

T TIMES
MICROWAVE SYSTEMS
AN AMPHENOL COMPANY

LMR[®]
CABLES • CONNECTORS • TOOLS • ASSEMBLIES



GUIDE

Coaxial Cables, Tools,
and Connectors

EUROPEAN VERSION

Index

PAGE:

4	Connectors & Tools	22	LMR® 195 - UltraFlex	40	LMR® 900 - LLPX®
6	LMR® Selection Guide	24	LMR® 240 - UltraFlex	42	LMR® 1200 - LLPX®
8	LMR® 195 - Standard	26	LMR® 400 - UltraFlex	44	LLPX® Tools & Hardware
10	LMR® 240 - Standard	28	LMR® 600 - UltraFlex	46	LMR® 240 - 75 Ohm
12	LMR® 400 - Standard	30	UltraFlex Tools & Hardware	48	LMR® 400 - 75 Ohm
14	LMR® 600 - Standard	32	LMR® 195 - LLPX®	50	LMR® 600 - 75 Ohm
16	LMR® 900	34	LMR® 240 - LLPX®	52	75 Ohm Tools & Hardware
18	LMR® 1200	36	LMR® 400 - LLPX®		
20	Standard Tools & Hardware	38	LMR® 600 - LLPX®		

LMR® and LLPX® are registered trademarks of Times Microwave Systems.

The LMR® cable solution offers a complete line of highly flexible, rugged, low-loss braided cables with the fastest, easiest connector installation available. LMR cables provide superior performance compared to RG cables of similar size. They also provide significantly better attenuation, shielding effectiveness, and UV resistance.

LMR® system is a complete solution with ultimate simplicity. Its ruggedness, weatherability, and proven construction provide the reliable and durable solutions end users require that will stand the test of time.

LMR® is not just a family of cables – LMR products include an extensive variety of connectors– including X-series EZ design connectors featuring common interface types and non-solder center pins. These connectors can be easily terminated using Times Microwave Systems' prep tools included within the LMR system.

Product line includes:

- An array of industry standard options for cable types, jackets, and cable sizes
- A complete line of cable, connectors (including EZ), tools, and accessories
- Full range of cables sizes, from LMR-100 (0.110") all the way up to LMR-1200- DB (1.200")
- A complete line of cable prep and connector installation tools –everything needed to get from the antenna to the equipment– so users always have the right tools
- Supported by Times Microwave Systems extensive distribution network and unsurpassed technical support

Visit Us at www.timesmicrowave.com to learn more about how the LMR system can power your critical communications infrastructure.

Cable Family	Description	Center Conductor	Dielectric	Outer Conductor	Connectors	Installation
Standard	General use 50 Ohm coaxial cable	Solid	Foam PE	Tape & copper	Crimp (EZ) or Solder (TC)	Indoor/Outdoor
UltraFlex	Flexible construction	Stranded	Foam PE	Tape & copper	Solder (TC)	Indoor/Outdoor
LLPX	Plenum rated for indoor applications	Solid	ePTFE	Tape & copper	Crimp (EZ) or Solder (TC)	Indoor
75 Ohm	General use 75 Ohm coaxial cable	Solid	Foam PE	Tape & copper	Crimp (EZ) or Solder (TC)	Indoor/Outdoor

LMR® Standard

High-performance broadband, flexible, low-loss 50 Ohm coaxial cables. Features include 100% effective shielding, available as pre-terminated assemblies, and rugged resistance to UV, sunlight, and weather.

Ideal for...

- Jumper Assemblies in Wireless Systems
- Short Antenna Feeder runs
- Applications requiring an easily routed, low loss RF cable

LMR® LLPX®

Indoor highly fire-retardant cable designed for runs within return air handling plenums (e.g. dropped ceilings, raised floors).

Ideal for...

- Indoor Plenum Feeder runs
- UL/NEC/CSA listed CMP/FT6
- Any wireless application

Applications:

STANDARD

The industry standard in high-performance broadband, flexible, low-loss 50 Ohm coaxial cables. Features include 100% effective shielding, availability as pre-terminated assemblies, and rugged resistance to UV, sunlight, and weather.

FIRE RETARDANT

LMR-FR is a non-halogen (non-toxic), low smoke, fire retardant cable designed for in-building runs that can be routed anywhere except air handling plenums. LMR-FR is UL/NEC & CSA listed 'CMR' and 'FT4' respectively, meets FAA FAR25 requirements and is MSHA-P listed for mining applications.

DIRECT BURIAL

LMR-DB is a waterproof version of the LMR. The addition of a waterproofing compound in and around the foil/braid ensures continuous reliable service should the jacket be inadvertently damaged during installation or in the future.

LMR® UltraFlex

A stranded center conductor and rubber outer jacketed cable designed for multiple bending/flexing cycles. It is used for both indoor and outdoor applications.

Ideal for...

- Communications Systems
- Short Antenna Feeder runs
- Any application that requires additional flexibility

LMR® 75 Ohm

UV Resistant Polyethylene jacketed cable designed for 30-year service outdoor use. The bending and handling characteristics are significantly better than other smooth wall or corrugated hard-line cables.

Ideal for...

- Satellite Applications
- Video Applications-CCTV, CATV, base/broadband
- In-Building Feeder Runs
- Any 75 Ohm Wireless Application

Connectors

LMR® connectors include a wide variety of interface types. Advantage™ -X series feature of solderless contact and a 'no braid trim' design, improving assembly, reducing FOD, and making them the preferred choice for quick and reliable field installations. Most interfaces are also available in a solder-pin TC version.



All Advantage™ EZ-X series connectors have the following benefits:

- No braid trimming required
- Corrosion resistant
- Center pin contacts made from silver or gold plated beryllium copper
- Spring finger inner contacts
- Crimp style outer contacts
- Optimized connector retention



EZ connectors are the preferred choice for quick and reliable field installations.

Times Microwave Systems offers a complete line of site installation hardware and accessories- everything you need to get from the antenna to the equipment:

Ground kits: Perfectly sized to each LMR cable, with never a chance of the ground strap being too tight (crushed cable), or too loose (poor grounding)

Hangers: Snap-in, butterfly

Hoisting grips: Stainless steel cable pull hoisting grips

Weatherproofing kits: Tape and cold shrink

Tools

Identifying the proper tools for a job, making sure that you have all of the necessary tools and storing them in a way that is quickly accessible when working remote on a job site, has been a timeless struggle.

The Times Microwave Systems hard case tool kits include hard foam cut-outs that will keep all of the tools required for a specific job all in one place. All it takes is a quick flip of the lid to make sure you have everything you need.

TK-195/200/240EZ-HC

- For LMR-195, 200 and 240 • X series connectors

▪ **CT-240/200/195/100**
Crimp tool for LMR 100/195/200/240 connectors

▪ **CST-240A**
Prep tool for LMR-240

▪ **CST-195/200**
Prep tool for LMR-195/200 connectors

▪ **CCT-03**
Cable cutting tool for LMR-100 through LMR-400



660-1206



TK-400/400-75EZ-HC

- For LMR-400 and 400-75 • X series connectors

▪ **CT-400/300**
Crimp Tool for LMR 400 and LMR 300

▪ **CST-400-75**
Prep tool for LMR 400-75

▪ **CST-400**
Prep tool for LMR 400

▪ **CCT-03**
Cable cutting tool for LMR-100 through LMR-400



660-1266



TK-CST-HC (Prep Tool Kit)

- For LMR, LMR-DB, and LMR-FR

▪ **CST-195/200**
Prep tool for LMR 195/200

▪ **CST-240-PX**
Prep tool for LMR 240-LLPX

▪ **CST-240A**
Prep tool for LMR 240

▪ **CST-400-PX**
Prep tool for LMR 400-LLPX

▪ **CST-400**
Prep tool for LMR 400

▪ **CST-600-PX**
Prep tool for LMR 600-LLPX

▪ **CST-600**
Prep tool for LMR 600



660-1268



Attenuation (dB per 100 feet; +25C)

Size	7/8"LDF	LMR 1200	LMR 900	1/2"LDF	LMR 600	1/2"SuperFlex	3/8" LDF
	27.69 mm	30.48 mm	22.1 mm	16 mm	14.99 mm	13.21 mm	11.18 mm

Frequency (MHz)

30	0.65	0.69	0.94	1.21	1.38	1.84	1.86
50	0.84	0.89	1.23	1.57	1.79	2.40	2.41
150	1.50	1.58	2.16	2.77	3.16	4.23	4.27
220	1.84*	1.93	2.63	3.45*	3.87	5.18*	5.22*
450	2.74	2.83	3.84	4.95	5.64	7.61	7.55
900	4.04*	4.17	5.58	7.25*	8.20	11.19*	11.02*
1500	5.45	5.54	7.35	9.61	10.86	14.99	14.53
2000	6.46	6.53	8.63	11.32	12.80	17.75	17.09
2500	7.45*	7.42	9.78	12.83*	14.50	22.02*	19.39*
5800	N/A	N/A	16.08	19.69	23.95	33.79	31.83
8000	N/A	N/A	N/A	N/A	N/A	41.34	38.26

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

Size	7/8"LDF	LMR 1200	LMR 900	1/2"LDF	LMR 600	1/2"SuperFlex	3/8" LDF
	27.69 mm	30.48 mm	22.1 mm	16 mm	14.99 mm	13.21 mm	11.18 mm

Frequency (MHz)

30	14.0	12.6	8.9	6.31	5.5	5.75	4.14
50	10.7	9.7	6.8	4.85	4.3	4.42	3.19
150	6.04	5.5	3.9	2.75	2.4	2.49	1.81
220	4.94*	4.5	3.2	2.23*	1.9	2.04*	1.49*
450	3.32	3.1	2.2	1.53	1.3	1.38	1.02
900	2.24	2.1	1.5	1.05*	0.93	0.944*	0.703*
1500	1.66	1.6	1.1	0.793	0.70	0.705	0.530
2000	1.40	1.3	1.0	0.673	0.59	0.597	0.451
2500	1.21*	1.2	0.9	0.594*	0.52	0.547*	0.398*
5800	N/A	N/A	0.52	0.38	0.32	0.31	0.18
8000	N/A	N/A	N/A	0.32	0.26	0.26	0.2

LMR 400	3/8"SuperFlex	RG213/214	1/4"SuperFlex	LMR 240	RG8X	LMR 195	RG-58
10.29 mm	10.54 mm	10.29 mm	7.62 mm	6.1 mm	6.15 mm	4.95 mm	4.95 mm

2.30	2.15	3.94	3.22	4.27	6.56	6.56	8.20
2.95	2.78	5.25	4.17	5.58	8.20	8.53	10.17
4.92	4.89	9.19	7.32	9.84	15.42	14.44	20.34
5.91	5.97*	11.48	8.92	12.14	19.69	17.72	24.28
8.86	8.73	17.06	12.89	17.39	28.22	25.59	34.78
12.80	12.66*	26.25	18.6*	24.94	42.00	36.42	54.14
16.73	16.80	N/A	24.51	32.48	N/A	47.57	N/A
19.69	19.72	N/A	28.64	37.73	N/A	55.45	N/A
22.31	22.44*	N/A	32.32*	42.32	N/A	62.34	N/A
35.43	36.42	N/A	51.84	66.93	N/A	98.10	N/A
42.65	44.29	N/A	62.34	79.73	N/A	117.13	N/A

Competitor's Data As Published

* = Estimated from published data

*Trademarks are exclusive property of their respective owners

LMR 400	3/8"SuperFlex	RG213/214	1/4"SuperFlex	LMR 240	RG8X	LMR 195	RG-58
10.29 mm	10.54 mm	10.29 mm	7.62 mm	6.1 mm	6.15 mm	4.95 mm	4.95 mm

3.3	3.97	1.8	2.28	1.49	0.35	0.89	0.40
2.6	3.06	1.2	1.76	1.15	0.28	0.68	0.30
1.5	1.74	0.62	1.00	0.66	0.15	0.39	0.16
1.2	1.44*	N/A	0.825*	0.54	N/A	0.32	N/A
0.83	0.975	0.30	0.567	0.38	0.08	0.22	0.08
0.58	0.674*	0.18	0.393*	0.26	0.05	0.15	0.05
0.44	0.507	N/A	0.299	0.20	N/A	0.12	N/A
0.37	0.431	N/A	0.256	0.17	N/A	0.10	N/A
0.33	0.379*	N/A	0.255*	0.15	N/A	0.09	N/A
0.21	0.23	N/A	0.14	0.1	N/A	0.06	N/A
0.17	0.19	N/A	0.12	0.08	N/A	0.04	N/A

Competitor's Data As Published

* = Estimated from published data

*Trademarks are exclusive property of their respective owners

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.195 (4.95)
Weight	lb/ft (kg/m)	0.021 (0.03)
Bend Radius: Installation	in (mm)	0.5 (12.7)
Bend Radius: Repeated	in (mm)	2.0 (50.8)
Bending Moment	ft-lb (N-m)	0.2 (0.27)
Tensile Strength	lb (kg)	40 (18.2)
Flat Plate Crush	lb/in. (kg/mm)	15 (0.27)
Maximum Frequency	GHz	8
Velocity of Propagation	%	80
Dielectric Constant	NA	1.56
Time Delay	nS/f (nS/m)	1.27 (4.38)
Capacitance	pF/ft (pF/m)	25.4 (89.12)
Inductance	uH/ft (uH/m)	0.064 (0.21)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	7.6 (24.9)
Outer Conductor	Ohms/1000ft (/km)	4.9 (16.1)
Voltage Withstand	Volts DC	1000
Jacket Spark	Volts RMS	3000
Peak Power	kW	2.5



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.36042759	1.182562923
K2	0.0004747	0.001557491

INNER CONDUCTOR

Solid BC 0.037 in (0.94 mm)

OUTER CONDUCTOR

Aluminum Tape 0.116 in (2.95 mm)

JACKET

(Part Description table) 0.195 in (4.95 mm)

DIELECTRIC

Foam PE 0.110 in (2.79 mm)

OVERALL BRAID

Tinned Copper 0.139 in (3.53 mm)

Connectors

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
4310M	Male	Straight Plug	Hex	EZ-195-200-4310M-X	3190-8092	43M	
4310M-RA	Male	Right Angle	Hex	EZ-195-200-4310M-RA-X	3190-8093	43MR	
7/16 Din	Male	Straight Plug	Hex/Knurl	EZ-195-200-716M-X	3190-8102	DM	
		Right Angle	Hex/Knurl	EZ-195-200-716M-RA-X	3190-8103	DMR	
BNC	Male	Straight Plug	Knurl	EZ-195-BM-X	3190-6141	BM	
FME	Female	Straight Jack	Hex	TC-195-FMEF-X	3190-6249	FMEF	
		Bulkhead	N/A	EZ-195-NF-BH-X	3190-6401	NFB	
N	Female	Straight Jack	N/A	EZ-195-200-NF-X	3190-8091	NF	
		Male	Straight Plug	Hex/Knurl	EZ-195-NMH-X	3190-6497	NM
			Right Angle	Hex/Knurl	TC-195-NMH-RA-D	3190-6543	NMR
QMA	Female	Straight Jack	N/A	EZ-195-QF-X	3190-6384	QF	
	Male	Straight Plug	Knurl	EZ-195-QM-X	3190-6383	QM	
QN	Female	Straight Jack	N/A	EZ-195-200-QNF-X	3190-8040	QNF	
	Male	Straight Plug	N/A	EZ-195-200-QNM-X	3190-8038	QNM	
SMA	Female	Right Angle Plug	N/A	EZ-195-200-QNM-RA-X	3190-8039	QNM-R	
		Straight Jack	N/A	EZ-195-200-SF-X	3190-8002	SF	
		Male	Straight Plug	Hex	EZ-195-SM-X	3190-6140	SM
Right Angle Plug	Hex		TC-195-SM-SS-X	3190-2878	SMR		
TNC	Female	Straight Jack	N/A	EZ-195-200-TF-BH-X	3190-8004	TFB	
		EZ-195-TF-RP-X	3190-6166	TFRP			
	Male	Straight Plug	Hex/Knurl	EZ-195-TM-X	3190-6496	TM	
		EZ-195-TM-RP-X	3190-6142	TMRP			
		TC-195-TM-X	3190-6568	TM			
UHF	Male	Right Plug	Hex	EZ-195-200-TM-RA-X	3190-8003	TMR	
		Straight Plug	Knurl	EZ-195-200-UM-X	3190-8005	UM	
		Right Angle Plug	Knurl	EZ-195-200-UM-RA-X	3190-8006	UMR	

*Connector part numbers in bold text are the default connectors for LMR-195 cable assemblies

Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-195	Outdoor	PE	Black	54110	LMR195
LMR-195-DB	Outdoor/Watertight	PE	Black	54113	LDB195
LMR-195-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54111	LFR195
LMR-195-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54158	LPF195
LMR-195-MA	Mobile Antennas	PVC	Black	54210	LMA195
LMR-195-PVC	General Purpose	PVC	Black	54215	LPV195

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX

Cable Code

-XXX

Connector A

XXX-

Connector B

XX.X

Length

X

Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 9 to select your desired connector

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.240 (6.10)
Weight	lb/ft (kg/m)	0.034 (0.05)
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)
Tensile Strength	lb (kg)	80 (36.3)
Flat Plate Crush	lb/in. (kg/mm)	20 (0.36)
Maximum Frequency	GHz	8
Velocity of Propagation	%	83
Dielectric Constant	NA	1.42
Time Delay	nS/f (nS/m)	1.21 (3.97)
Capacitance	pF/ft (pF/m)	24.5 (80.6)
Inductance	uH/ft (uH/m)	0.060 (0.20)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	3.2 (10.5)
Outer Conductor	Ohms/1000ft (/km)	3.89 (12.8)
Voltage Withstand	Volts DC	1500
Jacket Spark	Volts RMS	5000
Peak Power	kW	5.6



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.2445	0.8022045
K2	0.00033	0.00108273

INNER CONDUCTOR

Solid BC 0.056 in (1.42 mm)

OUTER CONDUCTOR

Aluminum Tape 0.155 in (3.94 mm)

JACKET

(Part Description table) 0.240 in (6.10 mm)

DIELECTRIC

Foam PE 0.150 in (3.81 mm)

OVERALL BRAID

Tinned Copper 0.178 in (4.52 mm)

Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-240	Outdoor	PE	Black	54021	LMR240
LMR-240-DB	Outdoor/Watertight	PE	Black	54090	LDB240
LMR-240-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54029	LF240
LMR-240-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54214	LPF240
LMR-240-PVC	General Purpose	PVC	Black	54140	LPV240
LMR-240-MA	Indoor & Mobile Antenna	PVC	Black	54046	LMA240

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX

Cable Code

-XXX

Connector A

XXX-

Connector B

XX.X

Length

X

Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 11 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
1.0/2.3	Male	Straight Plug	Knurl	EZ-240-1023M-X	3190-6283	1023M
4.3/10	Male	Straight Plug	Hex	EZ-240-4310M-X	3190-6386	43M
		Right Angle Plug	Hex	TC-240-4310M-X	3190-6385	43M
7/16 DIN	Male	Straight Plug	Hex	EZ-240-4310M-RA-X	3190-8094	43MR
		Right Angle Plug	Hex	TC-240-716M	3190-2982	DM
BNC	Male	Straight Plug	Hex	TC-240-716M-RA-D	3190-2983	DMR
		Right Angle Plug	Hex/Knurl	EZ-240-716M-RA-X	3190-8104	DMR
BNC	Male	Straight Plug	Knurl	EZ-240-BM-X	3190-6406	BM
		Right Angle Plug	Knurl	TC-240-BM-X	3190-6380	BM
F	Male	Straight Plug	Hex	EZ-240-BM-RA-X	3190-2868	BMR
FME	Male	Straight Plug	Hex	TC-240-BM-RA-D	3190-6552	BMR
Mini UHF	Male	Straight Plug	Knurl	TC-240-FM-X	3190-6773	FM
N	Female	Straight Jack	N/A	TC-240-FMEM-X	3190-6251	FMEM
			N/A	TC-240-MUHF	3190-445	MUF
			N/A	EZ-240-NF-X	3190-2795	NF
N	Male	Straight Plug	N/A	EZ-240-NF-BH-X	3190-6316	NFB
			N/A	TC-240-NF-BH-X	3190-6545	NFB
			N/A	TC-240-NF-PM-X	3190-2889	NF
QMA	Male	Straight Plug	Hex/Knurl	EZ-240-NMH-X	3190-6382	NM
			Hex/Knurl	TC-240-NMH-X	3190-6381	NM
			Hex/Knurl	EZ-240-NMH-RA-X	3190-6143	NMR
QMA	Male	Right Angle Plug	Hex/Knurl	TC-240-NMH-RA-D	3190-6549	NMR
			Knurl	EZ-240-QM-X	3190-6564	QM
			Knurl	TC-240-QM-RA-X	3190-2895	QMR
QN	Female	Straight Jack	N/A	EZ-240-QNF-X	3190-8042	QNF
			N/A	EZ-240-QNM-X	3190-8047	QNM
QN	Male	Right Angle Plug	N/A	EZ-240-QNM-RA-X	3190-8041	QNMR
			N/A	EZ-240-SF-X	3190-8008	SF
SMA	Female	Straight Jack	N/A	TC-240-SF-BH-SS-X	3190-2896	SF
			Hex	EZ-240-SM-X	3190-6319	SM
			Hex	TC-240-SM-SS-X	3190-2898	SM
SMA	Male	Straight Plug	Hex	TC-240-SM-RP	3190-326	SMRP
			Hex	EZ-240-SM-RA-X	3190-6551	SMR
			Hex	TC-240-SM-RA-SS-D	3190-6546	SMR
TNC	Female	Straight Jack	N/A	EZ-240-TF-X	3190-6204	TF
			N/A	EZ-240-TF-BH-X	3190-8009	TFB
			N/A	EZ-240-TF-RP-X	3190-6405	TFRP
TNC	Male	Straight Plug	Hex/Knurl	EZ-240-TM-RP-X	3190-2892	TMRP
			Hex/Knurl	EZ-240-TM-X	3190-6494	TM
			Hex/Knurl	TC-240-TM-X	3190-6550	TM
UHF	Male	Straight Plug	Hex/Knurl	EZ-240-TM-RA-X	3190-2726	TMR
			Hex/Knurl	TC-240-TM-RA-D	3190-6547	TMR
UHF	Male	Right Angle Plug	Knurl	EZ-240-UM-X	3190-8010	UM
			Knurl	EZ-240-UM-RA-X	3190-8011	UMR

*Connector part numbers in bold text are the default connectors for LMR-240 cable assemblies

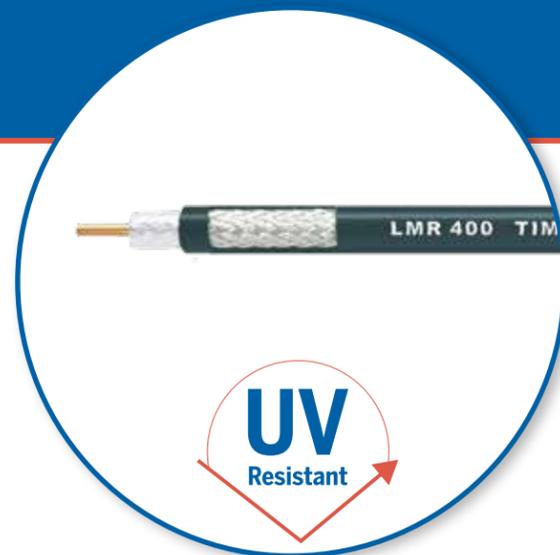
Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.405 (10.29)
Weight	lb/ft (kg/m)	0.068 (0.10)
Bend Radius: Installation	in (mm)	1.0 (25.4)
Bend Radius: Repeated	in (mm)	4.0 (101.6)
Bending Moment	ft-lb (N-m)	0.5 (0.68)
Tensile Strength	lb (kg)	160 (72.6)
Flat Plate Crush	lb/in. (kg/mm)	40 (0.71)
Maximum Frequency	GHz	8
Velocity of Propagation	%	84
Dielectric Constant	NA	1.38
Time Delay	nS/f (nS/m)	1.20 (3.92)
Capacitance	pF/ft (pF/m)	23.9 (78.4)
Inductance	uH/ft (uH/m)	0.060 (0.20)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	1.39 (4.6)
Outer Conductor	Ohms/1000ft (/km)	1.65 (5.4)
Voltage Withstand	Volts DC	2500
Jacket Spark	Volts RMS	8000
Peak Power	kW	16



Calculation

$$IL = (K1 \times V(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

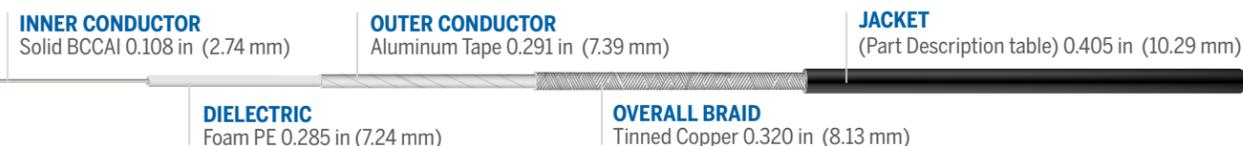
Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.1235129	0.405245825
K2	0.0002626	0.000861591

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
4.3/10	Male	Straight plug	Hex	EZ-400-4310M-X TC-400-4310M-X	3190-8096 3190-6272	43M 43M
		Right angle plug	Hex	EZ-400-4310M-RA-X	3190-8097	43MR
7/16 DIN	Male	Straight plug	Hex	EZ-400-716M-X TC-400-716M-X	3190-2524 3190-2597	DM DM
		Right angle plug	Hex	EZ-400-716M-RA-X TC-400-716M-RA-D	3190-2545 3190-2598	DMR DMR
BNC	Male	Straight plug	Knurl	EZ-400-BM-X TC-400-BM-X	3190-2852 3190-6232	BM BM
		Right angle plug	Knurl	EZ-400-BM-RA-X TC-400-BM-RA-D	3190-2847 3190-6430	BMR BMR
HN	Male	Straight plug	Knurl	TC-400-HNM	3190-923	HNM
		Right angle plug	Hex/Knurl	TC-400-HNM-RA	3190-2541	HNMR
Mini UHF		Straight plug	Knurl	TC-400-MUHF	3190-520	MUM
N	Female	Straight jack	N/A	EZ-400-NF-BH-X	3190-6328	NFB
				EZ-400-NF-X	3190-2818	NF
	Male	Straight plug	Hex/Knurl	EZ-400-NMH-X	3190-2590	NM
				EZ-400-NMC-2-D	3190-2640	NMC
				TC-400-NMH-X	3190-2626	NM
				EZ-400-NMK-X	3190-6071	NMK
		Right angle plug	Hex/Knurl	TC-400-NMC-2	3190-6077	NMC
				TC-400-NM-RP	3190-960	NMRP
				EZ-400-NMH-RA-X	3190-6342	NMR
				TC-400-NMH-RA-D	3190-2293	NMR
Female	Straight jack	N/A	EZ-400-QNF-X	3190-2980	QNM	
Male	Straight plug	N/A	EZ-400-QNM-X	3190-8043	QMM	
			TC-400-QNM-X	3190-6212	QNM	
	Right angle plug	Knurl	EZ-400-QNM-RA-X	3190-2981	QNMR	
SMA	Female	Straight jack	N/A	EZ-400-SF-X	3190-8023	SF
				TC-400-SF-X	3190-6174	SF
	Male	Straight plug	Hex	EZ-400-SM-X	3190-8021	SM
Right angle plug		Solder	TC-400-SM-X	3190-3046	SM	
		Hex	EZ-400-SM-RA-X	3190-8022	SMR	
TNC	Female	Straight jack	N/A	EZ-400-TF-X	3190-3049	TF
				EZ-400-TF-BH-X	3190-8024	TFB
				EZ-400-TF-RP	3190-795	TFRP
				TC-400-TF-X	3190-3051	TF
				TC-400-TF-RP	3190-1063	TFRP
	Male	Straight plug	Knurl	EZ-400-TM-X	3190-2533	TM
				TC-400-TM-X	3190-2532	TM
				EZ-400-TM-RP	3190-794	TMRP
				TC-400-TM-RP	3190-1062	TMRP
				EZ-400-TM-RA-X	3190-2800	TMR
	Right angle plug	Hex/Knurl	TC-400-TM-RP-RA-D	3190-6147	TMRRP	
			TC-400-TM-RA-D	3190-2671	TMR	
UHF	Male	Straight plug	Knurl	EZ-400-UM-X	3190-8025	UM
		Right angle plug	Knurl	EZ-400-UM-RA-X	3190-8026	UMR

*Connector part numbers in bold text are the default connectors for LMR-400 cable assemblies



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-400	Outdoor	PE	Black	54001	LMR400
LMR-400-DB	Outdoor/Watertight	PE	Black	54091	LDB400
LMR-400-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54030	LFR400
LMR-400-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54073	LPF400
LMR-400-PVC	General Purpose	PVC	Black	54218	LPV400
LMR-400-RR-DB	RodentRepel/Watertight	PE	Black	54421	LRR400

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 13 to select your desired connector

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.590 (14.99)
Weight	lb/ft (kg/m)	0.131 (0.20)
Bend Radius: Installation	in (mm)	1.50 (38.1)
Bend Radius: Repeated	in (mm)	6.0 (152.4)
Bending Moment	ft-lb (N-m)	2.75 (3.73)
Tensile Strength	lb (kg)	350 (158.9)
Flat Plate Crush	lb/in. (kg/mm)	60 (1.07)
Maximum Frequency	GHz	8
Velocity of Propagation	%	85
Dielectric Constant	NA	1.32
Time Delay	nS/f (nS/m)	1.17 (3.83)
Capacitance	pF/ft (pF/m)	23.4 (76.6)
Inductance	uH/ft (uH/m)	0.058 (0.19)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.53 (1.7)
Outer Conductor	Ohms/1000ft (/km)	1.2 (3.9)
Voltage Withstand	Volts DC	4000
Jacket Spark	Volts RMS	8000
Peak Power	kW	40



Calculation

$$IL = (K1 \times V(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.0763055	0.250358346
K2	0.0002626	0.000861591



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-600	Outdoor	PE	Black	54003	LMR600
LMR-600-DB	Outdoor/Watertight	PE	Black	54093	LDB600
LMR-600-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54032	LMR600
LMR-600-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54074	LPF600
LMR-600-PVC	General Purpose	PVC	Black	54219	LPV600
LMR-600-RR-DB	RodentRepel/Watertight	PE	Black	54478	LRR600

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 15 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
BNC	Male	Right Angle Plug	Knurl	TC-600-BM-RA-D	3190-2734	BMR
DIN	7-16 Female	Straight Jack	N/A	EZ-600-716F-X	3190-2447	DF
		TC-600-716FC	3190-375	DF		
	7-16 Male	Straight Plug	Hex	EZ-600-716M-X	3190-2643	DM
TC-600-716M-X		3190-2642	DM			
EIA FLANGE	7/8	Flange	N/A	EZ-600-716M-RA-X	3190-6471	DMR
				TC-600-716M-RA-D	3190-6211	DMR
HN	Male	Straight Plug	Knurl	TC-600-HNMC	3190-1429	HNM
LC	Male	Straight Plug	Hex	TC-600-LCM	3190-1406	LCM
		Straight	Hex	TC-600-4310M-X	3190-6273	43M
4.3/10	4.3/10 Male	Straight Plug	Hex	EZ-600-4310M-X	3190-8100	43M
		Right Angle Plug	Hex	EZ-600-4310M-RA-X	3190-8101	43MR
		Female	Straight Jack	N/A	EZ-600-NF-X	3190-2817
EZ-600-NF-BH-X	3190-8034				NFB	
TC-600-NF-X	3190-2816				NF	
N	Male	Straight Plug	Hex/Knurl	TC-600-NF-BH	3190-589	NFB
				EZ-600-NMK	3190-669	NM
				EZ-600-NMH-X	3190-2627	NM
	Female	Straight Jack	N/A	EZ-600-NMC-2-D	3190-2641	NM
				TC-600-NMC-2-D	3190-6122	NM
				TC-600-NMH-X	3190-2628	NM
Male	Right Angle Plug	Hex/Knurl	EZ-600-NMH-RA-X	3190-6387	NMR	
			TC-600-NMH-RA-D	3190-2427	NMR	
			EZ-600-QNF-X	3190-8050	QNF	
QN	Female	Straight Jack	N/A	EZ-600-QNM-X	3190-8048	QNM
	Male	Straight Plug	N/A	EZ-600-QNM-RA-X	3190-8049	QNMNR
SMA	Male	Straight Plug	Hex	EZ-600-SM-X	3190-8111	SM
		Straight Jack	Knurl	TC-600-TF-RP	3190-1065	TFRP
TNC	Female	Straight Jack	N/A	EZ-600-TF-X	3190-3050	TF
				EZ-600-TF-BH-X	3190-8035	TFB
				EZ-600-TF-RP	3190-797	TFRP
	Male	Straight Plug	Hex/Knurl	TC-600-TF-X	3190-3052	TF
				EZ-600-TM-RP	3190-796	TMRP
				TC-600-TM-RP	3190-1064	TMRP
Male	Right Angle Plug	Hex/Knurl	EZ-600-TM-X	3190-2531	TM	
			TC-600-TM-X	3190-2530	TM	
UHF	Male	Straight Plug	Knurl	TC-600-TM-RA-D	3190-2707	TMR
		Straight Angle Plug	Knurl	EZ-600-UM-X	3190-8036	UM
				EZ-600-UM-RA-X	3190-8037	UMR

*Connector part numbers in bold text are the default connectors for LMR-600 cable assemblies

Specifications

Ω Impedance
50 Ohms

Op Temp
-40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.870 (22.1)
Weight	lb/ft (kg/m)	0.266 (0.40)
Bend Radius: Installation	in (mm)	3.00 (76.2)
Bend Radius: Repeated	in (mm)	9.0 (228.6)
Bending Moment	ft-lb (N-m)	9.0 (12.20)
Tensile Strength	lb (kg)	750 (340.5)
Flat Plate Crush	lb/in. (kg/mm)	100 (1.79)
Maximum Frequency	GHz	6
Velocity of Propagation	%	87
Dielectric Constant	NA	1.32
Time Delay	nS/f (nS/m)	1.17 (3.83)
Capacitance	pF/ft (pF/m)	23.7 (77.8)
Inductance	uH/ft (uH/m)	0.058 (0.19)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.54 (1.77)
Outer Conductor	Ohms/1000ft (/km)	0.55 (1.8)
Voltage Withstand	Volts DC	5000
Jacket Spark	Volts RMS	8000
Peak Power	kW	62



Calculation

$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.05177	0.16985737
K2	0.00016	0.00059058



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-900-DB	Outdoor/Watertight	PE	Black	54094	LDB900
LMR-900-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54033	LF900
LMR-900-RR-DB	RodentRepel/Outdoor/Watertight	PE	Black	54422	LRR900

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 17 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
DIN	7-16 Female	Straight Jack	N/A	EZ-900-716FC-2-SP	3190-6512	DF
	7-16 Male	Straight Plug	Hex	EZ-900-716MC-2-SP	3190-6452	DM
EIA FLANGE	7/8	Straight	N/A	EZ-900-78EIA-2-SP	3190-6441	78EIA
		Right Angle	N/A	EZ-900-78EIA-RA-2-SP	3190-6442	78EIAR
N	Female	Straight Jack	N/A	EZ-900-NFC-2-SP	3190-6444	NF
	Male	Straight Plug	Hex/Knurl	EZ-900-NMC-2-SP	3190-6443	NM

* Connector part numbers in bold text are the default connectors for LMR-900 cable assemblies

Specifications

Impedance
50 Ohms

Op Temp
-40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	1.200 (30.48)
Weight	lb/ft (kg/m)	0.448 (0.67)
Bend Radius: Installation	in (mm)	6.50 (165.1)
Bend Radius: Repeated	in (mm)	12.0 (304.8)
Bending Moment	ft-lb (N-m)	15.0 (20.34)
Tensile Strength	lb (kg)	1300 (590.2)
Flat Plate Crush	lb/in. (kg/mm)	250 (4.47)
Maximum Frequency	GHz	5.2
Velocity of Propagation	%	88
Dielectric Constant	NA	1.29
Time Delay	nS/f (nS/m)	1.15 (3.79)
Capacitance	pF/ft (pF/m)	23.1 (75.8)
Inductance	uH/ft (uH/m)	0.058 (0.19)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.32 (1.0)
Outer Conductor	Ohms/1000ft (/km)	0.37 (1.2)
Voltage Withstand	Volts DC	6000
Jacket Spark	Volts RMS	8000
Peak Power	kW	90



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.03737	0.12261097
K2	0.00016	0.00052496



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-1200-DB	Outdoor/Watertight	PE	Black	54095	LDB1200
LMR-1200-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54034	LF1200

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXXXX - XXX - XXX - XX.X X
 Cable Code Connector A Connector B Length Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 19 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
DIN	7-16 Female	Straight Jack	N/A	EZ-1200-716FC-2	3190-2784	DF
	7-16 Male	Straight Plug	Hex	EZ-1200-716MC-2	3190-2781	DM
EIA FLANGE	7/8	Straight	N/A	EZ-1200-78EIA-2	3190-2780	78EIA
		Right Angle	N/A	EZ-1200-78EIA-RA-2	3190-2782	78EIAR
N	Female	Straight Jack	N/A	EZ-1200-NFC-2	3190-2785	NF
	Male	Straight Plug	Hex/Knurl	EZ-1200-NMC-2	3190-2783	NM

* Connector part numbers in bold text are the default connectors for LMR-1200 cable assemblies

195

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-195 and 200	CST-195/200	3192-102
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-195 crimp dies (0.213" hex) for use with the CT-U	Y197	3190-610
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Debur Tool	Center conductor debur tool	DBT-U	3192-001
Replacement Blade Kit	Replacement blade for all CST prepping tools Replacement blade for the CCT-03 cutting tool	RB-CST RB-03	3192-086 3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-195, 200 and 240	TK-195/200/240EZ-HC	660-1206
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-195/200	3109-445
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
Ground Kit	Standard ground kit for LMR-195	GK-S195TT	GK-S195TT

240

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-240	CST-240A	3192-152
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-240 crimp dies (0.255" hex) for use with the CT-U	Y375	3190-608
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-401	3192-216
Debur Tool	Center conductor debur tool	DBT-U	3192-001
Replacement Blade Kit	Replacement blade for all CST prepping tools Replacement blade for the CCT-03 cutting tool	RB-CST RB-03	3192-086 3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-195, 200 and 240	TK-195/200/240EZ-HC	660-1206
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-240	3109-400
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
Ground Kit	Standard ground kit for LMR-240	GK-S240TT	GK-S240TT

400

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-400	CST-400	3192-004
Crimp Tool	Crimp tool for LMR-400	CT-400/300	3190-666
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-400 crimp dies (0.429" hex) for use with the CT-U	Y1719	3190-202
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-400A	3190-2174
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-400	3192-217
Replacement Blade Kit	Replacement blade for all CST prepping tools Replacement blade for the CCT-03 cutting tool	RB-CST RB-03	3192-086 3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-400 and LMR-400-75	TK-400/400-75EZ-HC	660-1266
Soft Pouch Tool Kit	Connector Attachment Tools for LMR-400	TK-400EZ	3190-1601
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack) Over connector weather protection for LMR-400 and N male	WSB-400 WPB-400-NM	3109-394 3192-6122
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600 Cold Shrink for LMR-400 to LMR-600	CS-2060T CS-4060T	CS-2060T CS-4060T
Ground Kit	Standard ground kit for LMR-400	GK-S400TT	GK-S400TT
Pull Hoist	pre-laced pull hoist for LMR-400	HG-400T	HG-400T
Hangers	Standard hanger for LMR-400 and LMR-600	BH-S38-NH	BH-S38-NH
Support Blocks	Mini coax support blocks for LMR-400	CB-400T	CB-400T

600

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-600	CST-600	3192-052
Crimp Tool	Crimp tool for LMR-600	CT-600	3192-170
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-600 crimp dies (0.610" hex) for use with the CT-U	Y1720	3190-203
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-600A	3190-1051
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-600	3192-266
Replacement Blade Kit	Replacement blade for all CST prepping tools Replacement blade for the CCT-02 cutting tool	RB-CST RB-02	3192-086 3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Soft Pouch Tool Kit	Connector Attachment Tools for LMR-600	TK-600EZ	3190-1602

Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack) Over connector weather protection for LMR-600 and N male	WSB-600 WPB-600-NM	3109-401 3192-6163
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
Cold Shrink	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T
Ground Kit	Standard ground kit for LMR-600	GK-S600TT	GK-S600TT
Pull Hoist	Lace-up pull hoist for LMR-600	HG-600T	HG-600T
Hangers	Standard hanger for LMR-400 and LMR-600	BH-S38-NH	BH-S38-NH
Support Blocks	Mini coax support blocks for LMR-600	CB-600T	CB-600T

900

Installation Tools	Description	Part Number	Stock Code
Strip Tool	Prep Tool for LMR-900	ST-900C	3190-1310
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Wrench	1 1/4" open end wrench (2 required)	WR-900	3190-509
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-900A	3190-435
Replacement Blade Kit	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584

Hardware	Description	Part Number	Stock Code
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-600 to LMR-1200	CS-60120T	CS-60120T
Ground Kit	Standard ground kit for LMR-900	GK-S900TT	GK-S900TT
Pull Hoist	Lace-up pull hoist for LMR-900	HG-900T	HG-900T
Hangers	Butterfly hanger for LMR-900	BH-58-NH	BH-58-NH
Support Blocks	Mini coax support blocks for LMR-900	CB-900T	CB-900T

1200

Installation Tools	Description	Part Number	Stock Code
Strip Tool	Prep Tool for LMR-1200	ST-1200CH	3192-124
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Wrench	1 9/16" open end wrench (1 required) 1 7/16" open end wrench (1 required)	WR-1200A WR-1200B	3192-385 3190-511
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-1200A	3190-436
Replacement Blade Kit	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584

Hardware	Description	Part Number	Stock Code
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-600 to LMR-1200	CS-60120T	CS-60120T
Ground Kit	Standard ground kit for LMR-1200	GK-S1200TT	GK-S1200TT
Pull Hoist	Lace-up pull hoist for LMR-1200	HG-1200T	HG-1200T
Hangers	Butterfly hanger for LMR-1200	BH-78-NH	BH-78-NH
Support Blocks	Mini coax support blocks for LMR-1200	CB-1200T	CB-1200T

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.195 (4.95)
Weight	lb/ft (kg/m)	0.021 (0.03)
Bend Radius: Installation	in (mm)	0.5 (12.7)
Bend Radius: Repeated	in (mm)	2.0 (50.8)
Bending Moment	ft-lb (N-m)	0.1 (0.14)
Tensile Strength	lb (kg)	40 (18.2)
Flat Plate Crush	lb/in. (kg/mm)	10 (0.18)
Maximum Frequency	GHz	6
Velocity of Propagation	%	74
Dielectric Constant	NA	1.56
Time Delay	nS/ft (nS/m)	1.27 (4.17)
Capacitance	pF/ft (pF/m)	25.4 (83.3)
Inductance	uH/ft (uH/m)	0.064 (0.21)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	9.5 (31.2)
Outer Conductor	Ohms/1000ft (/km)	4.8 (16.1)
Voltage Withstand	Volts DC	1000
Jacket Spark	Volts RMS	3000
Peak Power	kW	2.5



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.424232	1.391905192
K2	0.000563	0.001847203

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
FME	Straight Jack	Hex	TC-195-FMEF-X	3190-6249	FME
N	Straight Plug	Hex/Knurl	TC-195-NMH-X	3190-6543	NM
	Right Angle Plug	Hex/Knurl	TC-195-NMH-RA-D	3190-6542	NMR
SMA	Straight Plug	Hex	TC-195-SM-SS-X	3190-2878	SM
TNC	Straight Plug	Hex/Knurl	TC-195-TM-X	3190-6568	TM

*Connector part numbers in bold text are the default connectors for LMR-195-UF cable assemblies

INNER CONDUCTOR

Stranded BC 0.038 in (0.97 mm)

OUTER CONDUCTOR

Aluminum Tape 0.116 in (2.95 mm)

JACKET

(Part Description table) 0.195 in (4.95 mm)

DIELECTRIC

Foam PE 0.110 in (2.79 mm)

OVERALL BRAID

Tinned Copper 0.139 in (3.53 mm)

Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-195-UF	Indoor/Outdoor	TPE	Black	54212	LUF195
LMR-195-UF-FR	Indoor/Outdoor	FRPE	Black	54360	LF195

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX

Cable Code

-XXX

Connector A

XXX-

Connector B

XX.X

Length

X

Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 23 to select your desired connector

Specifications

Ω Impedance
50 Ohms

Op Temp
-40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.240 (6.10)
Weight	lb/ft (kg/m)	0.034 (0.05)
Bend Radius: Installation	in (mm)	0.75 (19.1)
Bend Radius: Repeated	in (mm)	2.5 (63.5)
Bending Moment	ft-lb (N-m)	0.125 (0.17)
Tensile Strength	lb (kg)	80 (36.3)
Flat Plate Crush	lb/in. (kg/mm)	13 (0.23)
Maximum Frequency	GHz	6
Velocity of Propagation	%	80
Dielectric Constant	NA	1.42
Time Delay	nS/ft (nS/m)	1.21 (3.97)
Capacitance	pF/ft (pF/m)	23.9 (78.4)
Inductance	uH/ft (uH/m)	0.060 (0.20)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	4.28 (14.1)
Outer Conductor	Ohms/1000ft (/km)	3.89 (12.8)
Voltage Withstand	Volts DC	1500
Jacket Spark	Volts RMS	5000
Peak Power	kW	5.6



Calculation

$$IL = (K1 \times \sqrt{f}) + K2 \times f \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.290501	0.953133781
K2	0.000396	0.001299276

INNER CONDUCTOR

Stranded BC 0.056 in (1.4 mm)

OUTER CONDUCTOR

Aluminum Tape 0.155 in (3.94 mm)

JACKET

(Part Description table) 0.240 in (6.10 mm)

DIELECTRIC

Foam PE 0.150 in (3.81 mm)

OVERALL BRAID

Tinned Copper 0.178 in (4.52 mm)

Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-240-UF	Indoor/ Outdoor	TPE	Black	54041	LUF240
LMR-240-UF-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54143	LFX240

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX

Cable Code

-XXX

Connector A

XXX-

Connector B

XX.X

Length

X

Units of measure: I = Inches, F = Feet, M = Meters

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-240-4310M-X	3190-6385	43M
7/16 DIN	Male	Straight Plug	Hex	TC-240-716M	3190-2982	DM
		Right Angle	Hex	TC-240-716M-RA-D	3190-2983	DMR
BNC	Male	Straight Plug	Knurl	TC-240-BM-X	3190-6380	BM
		Right Angle Plug	Knurl	TC-240-BM-RA-D	3190-6552	BMR
F	Male	Straight Plug	N/A	TC-240-FMEM-X	3190-6251	FMEM
Mini UHF	Male	Straight Plug	Knurl	TC-240-MUHF	3190-445	MUF
N	Female	Straight Jack	N/A	TC-240-NF-BH-X	3190-6545	NFB
	Male	Straight Plug	Hex/Knurl	TC-240-NMH-X	3190-6381	NM
Female		Right Angle Plug	Hex/Knurl	TC-240-NMH-RA-D	3190-6549	NMR
	SMA	Straight Jack	N/A	TC-240-SF-BH-SS-X	3190-2896	SF
Male		Straight Plug	Hex	TC-240-SM-SS-X	3190-2898	SM
				TC-240-SM-RA-SS-D	3190-6546	SMR
TNC	Male	Straight Plug	Hex/Knurl	TC-240-TM-X	3190-6550	TM
		Right Angle Plug	Hex/Knurl	TC-240-TM-RA-D	3190-6547	TMR

*Connector part numbers in bold text are the default connectors for LMR-240-UF cable assemblies

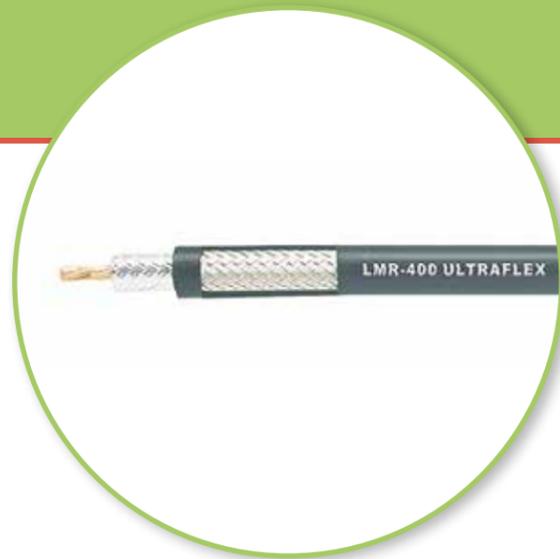
Specifications

Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.405 (10.29)
Weight	lb/ft (kg/m)	0.088 (0.131)
Bend Radius: Installation	in (mm)	1.00 (25.4)
Bend Radius: Repeated	in (mm)	4.0 (101.6)
Bending Moment	ft-lb (N-m)	0.375 (0.51)
Tensile Strength	lb (kg)	160 (72.6)
Flat Plate Crush	lb/in. (kg/mm)	20 (0.36)
Maximum Frequency	GHz	6
Velocity of Propagation	%	83
Dielectric Constant	NA	1.38
Time Delay	nS/ft (nS/m)	1.20 (3.92)
Capacitance	pF/ft (pF/m)	23.9 (78.4)
Inductance	uH/ft (uH/m)	0.060 (0.20)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	1.07 (3.51)
Outer Conductor	Ohms/1000ft (/km)	1.65 (5.4)
Voltage Withstand	Volts DC	2500
Jacket Spark	Volts RMS	8000
Peak Power	kW	16



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.146748	0.481480188
K2	0.000312	0.001023672



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-400-UF	Indoor/Outdoor	TPE	Black	54040	LUF400
LMR-400-UF-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54071	LFX400

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 27 to select your desired connector

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-400-4310M-X	3190-6272	43M
	Female	Straight Jack	N/A	TC-400-716FC	3190-376	DF
7/16 DIN	Male	Straight plug	Hex	TC-400-716M-X	3190-2597	DM
		Right Angle Plug	Hex	TC-400-716MC-RA TC-400-716M-RA-D	3190-1671 3190-2598	DMR
BNC	Male	Straight Plug	Knurl	TC-400-BM-X	3190-6232	BM
		Right Angle Plug	Knurl	TC-400-BM-RA-D	3190-6430	BMR
HN	Male	Straight Plug	Knurl	TC-400-HNM	3190-923	HNM
		Right Angle Plug	Hex/Knurl	TC-400-HNM-RA	3190-2541	HNMR
Mini UHF		Straight Plug	Knurl	TC-400-MUHF	3190-520	MUF
N	Female	Straight Jack	N/A	TC-400-NF-X	3190-2815	NF
				TC-400-NF-BH-X	3190-8219	NFB
	Male	Straight Plug	Knurl	TC-400-NM	3190-1454	NM
				TC-400-NM-RP	3190-960	NMRP
		Right Angle Plug	Hex/Knurl	TC-400-NMC-2	3190-6077	NM
				TC-400-NMH-X	3190-2626	NM
Hex/Knurl	TC-400-NMH-RA-D	3190-2293	NMR			
	Hex	TC-400-NMH-RA-SS	3190-1668	NMR		
QN	Male	Straight Plug	Knurl	TC-400-QNM-X	3190-6212	QNM
SMA	Female	Straight Jack	N/A	TC-400-SF-X	3190-6174	SF
	Male	Straight Plug	Solder	TC-400-SM-X	3190-3046	SM
TNC	Female	Straight Jack	N/A	TC-400-TF-X	3190-3051	TF
				TC-400-TF-RP	3190-1063	TFRP
	Male	Straight Plug	Knurl	TC-400-TM-RP	3190-1062	TMRP
				TC-400-TM-X	3190-2532	TM
		Right Angle Plug	Hex/Knurl	TC-400-TM-RA-D	3190-2671	TMR
				TC-400-TM-RP-RA-D	3190-6147	TMRP

*Connector part numbers in bold text are the default connectors for LMR-400-UF cable assemblies

Specifications

Impedance 50 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.590 (14.99)
Weight	lb/ft (kg/m)	0.165 (0.25)
Bend Radius: Installation	in (mm)	1.50 (38.1)
Bend Radius: Repeated	in (mm)	6.0 (152.4)
Bending Moment	ft-lb (N-m)	1.75 (2.37)
Tensile Strength	lb (kg)	350 (158.9)
Flat Plate Crush	lb/in. (kg/mm)	40 (0.71)
Maximum Frequency	GHz	6
Velocity of Propagation	%	87
Dielectric Constant	NA	1.32
Time Delay	nS/ft (nS/m)	1.17 (3.83)
Capacitance	pF/ft (pF/m)	23.4 (76.6)
Inductance	uH/ft (uH/m)	0.058 (0.19)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.43 (1.42)
Outer Conductor	Ohms/1000ft (/km)	1.2 (3.9)
Voltage Withstand	Volts DC	4000
Jacket Spark	Volts RMS	8000
Peak Power	kW	40



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.0763055	0.250358346
K2	0.0002626	0.000861591



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-600-UF	Indoor/Outdoor	TPE	Black	54044	LUF600
LMR-600-UF-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54310	LFX600

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 29 to select your desired connector

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-600-4310M-X	3190-6273	43M
	Female	Straight Jack	N/A	TC-600-716FC	3190-375	DF
7/16 DIN	Male	Straight Plug	Hex	TC-600-716M-X	3190-2642	DM
		Right Angle Plug	Hex	TC-600-716M-RA-D	3190-6211	DMR
BNC	Male	Right Angle Plug	Knurl	TC-600-BM-RA-D	3190-2734	BMR
HN	Male	Straight Plug	Knurl	TC-600-HNMC	3190-1429	HNM
LC	Male	Straight Plug	Hex	TC-600-LCM	3190-1406	LCM
		Straight Jack	N/A	TC-600-NF-X	3190-2816	NF
N	Female	Straight Jack	N/A	TC-600-NF-X	3190-2816	NF
		Straight Plug	Hex/Knurl	TC-600-NMC-2-D	3190-6122	NM
			Hex/Knurl	TC-600-NMH-X	3190-2628	NM
TNC	Male	Right Angle Plug	Hex	TC-600-UM-X	3190-8172	UM
		Straight Plug	Hex/Knurl	TC-600-NMH-RA-D	3190-2427	NMR
			Knurl	TC-600-TF-X	3190-3052	TF
UHF	Female	Straight Jack	Knurl	TC-600-TF-RP	3190-1065	TFRP
		Straight Plug	Knurl	TC-600-TM-RP	3190-1064	TMRP
			Hex/Knurl	TC-600-TM-X	3190-2530	TM
UHF	Male	Right Angle Plug	Hex/Knurl	TC-600-TM-RA-D	3190-2707	TMR
		Straight Plug	Knurl	TC-600-UMC	3190-213	UMC

*Connector part numbers in bold text are the default connectors for LMR-600-UF cable assemblies

195

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-195 and 200	CST-195/200	3192-102
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-195 crimp dies (0.213" hex) for use with the CT-U	Y197	3190-610
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584

Hardware	Description	Part Number	Stock Code
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T

240

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-240	CST-240A	3192-152
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-240 crimp dies (0.255" hex) for use with the CT-U	Y375	3190-608
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-401	3192-216
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584

Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-240	3109-400
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T

400

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-400	CST-400	3192-004
Crimp Tool	Crimp tool for LMR-400	CT-400/300	3190-666
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-400 crimp dies (0.429" hex) for use with the CT-U	Y1719	3190-202
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-400	3192-217
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584

Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Over connector weather protection for LMR-400 and N male	WPB-400-NM	3192-6122
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T

600

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-600	CST-600	3192-052
Crimp Tool	Crimp tool for LMR-600	CT-600	3192-170
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-600 crimp dies (0.610" hex) for use with the CT-U	Y1720	3190-203
Pin Crimp Tool	Pin Crimp Tool for N's, 4.3's and 7/16 DIN's	PCT-600	3192-266
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086

Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Over connector weather protection for LMR-600 and N male	WPB-600-NM	3192-6163
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	0.175 (4.45)
Weight	lb/ft (kg/m)	0.021 (0.03)
Bend Radius: Installation	in (mm)	0.5 (12.7)
Bend Radius: Repeated	in (mm)	2.0 (50.8)
Bending Moment	ft-lb (N-m)	0.1 (0.14)
Tensile Strength	lb (kg)	40 (18.2)
Flat Plate Crush	lb/in. (kg/mm)	10 (0.19)
Maximum Frequency	GHz	8
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.40)
Capacitance	pF/ft (pF/m)	26.7 (87.6)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	7.6 (24.9)
Outer Conductor	Ohms/1000ft (/km)	4.9 (16.1)
Voltage Withstand	Volts DC	1000
Jacket Spark	Volts RMS	3000
Peak Power	kW	2.5



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.36042759	1.182562923
K2	0.0004747	0.001557491



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-195-LLPX	Indoor/Outdoor Plenum CMP	PVDF Fluoropolymer	Red	54425	LPX195

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 33 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
N	Straight Plug	Hex/Knurl	TC-195-NMH-X	3190-6543	NM
	Right Angle Plug	Hex/Knurl	TC-195-NMH-RA-D	3190-6542	NMR
SMA	Straight Plug	Hex	TC-195-SM-SS-X	3190-2878	SM
TNC	Straight Plug	Hex/Knurl	TC-195-TM-X	3190-6568	TM

*Connector part numbers in bold text are the default connectors for LMR-195-LLPX cable assemblies

Specifications

Ω Impedance 50 Ohms

Op Temp -40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	0.205 (5.21)
Weight	lb/ft (kg/m)	0.040 (0.006)
Bend Radius: Installation	in (mm)	1.0 (25.4)
Bend Radius: Repeated	in (mm)	2.0 (50.8)
Bending Moment	ft-lb (N-m)	0.25 (0.34)
Tensile Strength	lb (kg)	60 (27.22)
Flat Plate Crush	lb/in. (kg/mm)	85 (1.52)
Maximum Frequency	GHz	8
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.40)
Capacitance	pF/ft (pF/m)	26.7 (87.6)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
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



Calculation

$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$

Cable Insertion Loss f = Frequency (MHz) Use K values with matching length unit

K values	dB/100ft	dB/100m
K1	0.27337	0.89692697
K2	0.0002	0.0006562



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-240-LLPX	Indoor/Outdoor Plenum CMP	PVDF Fluoropolymer	Red	54459	LPX240

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 35 to select your desired connector

Connectors

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-240-4310M-X	3190-6385	43M
7/16 DIN	Male	Straight Plug	Hex	TC-240-716M	3190-2982	DM
		Right Angle Plug	Hex	TC-240-716M-RA-D	3190-2983	DMR
BNC	Male	Straight Plug	Knurl	TC-240-BM-X	3190-6380	BM
		Right Angle Plug	Knurl	TC-240-BM-RA-D	3190-6552	BMR
FME	Male	Straight Plug	N/A	TC-240-FMEM-X	3190-6251	FMEM
Mini UHF	Male	Straight Plug	Knurl	TC-240-MUHF	3190-445	MUF
N	Female	Straight Jack	N/A	TC-240-NF-BH-X	3190-6545	NFB
	Male	Straight Plug	Hex/Knurl	TC-240-NMH-X	3190-6381	NM
SMA	Female	Straight Jack	N/A	TC-240-NF-PM-X	3190-2889	NF
				TC-240-SF-BH-SS-X	3190-2896	SF
	Male	Straight Plug	Hex	EZ-240-SM-PL-X	3190-3075	SM
				TC-240-SM-SS-X	3190-2898	SM
TNC	Female	Straight Jack	N/A	TC-240-SM-RA-SS-D	3190-6546	SMR
				TC-240-SM-RP	3190-326	SMRP
				EZ-240-TF-PL-X	3190-6372	TF
Male	Straight Plug	Hex/Knurl	EZ-240-TM-PL-X	3190-6373	TM	
			EZ-240-TM-RP-PL-X	3190-6404	TMRP	
			TC-240-TM-X	3190-6550	TM	
		Right Angle Plug	Hex/Knurl	TC-240-TM-RA-D	3190-6547	TMR

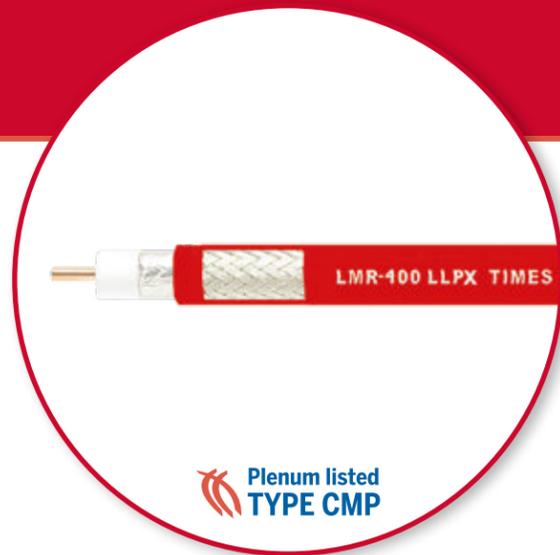
*Connector part numbers in bold text are the default connectors for LMR-240-LLPX cable assemblies

Specifications

Impedance 50 Ohms
Op Temp -40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	0.37 (9.40)
Weight	lb/ft (kg/m)	0.104 (0.15)
Bend Radius: Installation	in (mm)	1.8 (44.5)
Bend Radius: Repeated	in (mm)	4.0 (101.6)
Bending Moment	ft-lb (N-m)	0.5 (0.68)
Tensile Strength	lb (kg)	120 (54.5)
Flat Plate Crush	lb/in. (kg/mm)	185 (3.31)
Maximum Frequency	GHz	6
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.40)
Capacitance	pF/ft (pF/m)	26.7 (87.6)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	1.8 (5.9)
Outer Conductor	Ohms/1000ft (/km)	1.65 (5.4)
Voltage Withstand	Volts DC	2500
Jacket Spark	Volts RMS	8000
Peak Power	kW	16



Calculation

$$IL = (K1 \times \sqrt{f}) + K2 \times f \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)
Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.12914	0.42370834
K2	0.00015	0.00049215



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-400-LLPX	Indoor/Outdoor	PVDF Fluoropolymer	Red	54470	LPX400

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 37 to select your desired connector

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-400-4310M-X	3190-6272	43M
		Straight Plug	Hex	TC-400-716M-X	3190-2597	DM
7/16 DIN	Male	Right Angle Plug	Hex	TC-400-716MC-RA	3190-1671	716M-RA
				TC-400-716M-RA-D	3190-2598	DMR
BNC	Male	Straight Plug	Knurl	TC-400-BM-X	3190-6232	BM
		Right Angle Plug	Knurl	TC-400-BM-RA-D	3190-6430	BMR
HN	Male	Straight Plug	Knurl	TC-400-HNM	3190-923	HNM
		Right Angle Plug	Hex/Knurl	TC-400-HNM-RA	3190-2541	HNMR
Mini UHF		Straight Plug	Knurl	TC-400-MUHF	3190-520	MUF
				TC-400-NF-X	3190-2815	NF
N	Female	Straight Jack	N/A	TC-400-NF-BH-X	3190-8219	NFB
			Knurl	TC-400-NMC-2	3190-6077	NM
				TC-400-NM-RP	3190-960	NMRP
	Male	Straight Plug	Hex/Knurl	EZ-400-NMH-PL-X	3190-2961	NM
				TC-400-NMH-PL-X	3190-2962	NM
				TC-400-NMH-X	3190-2626	NM
	Right Angle Plug	Hex	TC-400-NMH-RA-SS	3190-1668	NMR	
		Hex/Knurl	TC-400-NMH-RA-D	3190-2293	NMR	
QN	Male	Straight Plug	Knurl	TC-400-QNM-X	3190-6212	QNM
SMA	Male	Straight Plug	Solder	TC-400-SM-X	3190-3046	SM
	Female	Straight Jack	N/A	TC-400-SF-X	3190-6174	SF
TNC	Female	Straight Jack	N/A	EZ-400-TF-PL-X	3190-6377	TF
				TC-400-TF-X	3190-3051	TF
				TC-400-TF-RP	3190-1063	TFRP
	Male	Straight Plug	Knurl	TC-400-TM-RP	3190-1062	TMRP
			Hex/Knurl	EZ-400-TM-PL-X	3190-6378	TM
			TC-400-TM-X	3190-2532	TM	
		Right Angle Plug	Hex/Knurl	TC-400-TM-RA-D	3190-2671	TMR
				TC-400-TM-RP-RA-D	3190-6147	TMRP

*Connector part numbers in bold text are the default connectors for LMR-400-LLPX cable assemblies

Specifications

Impedance 50 Ohms

Op Temp -40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	0.565 (14.38)
Weight	lb/ft (kg/m)	0.21 (0.31)
Bend Radius: Installation	in (mm)	2.8 (69.9)
Bend Radius: Repeated	in (mm)	6.0 (152.4)
Bending Moment	ft-lb (N-m)	2.75 (3.73)
Tensile Strength	lb (kg)	265 (120.3)
Flat Plate Crush	lb/in. (kg/mm)	210 (3.75)
Maximum Frequency	GHz	8
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.40)
Capacitance	pF/ft (pF/m)	26.7 (87.6)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.73 (2.4)
Outer Conductor	Ohms/1000ft (/km)	1.20 (3.90)
Voltage Withstand	Volts DC	4000
Jacket Spark	Volts RMS	8000
Peak Power	kW	40



Calculation

$$IL = (K1 \times V(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.08139	0.26704059
K2	0.00015	0.00049215



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-600-LLPX	Indoor/Outdoor	PVDF Fluoropolymer	Red	54461	LPX600

Assembly Ordering Guide



*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 39 to select your desired connector

Connectors

Connectors	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
4.3/10	Male	Straight Plug	Hex	TC-600-4310M-X	3190-6273	43M
	Female	Straight Jack	N/A	TC-600-716FC	3190-375	DF
7/16 DIN	Male	Straight Plug	Hex	TC-600-716M-X	3190-2642	DM
		Right Angle Plug	Hex	TC-600-716M-RA-D	3190-6211	DMR
BNC	Male	Right Angle Plug	Knurl	TC-600-BM-RA-D	3190-2734	BMR
HN	Male	Straight Plug	Knurl	TC-600-HNMC	3190-1429	HNM
LC	Male	Straight Plug	Hex	TC-600-LCM	3190-1406	LCM
			Hex/Knurl	TC-600-LCM-PL	3190-1221	LCM
N	Female	Stright Jack	N/A	TC-600-NF-X	3190-2816	NF
				TC-600-NF-BH	3190-589	NFB
				TC-600-NF-PL	3190-965	NF
	Male	Straight Plug	Hex/Knurl	EZ-600-NMH-PL-X	3190-2963	NM
				TC-600-NMC-2-D	3190-6122	NM
				TC-600-NMH-X	3190-2628	NM
		Right Angle Plug	Hex/Knurl	TC-600-NMH-RA-D	3190-2427	NMR
TNC	Female	Straight Jack	N/A	TC-600-TF-X	3190-3052	TF
			Knurl	TC-600-TF-RP	3190-1065	TFRP
	Male	Straight Plug	Knurl	TC-600-TM-RP	3190-1064	TMRP
Hex/Knurl			TC-600-TM-X	3190-2530	TM	
		Right Angle Plug	Hex/Knurl	TC-600-TM-RA-D	3190-2707	TMR

*Connector part numbers in bold text are the default connectors for LMR-600-LLPX cable assemblies

Specifications

Impedance 50 Ohms

Op Temp -40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	0.802 (20.37)
Weight	lb/ft (kg/m)	0.54 (0.81)
Bend Radius: Installation	in (mm)	3.00 (76.2)
Bend Radius: Repeated	in (mm)	76.2 (228.6)
Bending Moment	ft-lb (N-m)	9.0 (12.20)
Tensile Strength	lb (kg)	660 (299.6)
Flat Plate Crush	lb/in. (kg/mm)	300 (5.36)
Maximum Frequency	GHz	6
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.38)
Capacitance	pF/ft (pF/m)	27.17 (89.1)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.63 (2.07)
Outer Conductor	Ohms/1000ft (/km)	0.55 (1.8)
Voltage Withstand	Volts DC	5000
Jacket Spark	Volts RMS	8000
Peak Power	kW	62



Calculation

$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.05722	0.18773882
K2	0.00018	0.00059058



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-900-LLPX	Indoor/Outdoor	PVDF Fluoropolymer	Red	54462	LPX900

Assembly Ordering Guide

XXXXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 41 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
7/8 EIA Flange	Straight Flange	N/A	EZ-900-78EIA-2-SP	3190-6441	78EIA	
	Right Angle Flange	N/A	EZ-900-78EIA-RA-2-SP	3190-6442	78EIA-RA	
7/16 DIN	Female	Straight Jack	N/A	EZ-900-716FC-2-SP	3190-6512	DF
	Male	Straight Plug	Hex	EZ-900-716MC-2-SP	3190-6452	DM
		Right Angle Plug	Hex	EZ-900-716MC-RA-2-SP	3190-6423	DMR
N	Female	Straight Jack	N/A	EZ-900-NFC-2-SP	3190-6444	NF
	Male	Straight Plug	Hex/Knurl	EZ-900-NMC-2-SP	3190-6443	NM

*Connector part numbers in bold text are the default connectors for LMR-900-LLPX cable assemblies

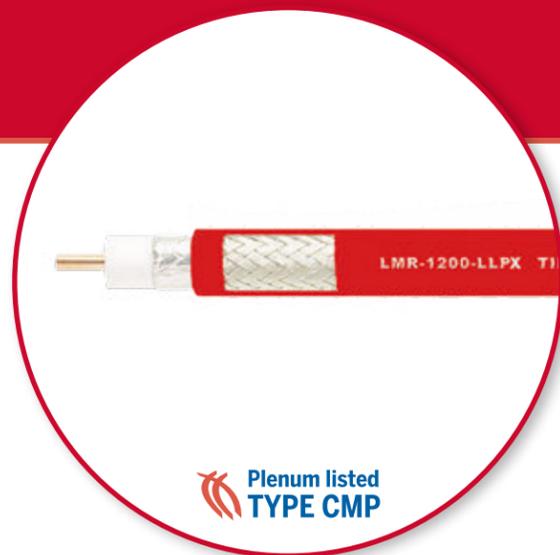
Specifications

Ω Impedance
50 Ohms

Op Temp
-40 to +257°F
-40 to +125°C

Units

Diameter	in (mm)	1.05 (26.7)
Weight	lb/ft (kg/m)	0.7 (1.04)
Bend Radius: Installation	in (mm)	6.0 (152.4)
Bend Radius: Repeated	in (mm)	12.0 (304.8)
Bending Moment	ft-lb (N-m)	15.0 (20.34)
Tensile Strength	lb (kg)	975 (442.7)
Flat Plate Crush	lb/in. (kg/mm)	375 (6.70)
Maximum Frequency	GHz	6
Velocity of Propagation	%	76
Dielectric Constant	NA	1.73
Time Delay	nS/ft (nS/m)	1.34 (4.40)
Capacitance	pF/ft (pF/m)	27.17 (89.12)
Inductance	uH/ft (uH/m)	0.067 (0.22)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	0.37 (1.21)
Outer Conductor	Ohms/1000ft (/km)	0.37 (1.21)
Voltage Withstand	Volts DC	6000
Jacket Spark	Volts RMS	8000
Peak Power	kW	90



Plenum listed
TYPE CMP

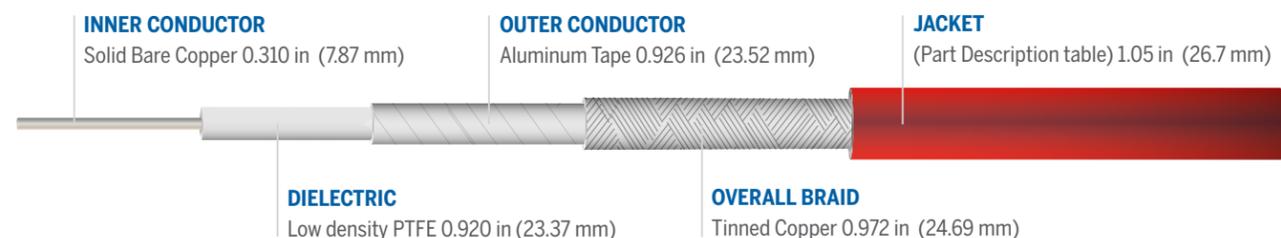
Calculation

$$IL = (K1 \times V(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.04172	0.13688332
K2	0.00018	0.00059058



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-1200-LLPX	Indoor/Outdoor	PVDF Fluoropolymer	Red	54463	LPX1200

Assembly Ordering Guide

XXXXXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 43 to select your desired connector

Connectors

	Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code
N	Female	Straight Jack	N/A	EZ-1200-NFC-PL-2	3190-6370	NF
	Male	Straight plug	Hex/Knurl	EZ-1200-NMC-PL-2	3190-6021	NM

*Connector part numbers in bold text are the default connectors for LMR-1200-LLPX cable assemblies

195

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-195 and 200	CST-195/200	3192-102
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-195 crimp dies (0.213" hex) for use with the CT-U	Y197	3190-610
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Debur Tool	Center conductor debur tool	DBT-U	3192-001
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-03 cutting tool	RB-03	3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-195, 200 and 240	TK-195/200/240EZ-HC	660-1206
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-195/200	3109-445
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T

240

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-240-LLPX	CST-240-PX	3192-263
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-240 crimp dies (0.255" hex) for use with the CT-U	Y375	3190-608
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Debur Tool	Center conductor debur tool	DBT-U	3192-001
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-03 cutting tool	RB-03	3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-240	3109-400
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T

400

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-400-PX	CST-400-PX	3192-264
Crimp Tool	Crimp tool for LMR-400	CT-400/300	3190-666
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-400 crimp dies (0.429" hex) for use with the CT-U	Y1719	3190-202
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-03 cutting tool	RB-03	3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-400	3109-394
	Over connector weather protection for LMR-400 and N male	WPB-400-NM	3192-6122
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T

600

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-600-PX	CST-600-PX	3192-265
Crimp Tool	Crimp tool for LMR-600	CT-600	3192-170
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-600 crimp dies (0.610" hex) for use with the CT-U	Y1720	3190-203
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-600	3109-401
	Over connector weather protection for LMR-600 and N male	WPB-600-NM	3192-6163
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T

900

Installation Tools	Description	Part Number	Stock Code
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Wrench	1 1/4" open end wrench (2 required)	WR-900	3190-509
Replacement Blade Kit	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-600 to LMR-1200	CS-60120T	CS-60120T

1200

Installation Tools	Description	Part Number	Stock Code
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Wrench	1 9/16" open end wrench (1 required)	WR-1200A	3192-385
	1 7/16" open end wrench (1 required)	WR-1200B	3190-511
Replacement Blade Kit	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-600 to LMR-1200	CS-60120T	CS-60120T

Specifications

Ω Impedance
75 Ohms

Op Temp
-40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.240 (6.10)
Weight	lb/ft (kg/m)	0.034 (0.05)
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)
Tensile Strength	lb (kg)	80 (38.3)
Flat Plate Crush	lb/in. (kg/mm)	20 (0.36)
Maximum Frequency	GHz	6
Velocity of Propagation	%	84
Dielectric Constant	NA	1.42
Time Delay	nS/ft (nS/m)	1.21 (3.97)
Capacitance	pF/ft (pF/m)	16.1 (52.9)
Inductance	uH/ft (uH/m)	0.091 (0.30)
Shielding Effectiveness	dB	>90
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



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.269	0.882589
K2	0.000305	0.001000705

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
BNC	Male	Straight Plug	Knurl	EZ-240-BM-75-X	3190-6261	BM
				TC-240-BM-75-X	3190-2939	BM
F	Male	Straight Plug	Hex	EZ-240-FMH-75-X	3190-6411	FM
				TC-240-FMH-75	3190-1483	FM
N	Male	Straight Plug	Hex/Knurl	EZ-240-NMH-75-X	3190-6284	QF

*Connector part numbers in bold text are the default connectors for LMR-240 75 ohm cable assemblies

INNER CONDUCTOR

Solid Bare Copper 0.032 in (0.82 mm)

OUTER CONDUCTOR

Aluminum Tape 0.155 in (3.94 mm)

JACKET

(Part Description table) 0.240 in (6.10 mm)

DIELECTRIC

Foam PE 0.150 in (3.81 mm)

OVERALL BRAID

Tinned Copper 0.178 in (4.52 mm)

Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-240-75	Indoor/Outdoor	PE	Black	54150	L750240
LMR-240-75-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54259	L75F240
LMR-240-75-DB	Outdoor	PE	Black	54226	L75D240

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXX

Cable Code

-XXX

Connector A

XXX-

Connector B

XX.X

Length

X

Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 47 to select your desired connector

Specifications

Ω Impedance 75 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.405 (10.29)
Weight	lb/ft (kg/m)	0.068 (0.10)
Bend Radius: Installation	in (mm)	1.00 (25.4)
Bend Radius: Repeated	in (mm)	4.0 (101.6)
Bending Moment	ft-lb (N-m)	0.5 (0.68)
Tensile Strength	lb (kg)	160 (72.6)
Flat Plate Crush	lb/in. (kg/mm)	40 (0.71)
Maximum Frequency	GHz	6
Velocity of Propagation	%	85
Dielectric Constant	NA	1.38
Time Delay	nS/ft (nS/m)	1.20 (3.92)
Capacitance	pF/ft (pF/m)	15.9 (52.3)
Inductance	uH/ft (uH/m)	0.090 (0.29)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	2.5 (8.20)
Outer Conductor	Ohms/1000ft (/km)	1.65 (5.4)
Voltage Withstand	Volts DC	2000
Jacket Spark	Volts RMS	5000
Peak Power	kW	10



Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.11557	0.37918517
K2	0.00026	0.00085306



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-400-75	Indoor/Outdoor	PE	Black	54147	L750400
LMR-400-75-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54256	L75F400
LMR-400-75-DB	Indoor/Outdoor	PE	Black	54228	L75D400

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 49 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
BNC	Male	Straight Plug	Knurl	TC-400-BM-75-X	3190-2960	BM
F	Male	Straight Plug	Hex	EZ-400-FM-75-X	3190-6482	FM
N	Male	Straight Plug	Hex/Knurl	EZ-400-NMH-75-X	3190-6408	NM
			Knurl	TC-400-NM-75	3190-389	NM
				TC-400-NM-75-50	3190-1704	NM

*Connector part numbers in bold text are the default connectors for LMR-400 75 ohm cable assemblies

Specifications

Ω Impedance 75 Ohms

Op Temp -40 to +185°F
-40 to +85°C

Units

Diameter	in (mm)	0.590 (15.0)
Weight	lb/ft (kg/m)	0.131 (0.20)
Bend Radius: Installation	in (mm)	1.5 (38.1)
Bend Radius: Repeated	in (mm)	6.0 (152.4)
Bending Moment	ft-lb (N-m)	2.75 (3.73)
Tensile Strength	lb (kg)	350 (158.9)
Flat Plate Crush	lb/in. (kg/mm)	60 (1.07)
Maximum Frequency	GHz	6
Velocity of Propagation	%	87
Dielectric Constant	NA	1.32
Time Delay	nS/ft (nS/m)	1.17 (3.83)
Capacitance	pF/ft (pF/m)	15.6 (51.1)
Inductance	uH/ft (uH/m)	0.088 (0.29)
Shielding Effectiveness	dB	>90
Inner Conductor	Ohms/1000ft (/km)	1.39 (4.56)
Outer Conductor	Ohms/1000ft (/km)	1.2 (3.9)
Voltage Withstand	Volts DC	4000
Jacket Spark	Volts RMS	8000
Peak Power	kW	40



Calculation

$$IL = (K1 \times V(f) + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/100ft	dB/100m
K1	0.07059	0.23160579
K2	0.00026	0.00085306



Part Description

Part-Number	Application	Jacket	Color	Stock Code	Cable Code
LMR-600-75	Indoor/Outdoor	PE	Black	54148	L750600
LMR-600-75-DB	Outdoor/Watertight	PE	Black	54220	L75D600
LMR-600-75-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54258	L75F600

* LMR-FR is a low-smoke, zero-halogen cable. See page 54 for performance details

Assembly Ordering Guide

XXXX Cable Code
 -XXX Connector A
 XXX- Connector B
 XX.X Length
 X Units of measure: I = Inches, F = Feet, M = Meters

*Refer to the Part Description table to select your desired Cable Code **Refer to the Connector table on page 51 to select your desired connector

Connectors

Gender	Description	Coupling Nut	Part Number	Stock Code	Connector Code	
F	Male	Straight Plug	Hex	EZ-600-FM-75-X	3190-6410	FM
N	Male	Straight Plug	Knurl	EZ-600-NM-75	3190-1620	NM
			Hex	TC-600-NMH-75-50	3190-1610	NM

*Connector part numbers in bold text are the default connectors for LMR-600 75 ohm cable assemblies

240

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-240	CST-240A	3192-152
Crimp Tool	Crimp tool for LMR-195,200 and 240	CT-240/200/195/100	3192-256
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-240 crimp dies (0.255" hex) for use with the CT-U	Y375	3190-608
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Debur Tool	Center conductor debur tool	DBT-U	3192-001
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-03 cutting tool	RB-03	3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-195, 200 and 240	TK-195/200/240EZ-HC	660-1206
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-240	3109-400
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
Ground Kit	Standard ground kit for LMR-240	GK-S240TT	GK-S240TT

400

Installation Tools	Description	Part Number	Stock Code
Combination Strip Tool	Prep Tool for LMR-400-75	CST-400-75	3192-089
Crimp Tool	Crimp tool for LMR-400	CT-400/300	3190-666
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-400 crimp dies (0.429" hex) for use with the CT-U	Y1719	3190-202
Cutting Tool	Spring loaded LMR cutting tool	CCT-03	3192-267
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-400A	3190-2174
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-03 cutting tool	RB-03	3192-337
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardcase Tool Kit	Connector Attachment Tools for LMR-400 and LMR-400-75	TK-400/400-75EZ-HC	660-1266
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-400	3109-394
	Over connector weather protection for LMR-400 and N male	WPB-400-NM	3192-6122
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T
Ground Kit	Standard ground kit for LMR-400	GK-S400TT	GK-S400TT
Pull Hoist	pre-laced pull hoist for LMR-400	HG-400T	HG-400T
Hangers	Standard hanger for LMR-400 and LMR-600	BH-S38-NH	BH-S38-NH
Support Blocks	Mini coax support blocks for LMR-400	CB-400T	CB-400T

600

Installation Tools	Description	Part Number	Stock Code
Strip Tool	Prep Tool for LMR-600-75	ST-600-75	3192-090
Crimp Tool	Crimp tool for LMR-600	CT-600	3192-170
Universal Crimp Tool	Universal, heavy-duty crimp handle	CT-U	3192-181
Crimp Dies	LMR-600 crimp dies (0.610" hex) for use with the CT-U	Y1720	3190-203
Cutting Tool	LMR cutting tool	CCT-02	3192-165
Mid-Span Strip Tool	Prep Tool for Ground Strap Attachment	GST-600A	3190-1051
Replacement Blade Kit	Replacement blade for all CST prepping tools	RB-CST	3192-086
	Replacement blade for the CCT-02 cutting tool	RB-02	3192-166
Tool Pouch	Embroided tool pouch with zipper	FKP-01	3190-584
Hardware	Description	Part Number	Stock Code
Weather Seal Boot	Weather Seal strain relief boot (10 pack)	WSB-600	3109-401
	Over connector weather protection for LMR-600 and N male	WPB-600-NM	3192-6163
Silicone Tape	Self-bonding silicone tape (for six connections)	WK-S-1	WK-S-1
Weather Seal Kit	Universal weather proofing kit (for six connections)	WK-U	WK-U
Cold Shrink	Cold Shrink for LMR-200 to LMR-600	CS-2060T	CS-2060T
	Cold Shrink for LMR-400 to LMR-600	CS-4060T	CS-4060T
Ground Kit	Standard ground kit for LMR-600	GK-S600TT	GK-S600TT
Pull Hoist	Lace-up pull hoist for LMR-600	HG-600T	HG-600T
Hangers	Standard hanger for LMR-400 and LMR-600	BH-S38-NH	BH-S38-NH
Support Blocks	Mini coax support blocks for LMR-600	CB-600T	CB-600T

References

LMR-FR (Low-Smoke, Zero Halogen):

UL/CSA listed, Type CMR (Riser Rated)
under UL File #E-170516.

CPR-Construction Product Regulation:

- LMR-195FR/240FR
 - Rated Cca, s2, d0, a1
 - DoP certificate #1005 is available on www.timesmicrowave.com
(Reference Times DoP #1005)
- LMR-400FR/600FR/LMR-900FR/LMR-1200FR
 - Rated B2ca, s1a, d0, a1
 - DoP #1006 certificate available on www.timesmicrowave.com

Rail Industry Certification:

Compliant to EN-45545 (R15/R16), NFPA-130
and BS-6853 Rail Standards

Flame Performance:

Meets UL-1666, UL-1581, UL-VW1, IEC332-1-2, IEC332-3, IEEE-383 and BS-4066 Flame Standards

Smoke Generation:

Meets IEC-61034-2 and NES-711 smoke generation requirements

Halogen Content:

Zero-Halogen meeting IEC-754-1 and -2, BS6425-1 and BS-6425-2 standards

LMR-LSZH (Low-Smoke, Zero-Halogen):

Non UL/CSA Listed cable design

CPR-Construction Product Regulation::

- LMR-195-LSZH through LMR-1200-LSZH
 - Rated "Dca" (Reference Times DoP#1008)

*Flame, Smoke, Halogen information available upon request

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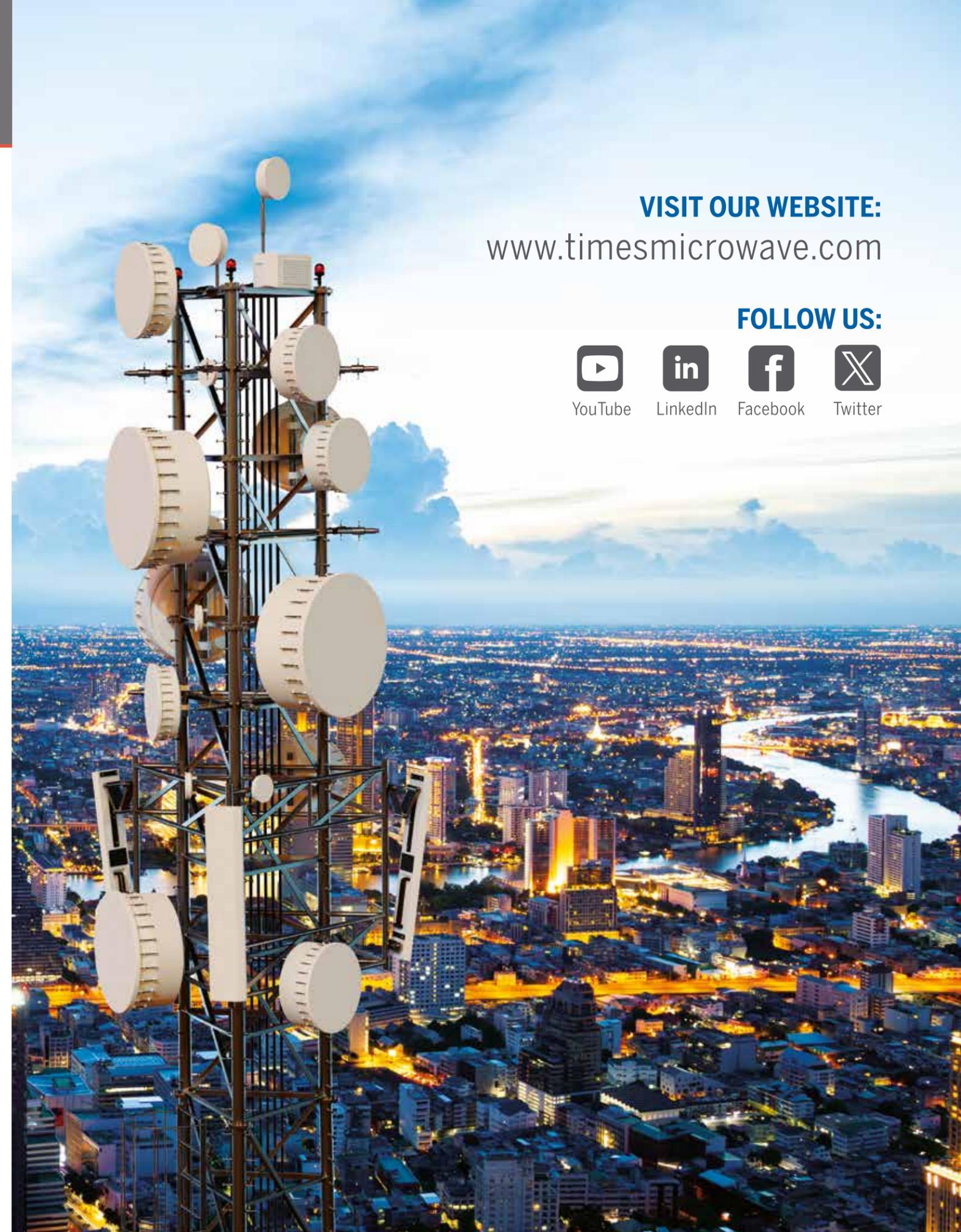
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Times Microwave Systems
358 Hall Avenue
Wallingford, CT 06492, USA
T 800. 867.2629



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