

# LMR<sup>®</sup>-240-75 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<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-240-75 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-240-75. 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-240-75 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-240-75 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	Stock Code
LMR-240-75	Indoor/Outdoor	PE	Black	54150
LMR-240-75-DB	Outdoor	PE	Black	54226

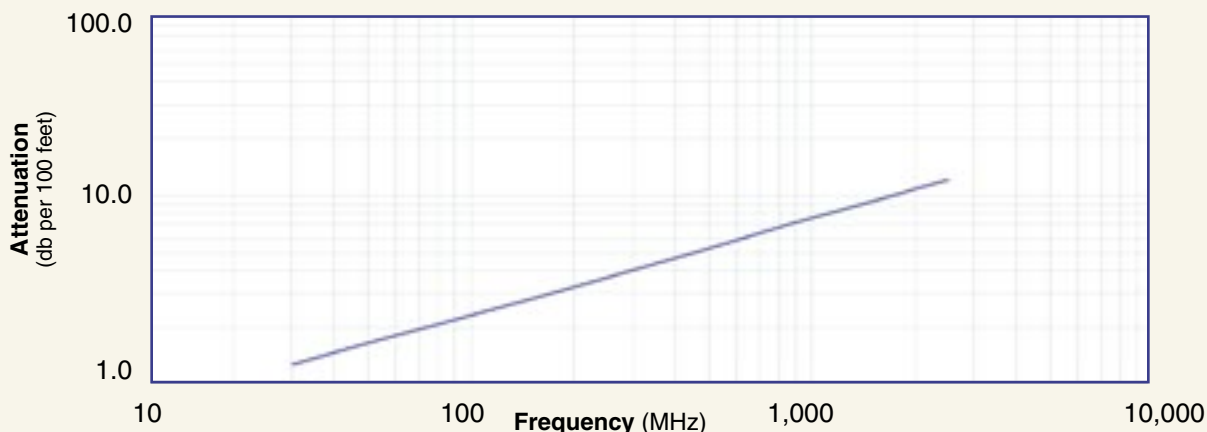
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.032	(0.82)
Dielectric	Foam PE	0.150	(3.81)
Outer Conductor	Aluminum Tape	0.155	(3.94)
Overall Braid	Tinned Copper	0.178	(4.52)
Jacket	Black PE	0.240	(6.10)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.75	(19.1)
Bend Radius: repeated	in. (mm)	2.5	(63.5)
Bending Moment	ft-lb (N-m)	0.25	(0.34)
Weight	lb/ft (kg/m)	0.034	(0.05)
Tensile Strength	lb (kg)	80	(38.3)
Flat Plate Crush	lb/in. (kg/mm)	20	(0.36)

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	%	84	
Dielectric Constant	NA	1.42	
Time Delay	nS/ft (nS/m)	1.21	(3.97)
Impedance	ohms	75	
Capacitance	pF/ft (pF/m)	16.1	(52.9)
Inductance	uH/ft (uH/m)	0.091	(0.30)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	10.1	(33.1)
Outer Conductor	ohms/1000ft (/km)	3.89	(12.8)
Voltage Withstand	Volts DC	1500	
Jacket Spark	Volts RMS	5000	
Peak Power	kW	5.6	

**Attenuation vs. Frequency (typical)**



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500
<b>Attenuation dB/100 ft</b>	1.3	1.6	2.9	3.5	5.0	7.2	9.4	10.3	10.9	12.3
<b>Attenuation dB/100 m</b>	4.1	5.4	9.4	11.4	16.4	23.5	30.7	33.8	35.8	40.3
<b>Avg. Power kW</b>	1.41	1.09	0.62	0.51	0.35	0.25	0.19	0.17	0.16	0.14

**Calculate Attenuation =**

$(0.229100) \cdot \sqrt{\text{FMHz}} + (0.000330) \cdot \text{FMHz}$  (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



**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)
BNC Male	Straight Plug	TC-240-BM-75	3190-1814	<1.1:1 (2.0)	Knurl	Solder-on	Crimp	N/G	1.37 (34.8)	0.56 (14.2)	0.043 (19.5)
F Male	Straight Plug	EZ-240-FMH-75	3190-1613	<1.25:1 (2.0)	Hex	Spring Finger	Crimp	N/G	1.7 (43.4)	0.56 (14.2)	0.016 (7.3)
	Straight Plug	TC-240-FMH-75	3190-1483	<1.25:1 (2.5)	Hex	Solder-on	Crimp	N/G	1.7 (43.2)	0.56 (14.2)	0.016 (7.3)
N Male	Straight Plug	EZ-240-NM-75	3190-1614	<1.25:1 (2.0)	Knurl	Spring Finger	Crimp	N/G	1.5 (38.1)	0.83 (21.1)	0.086 (39.0)
	Straight Plug	TC-240-NM-75	3190-477	<1.25:1 (2.5)	Knurl	Solder-on	Crimp	N/G	1.5 (38.1)	0.83 (21.1)	0.086 (39.0)

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

**Accessories**

Type	Part Number	Stock Code	Description
Ground Kit	GK-S240TT	GK-S240TT	Standard Grounding Kit

