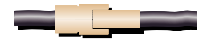


Benefits of LMR Cable

- Flexible:** More flexible than corrugated copper cables often eliminating the need for jumper cables.
- Low Cost:** The most cost effective choice for antenna feeders and jumper cables.
- Easy Connector Attachment:** Connectors suitable for quick field attachment using common hand tools or available stripping tools.
- Low Loss:** Loss comparable to corrugated copper cables.
- Weatherproof:** Black UV protected polyethylene jacket for long term outdoor exposure. LMR-DB watertight construction standard on LMR-900, -1200, -1700 (optional on LMR-195 through -600). Connectors provided with gaskets and shrink boots. Bonded aluminum tape resists moisture ingress.

LMR® Connectors



| | LMR-200 | LMR-240 | LMR-300 | LMR-400 | LMR-500 | LMR-600 | LMR-900 | LMR-1200 | LMR-1700 |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
| N (plug) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N (plug)-RP | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N (jack) | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N (rt.angle) | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| UHF (plug) | | ✓ | | | ✓ | ✓ | | | |
| Mini UHF | ✓ | ✓ | | ✓ | | | | | |
| BNC (plug) | ✓ | ✓ | | ✓ | | | | | |
| TNC (plug) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| TNC (plug)-RP | ✓ | ✓ | | ✓ | | ✓ | | | |
| TNC (plug) RA | | ✓ | | ✓ | | | | | |
| TNC (jack) | ✓ | | | ✓ | | | | | |
| TNC (jack)-RP | ✓ | | | ✓ | | ✓ | | | |
| SMA (plug) | ✓ | ✓ | ✓ | ✓ | | | | | |
| SMA RP | ✓ | ✓ | | ✓ | | | | | |
| SMA RA | | ✓ | | ✓ | | | | | |
| 7/16 DIN (plug) | | | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| 7/16 DIN (jack) | | | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| 7/16 DIN Bulkhead (jack) | | | | | | | | | |
| 7/16 90° (plug) | | | | | | ✓ | ✓ | | |
| 7/8 EIA Flange | | | | | | ✓ | ✓ | ✓ | |

Please consult TMS for other connector requirements

Special LMR Products

- LMR-DB:** Watertight flexible coax meets Industry Standard watertightness tests ASTM D4565, REA PE39, ANSI S-84-608 while maintaining the same excellent performance properties as standard LMR. The inert flooding compound completely eliminates all paths of water migration and ingress for long term reliability (10 year warranty).
- LMR-FR Riser and LMR-LLPL Plenum Fire Retardant Cables:** The LMR-FR cables have fire retardant, low smoke, non-halogenated jackets. The jackets are UV protected to allow installation outdoors or indoors. They provide identical electrical performance to standard LMR cables. They are UL/CSA 'CMR/MPR (PCC-FT4)' listed for installation in risers and are approved for use by the London Underground. LMR-LLPL is UL/CSA 'CMP/MPP (PCC-FT6)' listed for indoor use in air handling plenums, where maximum fire retardancy and minimum smoke generation are dictated.
- LMR-UltraFlex:** A stranded center conductor and a more flexible jacket make LMR-UltraFlex ideal for applications requiring repeat bending. Available sizes include 240, 400, and newly introduced 500 and 600. Attenuation is about 15% higher than for standard LMR cables. LMR-UltraFlex cable accepts standard LMR connectors.
- LMR-MA Mobile Antenna Cables:** The MA or mobile antenna versions of the LMR cables provide improved performance compared to RG-58 for mobile antenna feeders in high frequency applications. The LMR-MA cables feature PVC jackets for better flexibility and easier installation and non-bonded outer conductor tape for ease of connector attachment.
- 75 Ohm Versions:** Please consult TMS for further details.
- E-Z Connectors:** The EZ series of connectors are the quickest and easiest to install high performance connectors available. They utilize push on center contacts to eliminate soldering. They are available for LMR-400, 600, 900, 1200 and 1700 cables.
- Prep Tools:** Available for LMR-400, 500, 600, 900, 1200 and 1700. Easily strips cable for consistent high quality assemblies.
- Cable Assemblies:** FlexTech™ factory fabricated with LMR-DB watertight cable, weather sealed and 100% sweep tested for VSWR and Insertion Loss.
- Hardware Accessories:** A complete line of supporting hardware, including ground kits, hoisting grips, snap-in hangers, support blocks, entry panels and weatherproofing kits are available.

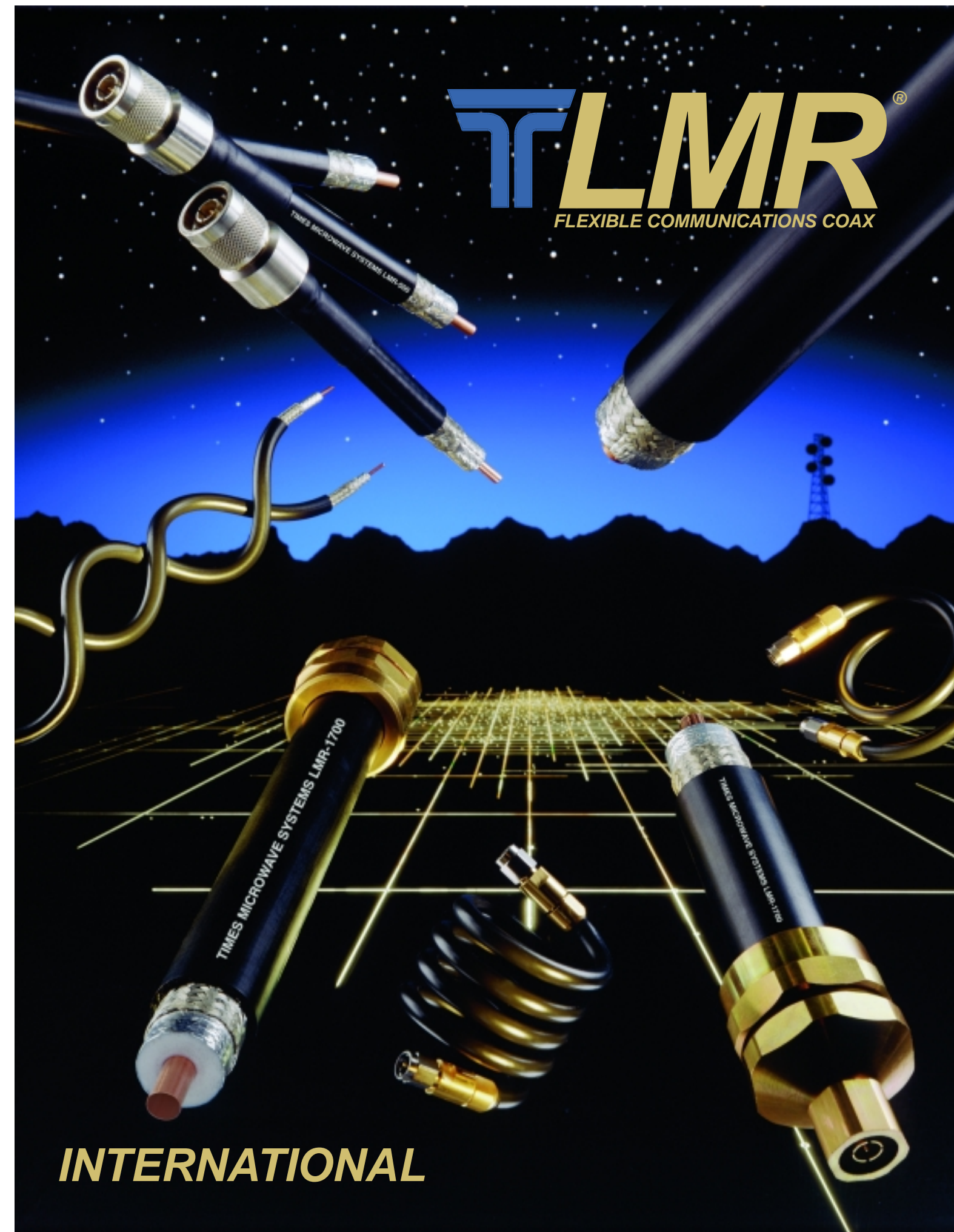


TIMES MICROWAVE SYSTEMS - THE COAX LEADER

358 Hall Avenue
Wallingford, CT 06492-5039 USA
Tel: (203) 949-8400
(800) 867-2629
Fax: (203) 949-8423

4 School Brae, Dysart
Kirkcaldy, Fife
Scotland KY1 2XB UK
Tel: +44 (0)1592655428
Fax: +44 (0)1592653162

www.timesmicrowave.com





Communications Coax Selection Guide Featuring TIMES MICROWAVE SYSTEMS LMR® Flexible Coax



Attenuation (dB per 100 meters ; +25C)

| | 1 1/4" low density foam | LMR-1700 | 7/8" low density foam | LMR-1200 | LMR-900 | 1/2" low density foam | LMR-600 | LMR-500 | 1/2" SuperFlex | 3/8" low density foam | LMR-400 | 3/8" SuperFlex | Belden 9913 | RG213/ RG214 | 1/4" SuperFlex | LMR-300 | LMR-240 | LMR-200 | RG-58 | LMR-195 | LMR-100A |
|---|-------------------------|----------|-----------------------|----------|---------|-----------------------|---------|---------|----------------|-----------------------|---------|----------------|-------------|--------------|----------------|---------|---------|---------|--------|---------|----------|
| Frequency / Size | 39.4mm | 42.4mm | 27.7mm | 30.5mm | 22.1mm | 16.0mm | 15.0mm | 12.7mm | 13.2mm | 11.2mm | 10.3mm | 10.5mm | 10.3mm | 10.3mm | 7.62mm | 7.62mm | 6.10mm | 4.95mm | 4.95mm | 4.95mm | 2.67mm |
| 30 MHz | 0.48 | 0.49 | 0.65 | 0.69 | 0.89 | 1.21 | 1.38 | 1.77 | 1.84 | 1.86 | 2.30 | 2.15 | 2.62 | 3.94 | 3.22 | 3.6 | 4.27 | 5.91 | 8.20 | 6.6 | 12.8 |
| 150 MHz | 1.12 | 1.14 | 1.50 | 1.58 | 2.03 | 2.77 | 3.16 | 4.00 | 4.23 | 4.27 | 4.92 | 4.89 | 5.25 | 9.19 | 7.32 | 7.9 | 9.84 | 13.1 | 20.3 | 14.4 | 29.2 |
| 220 MHz | 1.36* | 1.40 | 1.84* | 1.93 | 2.48 | 3.45* | 3.87 | 4.89 | 5.18* | 5.22* | 5.91 | 5.97* | -- | 11.5 | 8.92* | 9.5 | 12.1 | 15.7 | 24.3 | 17.7 | 35.8 |
| 450 MHz | 2.02 | 2.07 | 2.74 | 2.83 | 3.61 | 4.95 | 5.64 | 7.12 | 7.61 | 7.55 | 8.86 | 8.73 | 9.19 | 17.1 | 12.9 | 13.8 | 17.4 | 23.0 | 34.8 | 25.6 | 51.8 |
| 900 MHz | 2.99* | 3.07 | 4.04* | 4.17 | 5.25 | 7.25* | 8.20 | 10.3 | 11.2* | 11.0* | 12.8 | 12.7* | 13.8 | 26.2 | 18.6* | 20.0 | 24.9 | 32.5 | 54.1 | 36.4 | 74.8 |
| 1,600 MHz | 4.19* | 4.29 | 5.68* | 5.74 | 7.19 | 10.0* | 11.3 | 14.0 | 15.6* | 15.1* | 17.4 | 17.4* | -- | -- | 25.3* | 26.9 | 33.5 | 43.9 | -- | 49.2 | 102.2 |
| 1,800 MHz | 4.50* | 4.61 | 6.09* | 6.14 | 7.68 | 10.7* | 12.0 | 15.0 | 16.7* | 16.1* | 18.6 | 18.6* | -- | -- | 27.0* | 28.5 | 35.7 | 46.7 | -- | 52.5 | 109.0 |
| 1,900 MHz | 4.65* | 4.76 | 6.30* | 6.33 | 7.94 | 11.0* | 12.4 | 15.4 | 17.2* | 16.6* | 19.1 | 19.2* | -- | -- | 27.8* | 29.5 | 36.7 | 48.0 | -- | 53.8 | 112.2 |
| 2,000 MHz | 4.76 | 4.91 | 6.46 | 6.52 | 8.17 | 11.3* | 12.8 | 15.9 | 17.8 | 17.1 | 19.7 | 19.7 | 22.0 | -- | 28.6 | 30.2 | 37.7 | 49.3 | -- | 55.4 | 115.5 |
| Attenuation at Any Frequency = [k1 x SqRt (Fmhz)] + [k2 x Fmhz] or use Performance Calculator at www.timesmicrowave.com | | | | | | | | | | | | | | | | | | | | | |
| k1 | | 0.08682 | | 0.12261 | 0.15929 | | 0.24788 | 0.31691 | | | 0.40123 | | | | | 0.62972 | 0.79426 | 1.05287 | | 1.17086 | 2.32669 |
| k2 | | 0.00052 | | 0.00052 | 0.00052 | | 0.00085 | 0.00085 | | | 0.00085 | | | | | 0.00108 | 0.00108 | 0.00108 | | 0.00154 | 0.00571 |
| Price US \$/metre | 35.90 | \$25.10 | 20.08 | \$15.91 | \$12.14 | 8.20 | \$4.27 | \$3.45 | 11.88 | 6.20 | \$2.10 | 8.66 | 1.97 | 2.95/5.48 | 5.45 | \$1.74 | \$1.54 | \$1.21 | 0.96 | \$1.21 | \$.98 |



Power Handling (kW ; +40C ; Sea Level)

| | 1 1/4" low density foam | LMR-1700 | 7/8" low density foam | LMR-1200 | LMR-900 | 1/2" low density foam | LMR-600 | LMR-500 | 1/2" SuperFlex | 3/8" low density foam | LMR-400 | 3/8" SuperFlex | Belden 9913 | RG213/ RG214 | 1/4" SuperFlex | LMR-300 | LMR-240 | LMR-200 | RG-58 | LMR-195 | LMR-100A |
|------------------|-------------------------|----------|-----------------------|----------|---------|-----------------------|---------|---------|----------------|-----------------------|---------|----------------|-------------|--------------|----------------|---------|---------|---------|--------|---------|----------|
| Frequency / Size | 39.4mm | 42.4mm | 27.7mm | 30.5mm | 22.1mm | 16.0mm | 15.0mm | 12.7mm | 13.2mm | 11.2mm | 10.3mm | 10.5mm | 10.3mm | 10.3mm | 7.62mm | 7.62mm | 6.10mm | 4.95mm | 4.95mm | 4.95mm | 2.67mm |
| 30 MHz | 21.1 | 20.3 | 14.0 | 12.6 | 9.5 | 6.31 | 5.5 | 4.4 | 5.75 | 4.14 | 3.3 | 3.97 | 2.2 | 1.8 | 2.28 | 2.1 | 1.49 | 1.02 | .40 | 0.89 | 0.33 |
| 150 MHz | 9.09 | 8.7 | 6.04 | 5.5 | 4.1 | 2.75 | 2.4 | 1.9 | 2.49 | 1.81 | 1.5 | 1.74 | .90 | .62 | 1.0 | 0.93 | 0.66 | 0.45 | .16 | 0.39 | 0.15 |
| 220 MHz | 7.45* | 7.1 | 4.94* | 4.5 | 3.4 | 2.23* | 1.9 | 1.6 | 2.04* | 1.49* | 1.2 | 1.44* | -- | -- | 0.825* | 0.76 | 0.54 | 0.37 | -- | 0.32 | 0.12 |
| 450 MHz | 5.01 | 4.8 | 3.32 | 3.1 | 2.3 | 1.53 | 1.3 | 1.1 | 1.38 | 1.02* | 0.83 | 0.975 | .45 | .30 | 0.567 | 0.52 | 0.38 | 0.26 | .08 | 0.22 | 0.08 |
| 900 MHz | 3.39* | 3.3 | 2.24* | 2.1 | 1.6 | 1.05* | 0.93 | 0.75 | 0.944* | 0.703* | 0.58 | 0.674* | .28 | .18 | 0.393* | 0.36 | 0.26 | 0.18 | .05 | 0.15 | 0.06 |
| 1,600 MHz | 2.42* | 2.3 | 1.60* | 1.5 | 1.2 | 0.764* | 0.68 | 0.55 | 0.678* | 0.512* | 0.42 | 0.490* | -- | -- | 0.288* | 0.280 | 0.19 | 0.133 | -- | 0.115 | 0.041 |
| 1,800 MHz | 2.25* | 2.2 | 1.49* | 1.4 | 1.09 | 0.715* | 0.63 | 0.52 | 0.633* | 0.479* | 0.40 | 0.459* | -- | -- | 0.270* | 0.260 | 0.18 | 0.125 | -- | 0.110 | 0.038 |
| 1,900 MHz | 2.18* | 2.1 | 1.44* | 1.37 | 1.06 | 0.694* | 0.61 | 0.50 | 0.613* | 0.465* | 0.39 | 0.445* | -- | -- | 0.262* | 0.253 | 0.176 | 0.121 | -- | 0.105 | 0.037 |
| 2,000 MHz | 2.13 | 2.0 | 1.40 | 1.33 | 1.03 | 0.673 | 0.59 | 0.49 | 0.597 | 0.451 | 0.37 | 0.431 | .16 | -- | 0.256 | 0.240 | 0.171 | 0.118 | -- | 0.100 | 0.036 |

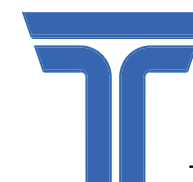
Trademarks are the exclusive property of their respective owners.
Competitor's Data As Published
* = estimated from published data.

General Performance Properties

| | LMR-1700 | LMR-1200 | LMR-900 | LMR-600 | LMR-500 | LMR-400 | LMR-300 | LMR-240 | LMR-200 | LMR-195 | LMR-100A |
|-------------------------------------|-----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| Conductor: (note 1) mm | 13.39 | 8.86 | 6.65 | 4.47 | 3.61 | 2.77 | 1.78 | 1.42 | 1.12 | 0.94 | 0.56 |
| Dielectric: Cellular PE (note 2) mm | 34.29 | 23.37 | 17.27 | 11.56 | 9.40 | 7.24 | 4.83 | 3.81 | 2.95 | 2.87 | 1.57 |
| Shield: Aluminum Tape (note 3)mm | 34.44 | 23.52 | 17.42 | 11.71 | 9.55 | 7.39 | 4.98 | 3.94 | 3.07 | 3.00 | 1.70 |
| Tinned Copper Braid mm | 35.61 | 24.69 | 18.59 | 12.45 | 10.29 | 8.13 | 5.72 | 4.52 | 3.66 | 3.58 | 2.16 |
| Jacket: Black PE (note 4) mm | 42.42 | 30.48 | 22.10 | 14.99 | 12.70 | 10.29 | 7.62 | 6.10 | 4.95 | 4.95 | 2.67 |
| Bend Radius (note 5) mm | 342.9 | 165.1 | 76.2 | 38.1 | 31.8 | 25.4 | 22.2 | 19.1 | 12.7 | 12.7 | 6.4 |
| Weight (Kg/m) | 1.096 | 0.667 | 0.396 | 0.195 | 0.144 | 0.101 | 0.082 | 0.051 | 0.033 | 0.033 | 0.022 |
| Temperature Range | -40°C to +85°C | | | | | | | | | | |
| Impedance | 50 Ohms | | | | | | | | | | |
| Velocity (%) | 89 | 88 | 87 | 87 | 86 | 85 | 85 | 84 | 83 | 80 | 66 |
| Capacitance (pF per metre) | 74.8 | 75.8 | 76.8 | 76.8 | 77.4 | 78.4 | 79.1 | 79.4 | 80.4 | 79.7 | 101.0 |
| DC Resistance: centre conductor | 0.69 | 1.05 | 1.77 | 1.74 | 2.69 | 4.56 | 7.0 | 10.5 | 17.6 | 24.9 | 70.2 |
| (ohms/Km) : shield | 0.89 | 1.21 | 1.8 | 3.94 | 4.17 | 5.41 | 7.3 | 12.8 | 16.1 | 16.1 | 31.2 |
| Shielding | > 90 db | | | | | | | | | | |
| Phase Stability | +/- 10 ppm/degC | | | | | | | | | | |

NOTES:

- Center Conductor in LMR-900, LMR-1200 & LMR-1700 is Copper Tube
Center Conductor in LMR-400, LMR-500 & LMR-600 is Copper Clad Aluminum
Center Conductor in LMR-195, LMR-200, LMR-240 and LMR-300 is Bare Copper
LMR-100A is BCCS
- Low loss closed cell polyethylene foam (LMR-100A solid polyethylene)
- Aluminum laminated tape bonded (LMR-100A unbonded) to the Dielectric with a Tinned Copper Overbraid
- Black UV protected polyethylene (LMR-100A black PVC)
- Less than 1 ohm impedance change at bend



TIMES MICROWAVE SYSTEMS

4 School Brae
Dysart
Kirkcaldy, Fife
Scotland KY1 2XB UK
TEL +44(0)1592655428 • FAX +44(0)1592653162

358 Hall Avenue
P.O.Box 5039
Wallingford, CT 06492-5039 USA
TEL (203) 949-8400
FAX (203) 949-8423