TIMES MICROWAVE SYSTEMS

LMR®-400-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 Number	Application	Jacket	Color	Stock Code
LMR-400-LLPX	Indoor/Outdoor Plenum CMP/FT6	Fluoropolymer	Red	54470

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 BCCAl	0.095	(2.41)
Dielectric	Low density PTFE	0.285	(7.24)
Outer Conductor	Aluminum Tape	0.291	(7.39)
Overall Braid	Tinned Copper	0.320	(8.13)
Jacket	Red Fluoropolymer	0.370	(9.40)

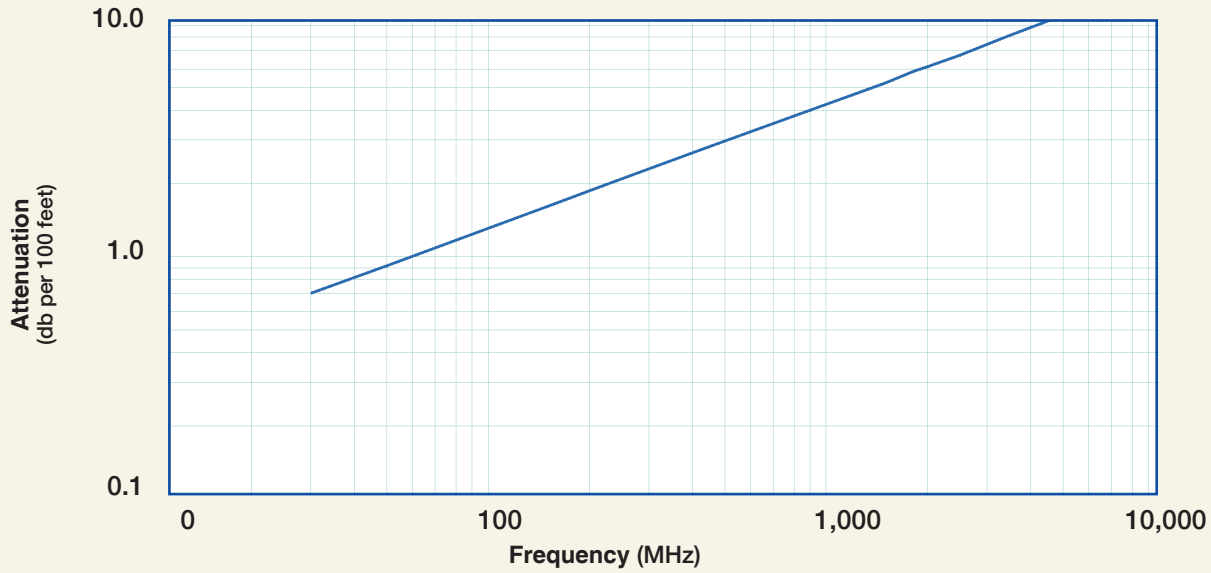
Mechanical Specifications

Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.00	(25.4)
Bend Radius: repeated	in. (mm)	4.0	(101.6)
Weight	lb/ft (kg/m)	0.104	(0.15)
Tensile Strength	lb (kg)	120	(54.5)
Flat Plate Crush	lb/in. (kg/mm)	185	(3.31)

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)	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	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	3400	5800	8000
Attenuation dB/100 ft	0.7	0.9	1.6	1.9	2.8	4.0	5.2	5.7	6.1	6.8	8.0	10.7	13.0
Attenuation dB/100 m	2.3	3.0	5.3	6.4	9.2	13.2	17.1	18.9	19.9	22.4	26.4	35.1	42.7
Avg. Power kW	6.2	4.8	208	2.3	1.6	1.1	0.84	0.78	0.73	0.65	0.57	0.41	0.34

Calculate Attenuation =

$(0.129140) \bullet \sqrt{FMHz} + (0.000150) \bullet FMHz$ (interactive calculator available at http://www.timesmicrowave.com/cable_calculators)

Attenuation:

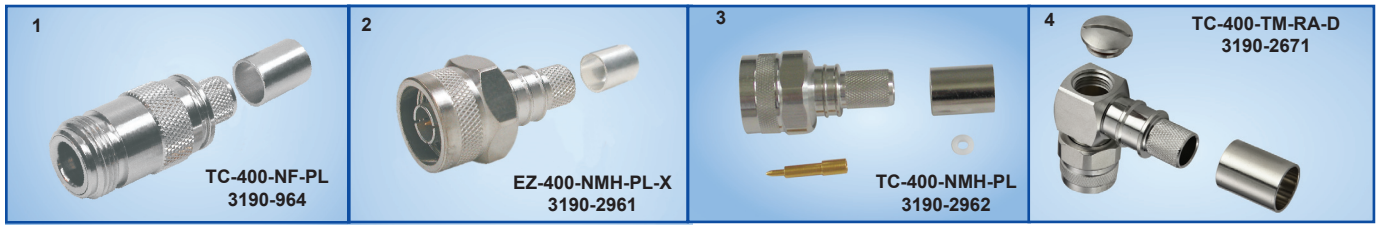
VSWR=1.0 ; Ambient = +25°C (77°F)

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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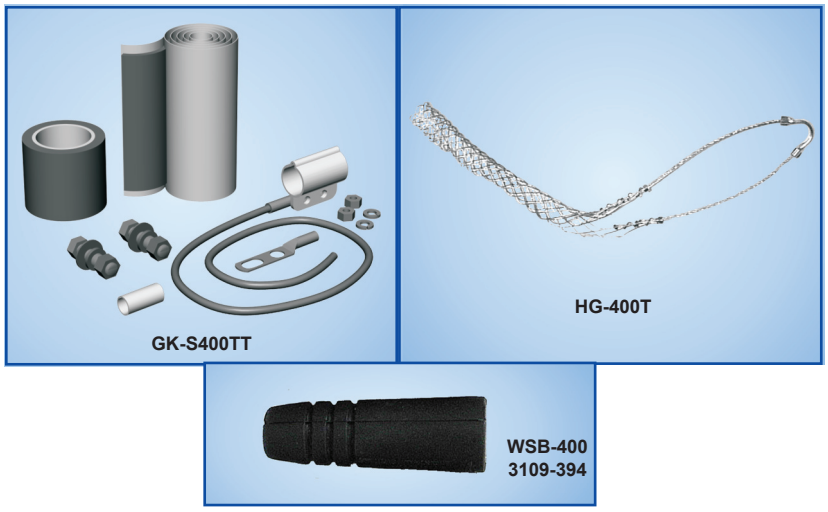
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Connectors

Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
1. N Female	Straight Jack	TC-400-NF-PL	3190-964	<1.25:1 (2.5)	NA	Solder	Crimp	N/G	1.8 (45)	0.66 (16.8)	0.105 (47.6)
2. N Male	Straight Plug	EZ-400-NMH-PL-X	3190-2961	<1.25:1 (2.5)	Hex/Knurl	Spring Finger	Crimp	A/G	1.5 (38)	0.89 (22.6)	0.113 (51.3)
3. N Male	Straight Plug	TC-400-NMH-PL	3190-2962	<1.25:1 (2.5)	Hex/Knurl	Solder	Crimp	S/G	1.5 (38)	0.89 (22.6)	0.113 (51.3)
4. TNC Male	Right Angle	TC-400-TM-RA-D	3190-2671	<1.35:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.2 (30)	1.48 (37.6)	0.110 (50.0)

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



Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S400TT	GK-S400TT	Standard Grounding Kit (each)
Hoisting Grip	HG-400T	HG-400T	Laced Type (each)
Weather Seal Boots	WSB-400	3109-394	Weather seal/strain relief boots (10pk) for use with most popular LMR-400-X series connectors



Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-U	3192-181	Crimp Handle
Crimp Dies	Y1719	3190-202	.429" Hex Dies
Crimp Tool	CT-400/300	3190-666	Crimp tool for LMR 400 connectors
Crimp Rings	CR-400	3190-830	Crimp rings for TC/EZ-400 connectors (package of 10)
Strip Tool	CST-400	3192-004	Combination prep tool for LMR-400 crimp and clamp connectors
Mid-Span Strip Tool	GST-400	3190-2174	For ground strap attachment
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
Tool Kit	TK-400EZ	3190-1601	Tool kit for LMR-400 crimp/clamp connectors (includes CCT-02, CST-400, CT-400/300, Tool Pouch)

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Amphenol:

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