

## LMR<sup>®</sup>-240-LLPX Flexible Low Loss Plenum Coax

### Ideal for...

- Indoor/Outdoor Plenum Feeder runs
- UL/NEC/CSA rated CMP/FT6 (listed under UL file #E-170516)
- Any wireless application (e.g. LMDS, MMDS, WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Cellular, PCS, Paging) requiring an easily routed, low loss RF cable for in-building systems



Part Description				
Part No.	Application	Jacket	Color	Stock Code
LMR-240-LLPX	Indoor/Outdoor Plenum CMP/FT6	Fluoropolymer	Red	54459

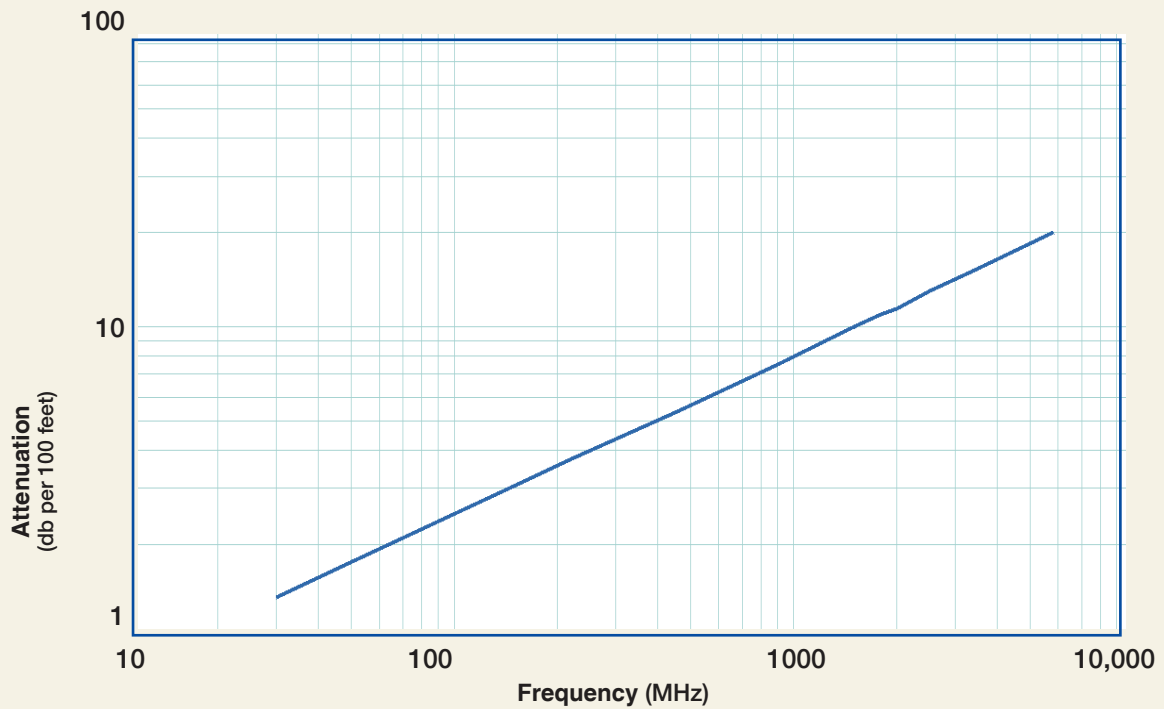
Environmental Specifications			
Performance Property	°F	°C	
Installation Temperature Range	-40/+257	-40/+125	
Storage Temperature Range	-40/+257	-40/+125	
Operating Temperature Range	-40/+257	-40/+125	

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid Bare Copper	0.051	(1.30)
Dielectric	Low density PTFE	0.150	(3.81)
Outer Conductor	Aluminum Tape	0.155	(3.94)
Overall Braid	Tinned Copper	0.178	(4.52)
Jacket	Red Fluoropolymer	0.214	(5.43)

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)
Weight	lb/ft (kg/m)	.040	(0.06)
Tensile Strength	lb (kg)	60	(27.22)
Flat Plate Crush	lb/in. (kg/mm)	85	(1.52)

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	76	
Dielectric Constant	NA	1.73	
Time Delay	nS/ft (nS/m)	1.34	(4.40)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	26.7	(87.6)
Inductance	uH/ft (uH/m)	0.067	(0.22)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	4.0	(13.1)
Outer Conductor	ohms/1000ft (/km)	3.9	(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	3400	5800	8000
<b>Attenuation dB/100 ft</b>	1.4	1.8	3.1	3.7	5.4	7.6	9.9	10.9	11.5	12.9	15.1	20.0	24.3
<b>Attenuation dB/100 m</b>	4.5	5.8	10.1	12.2	17.6	25.0	32.5	35.7	37.7	42.3	49.6	65.6	79.7
Avg. Power kW	2.5	1.9	1.1	0.91	0.63	0.44	0.34	0.31	0.29	0.26	0.23	0.17	0.12

**Calculate Attenuation =**  
 $(0.248520) \sqrt{\text{FMHz}} + (0.000183) \cdot \text{FMHz}$  (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; Jacket = +75°C (167°F); Sea Level; dry air; atmospheric pressure; no solar loading

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Connectors		Part Number	Stock Code	VSWR**	Coupling	Inner Contact Attach	Outer Contact Attach	Finish*	Length in	Width in	Weight lb
Interface	Description			Freq. (GHz)	Nut			Body /Pin	(mm)	(mm)	(g)
1. BNC Male	Straight Plug	TC-240-BMC	3190-242	<1.25:1 (2.5)	Knurl	Solder	Clamp	S/G	1.7 (43)	0.56 (14.2)	0.040 (18.1)
2. Mini-UHF	Straight Plug	TC-240-MUHF	3190-445	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.1 (28)	0.45 (11.4)	0.014 (6.4)
3. N Female	Bulkhead Jack	TC-240-NF-BH-X	3190-2888	<1.25 (2.5)	NA	Solder	Crimp	A/G	1.7 (44)	0.88 (22.2)	0.115 (52.2)
4. N Male	Straight Plug	TC-240-NM	3190-382	<1.25:1 (2.5)	Hex	Solder	Crimp	N/S	1.5 (38)	0.75 (19.1)	0.086 (39.0)
5. N Male	Straight Plug	TC-240-NMC	3190-244	<1.25:1 (2.5)	Knurl	Solder	Clamp	S/G	1.5 (38)	0.75 (19.1)	0.082 (37.2)
6. SMA Female	Bulkhead Jack	TC-240-SF-SS-BH-X	3190-2896	<1.25:1 (2.5)	NA	Solder	Crimp	SS/G	1.1 (29)	0.31 (7.9)	0.019 (8.6)
7. SMA Male	Straight Plug	TC-240-SM-SS-X	3190-2898	<1.25:1 (10)	Hex	Solder	Crimp	SS/G	1.0 (25)	0.32 (8.1)	0.016 (7.3)
8. SMA Male	Right Angle	TC-240-SM-RA-SS-X	3190-2900	<1.35:1 (6)	Hex	Solder	Crimp	SS/G	0.8 (20)	0.65 (16.5)	0.019 (8.6)
9. SMA Male	Rev. Polarity	TC-240-SM-RP	3190-326	<1.25:1 (2.5)	Hex	Solder	Crimp	SS/G	1.0 (25)	0.32 (8.1)	0.016 (7.3)
10. SMA Male	Straight Plug	EZ-240-SM-PL-X	3190-3075	<1.25:1 (6)	Hex	Spring Finger	Crimp	A/G	1.0 (25.4)	0.32 (8.1)	0.016 (PL)
11. TNC Male	Straight Plug	TC-240-TM-X	3190-2797	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/S	1.7 (43)	0.59 (15.0)	0.043 (19.5)
12. N Male	Right Angle	TC-240-NMH-RA-D	3190-2426	<1.35:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.2 (32.4)	1.22 (31.0)	0.091 (41.7)

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



## Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S240TT	GK-S240TT	Standard Ground Kit (each)



## Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR-100, 195, 200 and 240 connectors
Strip Tool	CST-240A	3192-152	Prep tool for LMR-240 connectors
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Replacement Blade	RB-02	3192-166	Replacement blade for cutting tool
Replacement Blade Kit	RB-CST	3192-086	Replacement kit for all CST strip tools
Weather Seal Boots	WSB-240	3109-400	Weather seal/strain relief boots (10 pk) for use with most popular LMR-240-X series connectors