

# LMR®-300-75 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®-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)

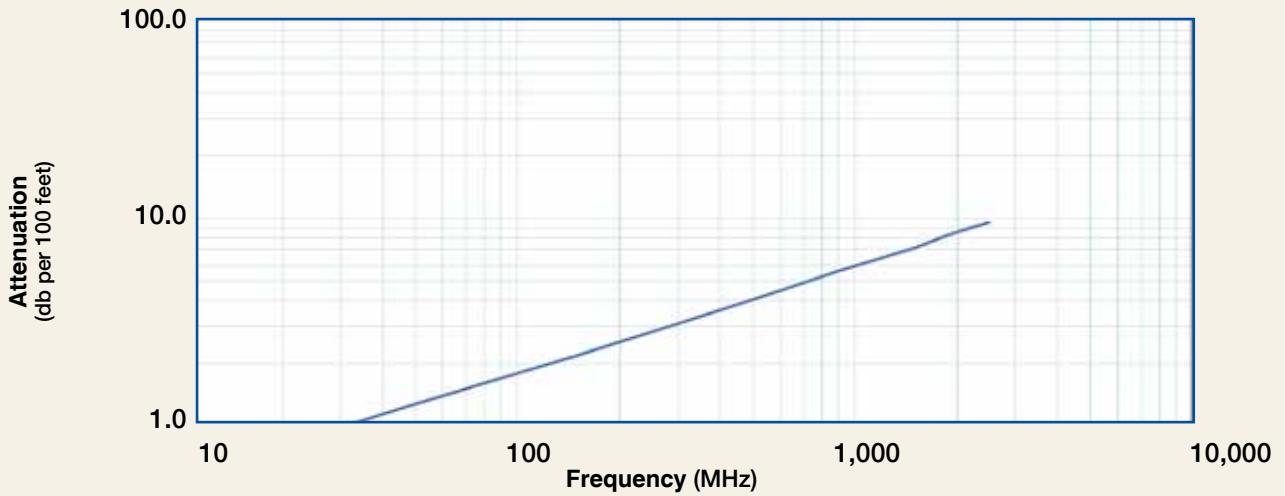
Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.875	(22.2)
Bend Radius: repeated	in. (mm)	3.0	(76.2)
Bending Moment	ft-lb (N-m)	0.38	(0.52)
Weight	lb/ft (kg/m)	0.055	(0.08)
Tensile Strength	lb (kg)	120	(54.5)
Flat Plate Crush	lb/in. (kg/mm)	30	(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](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* /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
1. BNC Male	Straight Plug	TC-300-BM-75-X	3190-2959	<1.1:1 (2.0)	Knurl	Solder-on	Crimp	N/G	1.37 (34.8)	0.56(14.2)	0.043 (19.5)
2. F Male	Straight Plug	EZ-300-FMH-75	3190-1615	<1.25:1 (2.5)	Hex	Spring Finger	Crimp	N/G	1.7 (43.2)	0.56(14.2)	0.018 (8.2)
3. N Male	Straight Plug	EZ-300-NM-75	3190-1616	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	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 spec based on 3 foot cable with a connector pair



**Install Tools**

Type	Part Number	Stock Code	Description
Crimp Tool	CT-300/400	3190-666	Crimp tool for LMR 300 and 400
Strip Tool	CST-300	3192-084	Combination prep tool for LMR-300 crimp and clamp connectors
Cutting Tool	CCT-01	3190-1544	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-S300TT	GK-S300TT	Standard Grounding Kit

