hanger Block Supporting Hardware |             |            | Complete Range of Supporting Hardware & Adapters Available |
| Snap-in Hangers                  | SH-U900T    | SH-U900T   | Snap-in Hanger (Kit of 10)                                 |