

# LMR-195

## Flexible Communications Cable

### Ideal for...

- Drop-in Replacement for RG-58/RG-142 (uses standard connectors)
- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, Mobile Antennas, 802.11, WLAN) requiring an easily routed, low loss RF cable



• **Flexible:** With a 1/2-inch minimum bend radius, LMR-195 cable is substantially more flexible than RG-142 and very comparable to RG-58, and affords much lower loss, greater shielding and lower cost.

• **Low Loss:** LMR-195 has lower loss than other RG58/RG142 'type' cables. This is achieved through the use of a high velocity gas-injected closed cell foam dielectric and bonded aluminum tape outer conductor.

• **Weatherproof:** The UV protected black polyethylene jacket makes the cable rugged and resistant to the full range of outdoor environments. Various jacket materials are available to address other indoor and outdoor requirements.

• **RF Shielding:** The bonded aluminum tape outer conductor is overlapped to provide 100% coverage, resulting in >90 dB RF shielding (>180 dB crosstalk) and excellent interference immunity (ingress and egress); a substantial improvement from RG58's 40 dB and RG142's 60 dB performance level.

• **Phase Stability:** The intimately bonded structure and foam dielectric of LMR cables provide excellent phase stability over temperature and with bending. The high velocity dielectric results in superior phase stability as compared with RG58 & RG142 solid dielectric cables.

• **Connectors and Assemblies:** Times Microwave provides jumper cable assemblies fabricated with LMR-195 cable and a variety of connector interface combinations. Custom assemblies with phase matching, insertion loss matching, and other special electrical or marking requirements can also be provided. Standard connectors designed for RG58 can be used on LMR-195.

### Part Description

Part Number	Designation	Jacket	Stock Code
LMR-195	Standard Outdoor Cable	Polyethylene	54110
LMR-195-DB	Watertight Cable	Polyethylene	54113
LMR-195-PVC	Indoor & Mobile Antenna Cable	PVC	54105
LMR-195-FR-W	CMR/MPP (PCC FT4)	White FR- PVC	54158
LMR-195-LLPL-W	CMP/MPP (PCC FT6)	White Plenum	54159

### Mechanical Specifications

Minimum Bend Radius	0.5 in	12.7 mm
Bending Moment	0.2 ft-lb	0.27 N-m
Weight	0.021 lb/ft	0.03 kG/m
Tensile Strength	40 lb	18.2 kG
Flat Plate Crush	15 lb/in	0.27 kG/mm

## TIMES MICROWAVE SYSTEMS

A Smiths Group plc company

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### Construction Specifications

Part Designation	Material	Inches	mm
Inner Conductor	Solid BC	0.037	0.94
Dielectric	Foam Polyethylene	0.110	2.79
Outer Conductor	Aluminum Tape	0.116	2.95
Overall Braid	Tinned Copper	0.139	3.53
Standard Jacket	Black Polyethylene	0.195	4.95

### Environmental Specifications

	°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

Cutoff Frequency	41 GHz*	
Velocity of Propagation	80%	
Voltage Withstand	1000 VDC	
Peak Power	2.5 kW	
DC Resistance		
Inner Conductor, ohms	7.6/1000'	24.94 /km
Outer Conductor, ohms)	4.9/1000'	16.08 /km
Jacket Spark	3000 VRMS	
Impedance	50 ohms	
Capacitance	24.3 pF/ft	79.70 pF/m
Inductance	0.064 uH/ft	0.21 uH/m
Shielding Effectiveness	>90 dB	
Phase Stability	< 10 ppm/C	

\*Consult factory for applications over 6 GHz.

Frequency MHz	Attenuation		Avg. Power kW
	dB/100 ft	dB/100 m	
30 MHz	1.90	6.3	0.85
50 MHz	2.46	8.1	0.66
150 MHz	4.3	14.1	0.38
220 MHz	5.2	17.1	0.31
450 MHz	7.5	24.6	0.21
900 MHz	10.7	35.0	0.15
1500 MHz	13.4	45.6	0.12
1800 MHz	15.3	50.1	0.11
2000 MHz	16.1	53.0	0.10
2500 MHz	18.1	59.5	0.09
5800 MHz	28.3	93.1	0.06

Attenuation (db/100 ft) = (0.35686) • √FMHz + (0.00047) • FMHz  
 (db/100 m) = (1.17086) • √FMHz + (0.00154) • FMHz  
 (interactive calculator available at <http://www.timesmicrowave.com>)  
 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

### Accessories

Tool Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR 195 connectors

