

## LMR® lite-200 Flexible Low Loss Communications Coax

Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable



• **LMR-LW200** is a lightweight low loss coaxial cable that employs an aluminum braid shield instead of the traditional tinned copper shield. LMR-LW200 has been designed and engineered with a combination of electrical, physical and mechanical properties that reduce weight and cost.

• **Flexibility** and bendability that are hallmarks of LMR-200 are also the same for LMR-LW200. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-LW200. Size for size LMR® has the lowest loss of any flexible cable and comparable loss to semi rigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability:** LMR-LW200 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors:** LMR-LW200 uses the same connectors, tools and installation accessories as standard LMR®. A wide variety of connectors are available for LMR-LW200 including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR

connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies:** All LMR-LW200 cable types are available as pre-terminated cable assemblies.

| Part Description |             |        | Stock       |
|------------------|-------------|--------|-------------|
| Part Number      | Application | Jacket | Color Code  |
| LMR-LW200        | Outdoor     | PE     | Black 45022 |

PE = Polyethylene

| Construction Specifications |                   |       |        |
|-----------------------------|-------------------|-------|--------|
| Description                 | Material          | In.   | (mm)   |
| Inner Conductor             | Solid BC          | 0.044 | (1.12) |
| Dielectric                  | Foam PE           | 0.116 | (2.95) |
| Outer Conductor             | Aluminum Tape     | 0.121 | (3.07) |
| Overall Braid               | Aluminum          | 0.144 | (3.66) |
| Jacket                      | (See table above) | 0.195 | (4.95) |

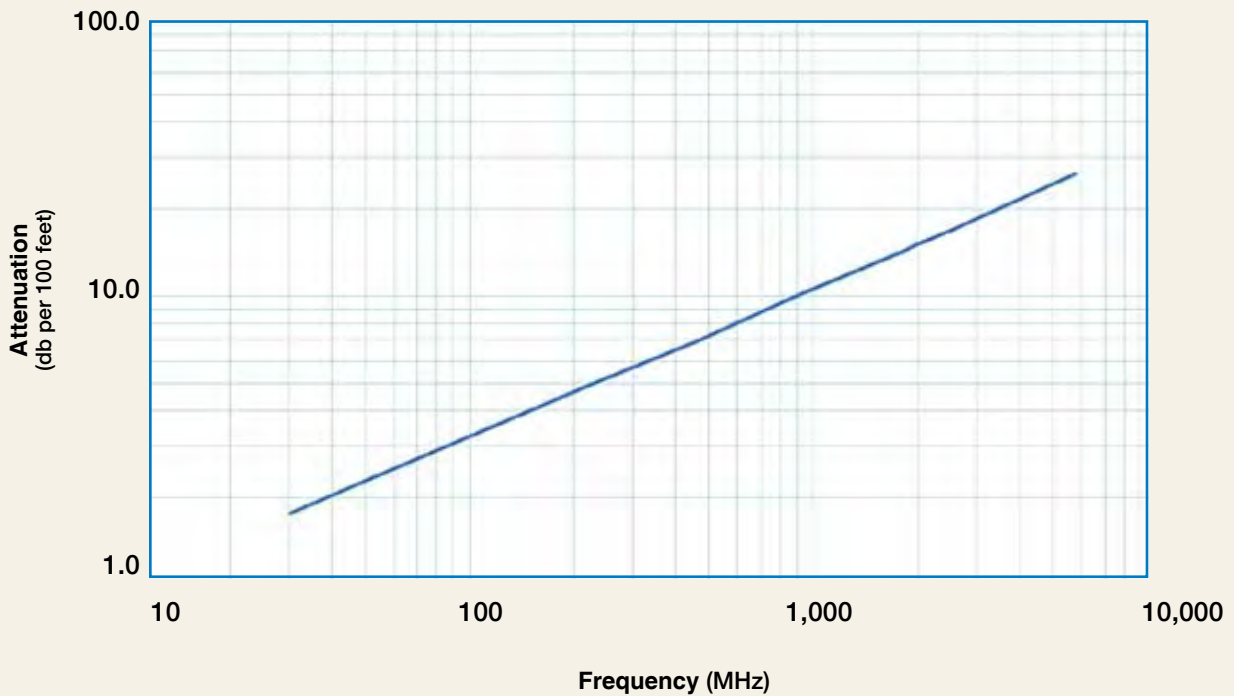
| Mechanical Specifications |                |      |          |
|---------------------------|----------------|------|----------|
| Performance Property      | Units          | US   | (metric) |
| Bend Radius: installation | in. (mm)       | 0.5  | (12.7)   |
| Bend Radius: repeated     | in. (mm)       | 2    | (50.8)   |
| Bending Moment            | ft-lb (N-m)    | 0.2  | (0.27)   |
| Weight                    | lb/ft (kg/m)   | .015 | (.022)   |
| Tensile Strength          | lb (kg)        | 40   | (48)     |
| Flat Plate Crush          | lb/in. (kg/mm) | 15   | (0.27)   |

| 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 |

TIMES MICROWAVE

| Electrical Specifications |                   |       |          |
|---------------------------|-------------------|-------|----------|
| Performance Property      | Units             | US    | (metric) |
| Velocity of Propagation   | %                 | 83    |          |
| Dielectric Constant       | NA                | 1.45  |          |
| Time Delay                | nS/ft (nS/m)      | 1.22  | (4.02)   |
| Impedance                 | ohms              | 50    |          |
| Capacitance               | pF/ft (pF/m)      | 24.5  | (80.3)   |
| Inductance                | uH/ft (uH/m)      | 0.061 | (0.20)   |
| Shielding Effectiveness   | dB                | >90   |          |
| DC Resistance             |                   |       |          |
| Inner Conductor           | ohms/1000ft (/km) | 5.36  | (17.6)   |
| Outer Conductor           | ohms/1000ft (/km) | 18.1  | (59.4)   |
| Voltage Withstand         | Volts DC          | 1000  |          |
| Jacket Spark              | Volts RMS         | 3000  |          |
| Peak Power                | kW                | 2.5   |          |

Attenuation vs. Frequency (typical)



| Frequency (MHz)              | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Attenuation dB/100 ft</b> | 1.8  | 2.3  | 4.0  | 4.8  | 7.0  | 9.9  | 12.9 | 14.2 | 15.0 | 16.9 | 26.4 |
| <b>Attenuation dB/100 m</b>  | 5.8  | 7.5  | 13.1 | 15.9 | 22.8 | 32.6 | 42.4 | 46.6 | 49.3 | 55.4 | 86.5 |
| <b>Avg. Power kW</b>         | 1.02 | 0.79 | 0.45 | 0.37 | 0.26 | 0.18 | 0.14 | 0.13 | 0.12 | 0.11 | 0.07 |

Calculate Attenuation =  $(0.320900) \cdot \sqrt{\text{FMHz}} + (0.000330) \cdot \text{FMHz}$  (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