

LMR[®]-300-75 Ohm Flexible Low Loss Coaxial Cable

Ideal for...

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



• **LMR[®]-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-300-75 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-300-75. 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-300-75 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-300-75 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Construction Specifications | | | |
|-----------------------------|---------------|-------|--------|
| Description | Material | In. | (mm) |
| Inner Conductor | Solid BC | 0.044 | (1.12) |
| Dielectric | Foam PE | 0.190 | (4.83) |
| Outer Conductor | Aluminum Tape | 0.196 | (4.98) |
| Overall Braid | Tinned Copper | 0.225 | (5.72) |
| Jacket | Black PE | 0.300 | (7.62) |

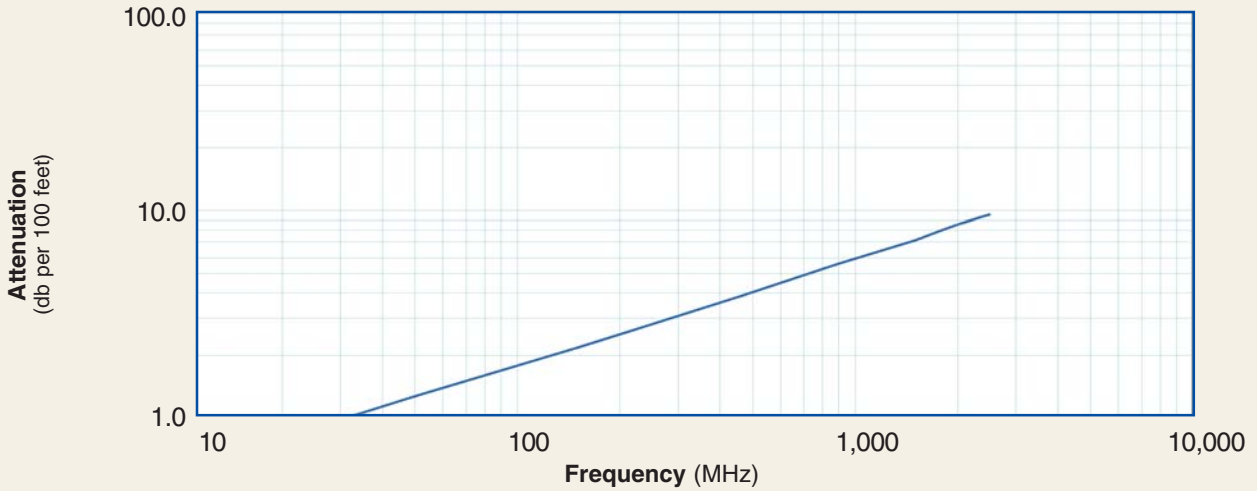
| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 0.875 | (22.2) |
| Bend Radius: repeated | in. (mm) | 3.0 | (76.2) |
| Bending Moment | ft-lb (N-m) | 0.38 | (0.52) |
| Weight | lb/ft (kg/m) | 0.055 | (0.08) |
| Tensile Strength | lb (kg) | 120 | (54.5) |
| Flat Plate Crush | lb/in. (kg/mm) | 30 | (0.54) |

| 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 | % | 85 | |
| Dielectric Constant | NA | 1.38 | |
| Time Delay | nS/ft (nS/m) | 1.20 | (3.92) |
| Impedance | ohms | 75 | |
| Capacitance | pF/ft (pF/m) | 15.9 | (52.3) |
| Inductance | uH/ft (uH/m) | 0.090 | (0.29) |
| Shielding Effectiveness | dB | >90 | |
| DC Resistance | | | |
| Inner Conductor | ohms/1000ft (/km) | 5.36 | (17.6) |
| Outer Conductor | ohms/1000ft (/km) | 2.21 | (7.3) |
| Voltage Withstand | Volts DC | 2000 | |
| Jacket Spark | Volts RMS | 5000 | |
| Peak Power | kW | 10 | |

| Part Description | | | | |
|------------------|----------------|--------|-------|------------|
| Part Number | Application | Jacket | Color | Stock Code |
| LMR-300-75 | Indoor/Outdoor | PE | Black | 54146 |
| LMR-300-75-DB | Outdoor | PE | Black | 54241 |

Attenuation vs. Frequency (typical)



| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 1.0 | 1.3 | 2.2 | 2.7 | 3.9 | 5.6 | 7.3 | 8.0 | 8.5 | 9.6 |
| Attenuation dB/100 m | 3.2 | 4.1 | 7.2 | 8.8 | 12.7 | 18.2 | 23.9 | 26.4 | 27.9 | 31.5 |
| Avg. Power kW | 2.06 | 1.59 | 0.91 | 0.74 | 0.51 | 0.36 | 0.27 | 0.25 | 0.23 | 0.21 |

Calculate Attenuation = $(0.175490) \cdot \sqrt{FMHz} + (0.000330) \cdot FMHz$ (interactive calculator available at 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



EZ-300-FMH-75



EZ-300-NM-75

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) |
|-----------|---------------|---------------|------------|--------------------|--------------|----------------------|----------------------|-------------------|----------------|---------------|---------------|
| F male | Straight Plug | EZ-300-FMH-75 | 3190-1615 | <1.25:1 (2.5) | Hex | Spring | FingerCrimp | N/G | 1.7 (43.2) | 0.56 (14.2) | 0.018 (8.2) |
| N male | Straight Plug | EZ-300-NM-75 | 3190-1616 | <1.25:1 (2.5) | Knurl | Spring | FingerCrimp | N/G | 1.5 (38.1) | 0.83 (21.1) | 0.074(33.6) |

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



GK-S300TT

Accessories

| Type | Part Number | Stock Code | Description |
|------------|-------------|------------|------------------------|
| Ground Kit | GK-S300TT | GK-S300TT | Standard Grounding Kit |