

## LMR<sup>®</sup>-200-75 Ohm Flexible Low Loss Coaxial Cable

### Ideal for...

- Satellite Applications
- Video Applications-CCTV, CATV, baseband or broadband
- In-Building Feeder Runs
- Any 75 ohm Wireless Application requiring an easily routed,



• **LMR<sup>®</sup>-75** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than any smooth wall or corrugated hard-line cables.

• **Flexibility** and bendability are hallmarks of the LMR-200-75 cable design. 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-75. Size for size LMR-75 has the lowest loss of any flexible cable and comparable loss to semirigid 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-75 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors:** Standard available connectors include type-N and type-F male plug with 75 ohm interface. Most LMR-75 connectors are the EZ install type with crimp outer and non-solder center contact attachment.

• **Cable Assemblies:** All LMR-75 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Part Description |                |              |       |            |
|------------------|----------------|--------------|-------|------------|
| Part Number      | Application    | Jacket Color | Color | Stock Code |
| LMR-200-75       | Indoor/Outdoor | PE           | Black | 54213      |
| LMR-200-75-DB    | Outdoor        | PE           | Black | 54242      |

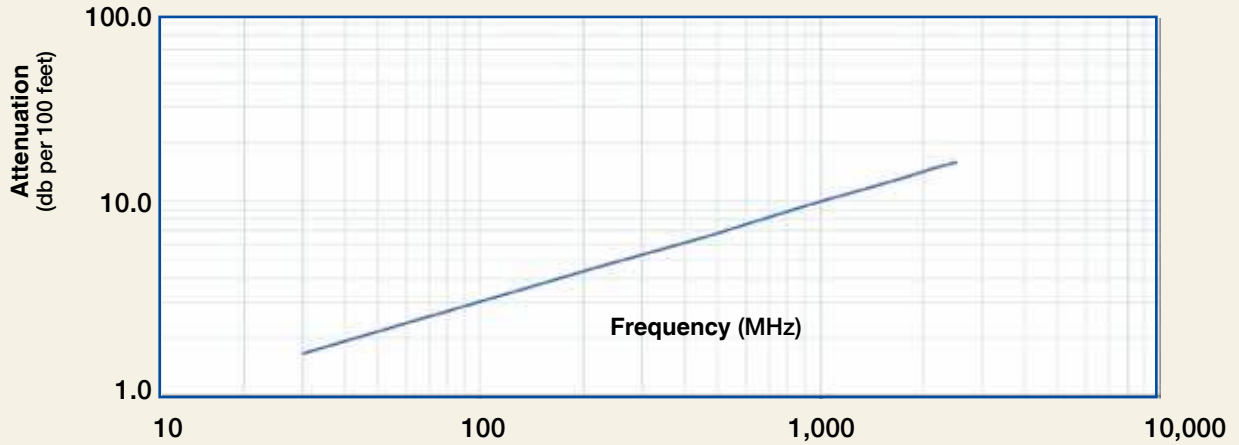
| Construction Specifications |               |       |        |
|-----------------------------|---------------|-------|--------|
| Description                 | Material      | In.   | (mm)   |
| Inner Conductor             | Solid BC      | 0.025 | (0.64) |
| Dielectric                  | Foam PE       | 0.116 | (2.95) |
| Outer Conductor             | Aluminum Tape | 0.121 | (3.07) |
| Overall Braid               | Tinned Copper | 0.144 | (3.66) |
| Jacket                      | Black PE      | 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)   | 0.022 | (0.03)   |
| Tensile Strength          | lb (kg)        | 40    | (18.2)   |
| 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 |

| Electrical Specifications |                   |       |          |
|---------------------------|-------------------|-------|----------|
| Performance Property      | Units             | US    | (metric) |
| Max Operating Frequency   | GHz               | 2.5   |          |
| Velocity of Propagation   | %                 | 83    |          |
| Dielectric Constant       | NA                | 1.45  |          |
| Time Delay                | nS/ft (nS/m)      | 1.22  | (4.02)   |
| Impedance                 | ohms              | 75    |          |
| Capacitance               | pF/ft (pF/m)      | 16.3  | (53.6)   |
| Inductance                | uH/ft (uH/m)      | 0.092 | (0.30)   |
| Shielding Effectiveness   | dB                | >90   |          |
| DC Resistance             |                   |       |          |
| Inner Conductor           | ohms/1000ft (/km) | 16.8  | (55.1)   |
| Outer Conductor           | ohms/1000ft (/km) | 4.9   | (16.1)   |
| 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 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 1.7  | 2.1  | 3.7  | 4.5  | 6.5  | 9.3  | 12.1 | 13.4 | 14.1 | 15.9 |
| Attenuation dB/100 m  | 5.4  | 7.0  | 12.2 | 14.9 | 21.4 | 30.6 | 39.8 | 43.8 | 46.3 | 52.0 |
| Avg. Power kW         | 0.98 | 0.76 | 0.43 | 0.36 | 0.25 | 0.17 | 0.13 | 0.12 | 0.11 | 0.10 |

Calculate Attenuation =  $(0.300717) \cdot \sqrt{\text{FMHz}} + (0.000335) \cdot \text{FMHz}$  (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

**Connectors**

| Interface | Description   | Part Number   | Stock Code | VSWR** Freq. (GHz) | Coupling Nut | Inner Contact Attach | Outer Contact Attach | Finish* Body /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|-----------|---------------|---------------|------------|--------------------|--------------|----------------------|----------------------|-------------------|----------------|---------------|---------------|
| 1. F Male | Straight Plug | EZ-200-FMH-75 | 3190-1611  | <1.35:1 (2.5)      | Hex          | Spring Finger Crimp  |                      | N/G               | 1.1 (27.0)     | 0.50 (12.7)   | 0.015 (6.8)   |
| 2. N Male | Straight Plug | EZ-200-NM-75  | 3190-1612  | <1.35:1 (2.5)      | Knurl        | Spring Finger Crimp  |                      | N/G               | 1.5 (38.1)     | 0.83 (21.1)   | 0.073 (33.1)  |

\* 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  |
|-----------------------|----------------|------------|--|
| Crimp Tool            | CT-240/200/195 | 3190-667   | Crimp tool for LMR 240, 200 and 195                              |
| Strip Tool            | CST-195/200    | 3192-102   | Combination prep tool for LMR-195/200 crimp and clamp connectors |
| Cutting Tool          | CCT-02         | 3192-165   | Cable end flush cut tool   |
| Replacement Blade Kit | RB-CST         | 3192-086   | Replacement blade kit for all CST tools                          |
| Debur Tool            | DBT-U          | 3192-001   | Removes center conductor rough edges                             |

**Accessories**

| Type       | Part Number | Stock Code | Description            |
|------------|-------------|------------|------------------------|
| Ground Kit | GK-S200TT   | GK-S200TT  | Standard Grounding Kit |

