RF SOLUTIONS

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Total Telecommunication
& Networking Solutions

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At ***ADVANCED NETWORK SOLUTIONS*****,** we provide a complete line of Radio Frequency solutions for covering nearly every application in today's RF & microwave design.

Over 15 years in telecommunication business, the skills of our team has allowed LITECH, our in house brand (registered trademark) in spawning new ideas and product ranges with superior quality in accordance to International Standard and recognition from ISO as well as both local and international network operators.

By incorporating the latest design and manufacturing technology, LITECH has successfully delivered telecommunications and networking solutions for numerous local and international clienteles.

In accordance to this, no matter how unique, big or small the requirement, LITECH is bound to offer high reliability solutions for the existing infrastructure and next-generation applications.

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ABOUT US

Our e-Catalogs provide plethora of telecommunications products such as BALUN, Fiber Optic, Racks & Cabinets and much more. Also we have solutions for FTTH, Wireless, and Data Centre Network architectures. ***Contact or send us queries to let us find the solutions for your challenge!***

ISO 9001 : 2000 039 SIRIM Approved! E198559

1/4” FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Copper-clad aluminum wire or copper
	Diameter, mm(in)	2.04(0.09)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	6.5(0.256)
Outer conductor	Material	Corrugated copper tube
	Diameter, mm(in)	7.5(0.295)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	9.1(0.358)
Weight, kg/m(lb/ft)	LTCB-03	0.10(0.07)
	LTCB-03-RTD	0.12(0.08)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	1.259	4.250	1.870	2000	6.340	20.800	0.370
200	1.859	6.690	1.300	2200	6.680	21.900	0.350
450	2.860	9.370	0.850	2400	7.010	23.000	0.340
800	3.880	12.720	0.620	2500	7.190	23.600	0.340
900	4.130	13.550	0.580	3000	7.960	26.100	0.300
1000	4.370	14.350	0.550				
1500	5.430	17.800	0.440				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		76(23.2)
Impedance, ohms		50 ± 1
Velocity, percent		88
Peak power rating, kW		11
RF peak voltage, KV		0.83
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		18.6
Insulation voltage, KV		2.2
Inner Conductor DC Resistance, W/km		5.5
Outer Conductor DC Resistance, W/km		3.7
Jacket Spark, KV		3
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	38(1.5)
	Repeated bend	76(3)
Number of bend	15	
Mobile Apply, mm(in)	200(8)	
Bending Moment, N · m(lb-ft)	1.3(0.98)	
Tensile Strength, kg(lb)	53(119)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
1/4" Standard Cable - PE	LTCB-01
1/4" Retardant Cable	LTCB-01-RTD

3/8” FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Copper-clad aluminum wire or copper
	Diameter, mm(in)	3.3(0.13)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	8.3(0.327)
Outer conductor	Material	Corrugated copper tube
	Diameter, mm(in)	9.6(0.378)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	11.2(0.441)
Weight, kg/m(lb/ft)	LTCB-02	0.14(0.10)
	LTCB-02-RTD	0.16(0.11)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	0.951	3.120	2.230	2000	4.600	15.100	0.460
200	1.356	4.450	1.560	2200	4.850	15.900	0.430
450	2.070	6.790	1.020	2400	5.090	16.700	0.420
800	2.800	9.200	0.750	2500	5.210	17.080	0.410
900	2.990	9.800	0.710	3000	5.760	18.900	0.370
1000	3.160	10.370	0.670				
1500	3.930	12.990	0.530				
1800	4.340	14.250	0.480				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC
Average Power Rate : VSWR 1.0, Ambient Temperature 40ºC
Inner Conductor Temperature 100ºC, no solar rediation

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		76(23.2)
Impedance, ohms		50 ± 1
Velocity, percent		88
Peak power rating, kW		15.6
RF peak voltage, KV		1.05
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		13.5
Insulation voltage, KV		2.5
Inner Conductor DC Resistance, W/km		3.1
Outer Conductor DC Resistance, W/km		2.8
Jacket Spark, KV		5
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	40(1.6)
	Repeated bend	95(4)
Number of bend	15	
Mobile Apply, mm(in)	250(10)	
Bending Moment, N · m(lb-ft)	1.9(1.4)	
Tensile Strength, kg(lb)	53(119)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
3/8" Standard Cable - PE	LTCB-02
3/8" Retardant Cable	LTCB-02-RTD

1/2” FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Copper-clad aluminum wire or copper
	Diameter, mm(in)	4.8(0.190)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	12.3(0.484)
Outer conductor	Material	Corrugated copper tube
	Diameter, mm(in)	13.8(0.543)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	15.7(0.618)
Weight, kg/m(lb/ft)	LTCB-03	0.24(0.16)
	LTCB-03-RTD	0.26(0.18)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	0.655	2.150	3.940	2000	3.200	10.500	0.810
200	0.939	3.080	2.750	2200	3.380	11.100	0.770
450	1.430	4.700	1.800	2400	3.540	11.600	0.750
800	1.940	6.350	1.330	2500	3.640	11.950	0.730
900	2.060	6.750	1.250	3000	4.020	13.200	0.650
1000	2.190	7.200	1.180				
1500	2.760	9.050	0.950				
1800	3.020	9.900	0.860				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC
Average Power Rate : VSWR 1.0, Ambient Temperature 40ºC
Inner Conductor Temperature 100ºC, no solar rediation

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		76(23.2)
Impedance, ohms		50 ± 1
Velocity, percent		88
Peak power rating, kW		40
RF peak voltage, KV		1.6
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		8.8
Insulation voltage, KV		6
Inner Conductor DC Resistance, W/km		1.48
Outer Conductor DC Resistance, W/km		1.9
Jacket Spark, KV		8
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	50(2)
	Repeated bend	125(5)
Number of bend	15	
Mobile Apply, mm(in)	350(14)	
Bending Moment, N · m(lb-ft)	5.0(3.7)	
Tensile Strength, kg(lb)	110(247)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
1/2" Standard Cable - PE	LTCB-03
1/2" Retardant Cable	LTCB-03-RTD

1/2” SUPERFLEX FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Copper-clad aluminum wire or copper
	Diameter, mm(in)	3.55(0.14)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	8.7(0.34)
Outer conductor	Material	Helical copper tube
	Diameter, mm(in)	12.0(0.47)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	13.4(0.53)
Weight, kg/m(lb/ft)	LTCB-03S	0.20(0.14)
	LTCB-03S-RTD	0.22(0.18)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	0.980	3.220	3.030	2000	5.000	16.400	0.590
200	1.420	4.650	2.110	2200	5.290	17.350	0.560
450	2.190	7.200	1.370	2400	5.520	18.100	0.530
800	3.010	9.860	1.000	2500	5.640	18.500	0.520
900	3.220	10.560	0.940	3000	5.370	20.900	0.480
1000	3.400	11.150	0.880				
1500	4.210	13.800	0.700				
1800	4.740	15.550	0.630				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC
Average Power Rate : VSWR 1.0, Ambient Temperature 40ºC
Inner Conductor Temperature 100ºC, no solar rediation

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		80(24.4)
Impedance, ohms		50 ± 2
Velocity, percent		83
Peak power rating, kW		19
RF peak voltage, KV		1.13
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		12.5
Insulation voltage, KV		12.5
Inner Conductor DC Resistance, W/km		2.5
Outer Conductor DC Resistance, W/km		3.5
Jacket Spark, KV		5
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	15(0.6)
	Repeated bend	30(1.2)
Number of bend	15	
Mobile Apply, mm(in)	200(8)	
Bending Moment, N · m(lb-ft)	1.8(1.3)	
Tensile Strength, kg(lb)	65(146)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
1/2" Superflex Cable - PE	LTCB-03S
1/2" Superflex Retardant Cable	LTCB-03S-RTD

7/8”
FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Smooth copper tube
	Diameter, mm(in)	9.0(0.35)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	22.5(0.89)
Outer conductor	Material	Corrugated copper tube
	Diameter, mm(in)	24.9(0.98)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	27.7(1.09)
Weight, kg/m(lb/ft)	LTCB-05	0.54(0.36)
	LTCB-05-RTD	0.59(0.39)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	0.357	1.170	8.620	2000	1.840	6.050	1.680
200	0.515	1.690	5.990	2200	1.950	6.400	1.590
450	1.790	2.600	3.880	2400	2.060	6.750	1.540
800	1.090	3.560	2.830	2500	2.100	6.900	1.500
900	1.160	3.800	2.650	3000	2.320	7.600	1.330
1000	1.230	4.030	2.500				
1500	1.550	5.080	1.990				
1800	1.710	5.610	1.790				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC
Average Power Rate : VSWR 1.0, Ambient Temperature 40ºC
Inner Conductor Temperature 100ºC, no solar rediation

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		76(23.2)
Impedance, ohms		50 ± 1
Velocity, percent		88
Peak power rating, kW		91
RF peak voltage, KV		3
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		5.
Insulation voltage, KV		10
Inner Conductor DC Resistance, W/km		1.0
Outer Conductor DC Resistance, W/km		1.2
Jacket Spark, KV		8
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	90(3.5)
	Repeated bend	250(10)
Number of bend	15	
Mobile Apply, mm(in)	500(20)	
Bending Moment, N · m(lb-ft)	16.3(12)	
Tensile Strength, kg(lb)	147(325)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
7/8" Standard Cable - PE	LTCB-05
7/8" Retardant Cable	LTCB-05-RTD

1 5/8”
FEEDER CABLE

GENERAL SPECIFICATION

Construction		
Inner conductor	Material	Helical copper tube
	Diameter, mm(in)	17.5(0.69)
Dielectric	Material	Physical foam polyethylene
	Diameter, mm(in)	43.5(1.71)
Outer conductor	Material	Corrugated copper tube
	Diameter, mm(in)	46.5(1.83)
Jacket	Material	Black PE or low smoke halogen-free fire retardant
	Diameter, mm(in)	49.5(1.95)
Weight, kg/m(lb/ft)	LTCB-07	1.35(0.91)
	LTCB-07-RTD	1.48(0.99)

TECHNICAL SPECIFICATION

Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW	Frequency MHz	Max. Attenuation dB/100 ft	Max. Attenuation dB/100 m	Power Rate kW
100	0.204	0.670	16.900	2000	1.120	3.680	3.000
200	0.299	0.980	11.600	2200	1.190	3.910	2.850
450	0.470	1.530	7.360	2400	1.260	4.130	2.700
800	0.650	2.120	5.260	2500	1.290	4.240	2.610
900	0.690	2.280	4.930				
1000	0.740	2.420	4.610				
1500	0.940	3.090	3.640				
1800	1.050	3.450	3.270				

Standard Testing Condition
Attenuation : VSWR 1.0, Ambient Temperature 20ºC
Average Power Rate : VSWR 1.0, Ambient Temperature 40ºC
Inner Conductor Temperature 100ºC, no solar rediation

ELECTRICAL SPECIFICATION

Capacitance, pF/m(ft)		76(23.2)
Impedance, ohms		50 ± 1
Velocity, percent		88
Peak power rating, kW		320
RF peak voltage, KV		5.7
Insulating resistance, MW-km		>5000
Cut-off frequency, (GHz)		2.8
Insulation voltage, KV		15
Inner Conductor DC Resistance, W/km		0.85
Outer Conductor DC Resistance, W/km		0.4
Jacket Spark, KV		10
Shielding effectiveness, dB		>120
VSWR (Return loss)	0.005~3GHz	≤ 1.15 (>=23dB)
	0.8~1.0GHz	≤ 1.10 (>=26dB)
	1.7~2.0GHz	≤ 1.10 (>=26dB)
	2.0~2.4GHz	≤ 1.10 (>=26dB)

MECHANICAL SPECIFICATION

Bending radius, mm(in)	Single bend	200(8)
	Repeated bend	510(20)
Number of bend	15	
Mobile Apply, mm(in)	900(35)	
Bending Moment, N · m(lb-ft)	46(34)	
Tensile Strength, kg(lb)	330(750)	
Storage Temperature, ºC(ºF)	-55 to +85(-67 to +185)	
Installation Temperature, ºC(ºF)	-40 to +60(-40 to +140)	
Operating Temperature, ºC(ºF)	-55 to +85(-67 to +185)	

Ordering Information

Description	Part Number
1 5/8" Standard Cable - PE	LTCB-07
15/8" Retardant Cable	LTCB-07-RTD

RF JUMPER

TECHNICAL SPECIFICATION

Cable Type	Connector A Connector B	Length m	Attenuation, MHz, dB 450	900	1800	2400	VSWR (Return Loss), GHz 0.8-1.0	1.7-2.0	2.0-2.4	IM3 dBc
1/4" Flexible	N Male/Female 7/16 Male/Female	1.5	0.18	0.26	0.39	0.45	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.24	0.35	0.52	0.60	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.36	0.52	0.78	0.90	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.60	0.87	1.30	1.50	1.06(30)	1.08(28)	1.08(28)	-155
3/8" Flexible		1.5	0.14	0.20	0.29	0.34	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.18	0.26	0.38	0.45	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.27	0.39	0.58	0.68	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.46	0.66	0.96	1.13	1.06(30)	1.08(28)	1.08(28)	-155
1/2" Flexible		1.5	0.11	0.16	0.23	0.27	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.14	0.21	0.31	0.36	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.22	0.32	0.47	0.54	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.36	0.53	1.78	1.91	1.06(30)	1.08(28)	1.08(28)	-155
1/4" Corrugated		1.5	0.14	0.20	0.30	0.35	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.19	0.27	0.39	0.46	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.28	0.41	0.59	0.69	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.47	0.68	0.99	1.15	1.06(30)	1.08(28)	1.08(28)	-155
3/8" Corrugated		1.5	0.10	0.15	0.21	0.25	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.14	0.20	0.29	0.33	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.20	0.29	0.43	0.50	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.34	0.49	1.71	1.84	1.06(30)	1.08(28)	1.08(28)	-155
1/2" Corrugated		1.5	0.07	0.10	0.15	0.17	1.06(30)	1.08(28)	1.08(28)	-155
		2.0	0.09	0.14	0.20	0.23	1.06(30)	1.08(28)	1.08(28)	-155
		3.0	0.14	0.20	0.30	0.35	1.06(30)	1.08(28)	1.08(28)	-155
		5.0	0.24	0.34	0.50	0.58	1.06(30)	1.08(28)	1.08(28)	-155

Ordering Information

LTRF - □□ - □□ - □ - □

Connector A1	Connector A2	Connector A1	Connector A2	Type Of Cable	Length
8 : N	03 : RG179 (M/F)	8 : N	03 : RG179 (M/F)	23 : LMR 400	1.5m
7 : 7/16	04 : RG213 (M/F)	7 : 7/16	04 : RG213 (M/F)	04 : RG213	2.0m
				13 : RG223	3.0m
					5.0m

LMR-400

COAXIAL CABLE LMR-400

ATTENUATION AND AVG. POWER (20°C)		
Frequency (MHz)	Attenuation (≤dB/100m)	Avg. Power (KW)
30	2.20	3.33
50	2.90	2.60
150	5.00	1.50
220	6.10	1.20
450	8.90	0.83
900	12.80	0.44
1500	16.80	0.40
1800	18.60	0.37
2000	19.60	0.33
2500	22.20	0.29
5800	35.50	0.21

SPECIFICATIONS	
Center Conductor	Solid Copper
Dielectric	Physical Foam Polyethylene
Shielding	Aluminium Foil +Tinned Copper
Jacket	Black PVC or Polyethylene
Impedance	50ohm
Operating Temperature	-40°C to 85°C
Bending Radius	25.4mm

RG-213

COAXIAL CABLE RG-213

ATTENUATION AND AVG. POWER (20°C)	
Frequency (MHz)	Attenuation (>dB/100m)
100	6.6
400	14.1
1000	24.0

SPECIFICATIONS	
Center Conductor	Bare Copper
Dielectric	Solid Polyethylene
Shielding	Bare Copper
Jacket	PVC Sheathed
Impedance	50 ± 2ohm
Operating Temperature	-20°C to 80°C
Bending Radius	45mm

RG-223

COAXIAL CABLE RG-223

ATTENUATION AND AVG. POWER (20°C)	
Frequency (MHz)	Attenuation (>dB/100m)
100	13.10
400	26.9
1000	44.00
3000	81.40
5000	109.90
11000	177.50

SPECIFICATIONS	
Center Conductor	Silver Plated Copper
Dielectric	Solid Polyethylene
Shielding	Silver Plate Copper
Jacket	PVC Sheathed
Impedance (ohm)	50
Operating Temperature	-20°C to 80°C
Bending Radius	25mm

Ordering Information

LTRJ - □ - □ - □ - □

Connector A	Connector B	Type Of Cable	Cable Lenght
3 : BNC(M/F)	3 : BNC(M/F)	23 : LMR 400	1.5m
B : TNC(M/F)	B : TNC(M/F)	04 : RG213	2.0m
8 : N(M/F)	8 : N(M/F)	13 : RG223	3.0m
7 : 7/16	7 : 7/16		5.0m

LOW LOSS RFJUMPER

ELECTRICAL SPECIFICATION	
Impedance	50 Ω
Frequency Range	DC ~ 7.5 GHz
Return Loss	Physical foam polyethylene
	21 dB (2~3 GHz)
Insertion Loss	-0.05 x f(GHz) ½
PIMD	≤ -160 dBc
Insulation Resistance	≥ 10000M Ω
Voltage	2500 Vrms

Litech 7-16 DIN connectors for corrugated coaxial cables are designed to meet the requirements for transmitting signals in high power communications such as antennas, broadcast and base station of mobile radio system (GSM) all around the world. These connectors have been constructed with screw type couplings and have a low VSWR and a characteristic impedance of 50 Ω making it applicable with excellent electrical properties up to 7.5 GHz.

MECHANICAL SPECIFICATION	
Inner Attachment Method	Solderless (Capativated)
Coupling Torque	250 ~ 300 kg.f/cm
Durability	500 cycle

Advantages

- Low PIM and low VSWR for enhanced system performance.
- Excellent Return Loss performance.
- Quick and Easy screw type coupling nut allows tightening with standard tools for mating and also can be assemble as a straight or right-angle plug).
- Enviromental resistances compliance with MIL-STD202.
- Silver / gold-plated contacts and silver, brass or white bronze-plated bodies deliver a high conductivity and corrosion resistance for a very long period of time.
- Contact and Insulation Resistance compliance with MIL-STD.
- Durability (Mating) compliance with EIA.

MATERIAL	
Body & Outer Conductor	Brass / Silver or Whitebronze
Inner Conductor / Pin	Silver or gold
Socket	Silver or gold
Gasket	Silicon Rubber

ENVIRONMENT SPECIFICATION	
Temperature Range	-65ºC ~ 165ºC
Interface Compliance	IEC 169-16
Corrosion,Vibration, Thermal Shock & Moisture Resistance	Compliance with MIL-STD-202

7/16 DIN CONNECTORS

Ordering Information

Cable Type	Connector Type	Part Number	Length(mm)	Diameter(mm)	Weight(g)
1/2'S	Male	LTCN-703M-03S	47	35	106.5
	Female	LTCN-704F-03S	52	29	111.50
	Male Right Angle	LTCN-715M-03S	55.5	35	200.0
	Female Right Angle	LTCN-716F-03S	52.3	29	200.0
1/2"	Male	LTCN-703M-03	47.3	35	102.5
	Female	LTCN-704F-03	51	29	110.5
	Male Right Angle	LTCN-715M-03	65.8	35	174.0
	Female Right Angle	LTCN-716F-03	49.3	29	175.0
7/8"	Male	LTCN-703M-05	58.5	35	202.5
	Female	LTCN-704F-05	53	29	176.7
1 1/4"	Male	LTCN-703M-06	76	35	554.5
	Female	FLTCN-704F-06	72.5	29	503.5
1 5/8"	Male	LTCN-703M-07	78.5	35	607.5
	Female	LTCN-704F-07	80.5	29	689.0

ELECTRICAL SPECIFICATION	
Impedance	50 Ω
Frequency Range	DC ~ 7.5 GHz
Return Loss	Physical foam polyethylene
	21 dB (2~3 GHz)
Insertion Loss	-0.05 x f(GHz) ½
PIMD	≤ -160 dBc
Insulation Resistance	≥ 10000M Ω
Voltage	2500 Vrms

Litech Type N connectors are available for both Coaxial Cable (Standard N) and Corrugated Cable (Helical N). Our Type N connectors for corrugated cable are designed to meet the requirements for applications widely used in antennas, broadcast, base station of mobile radio system (GSM),cable assemblies and instrumentation all around the world.These connectors have been constructed with screw type couplings and have a low VSWR and a characteristic impedance of 50 Ω making it applicable with excellent electrical properties up to 7.5 GHz.

MECHANICAL SPECIFICATION	
Inner Attachment Method	Solderless (Capativated)
Coupling Torque	7 ~ 12 kg.f/cm
Durability	500 cycle

MATERIAL	
Body & Outer Conductor	Brass / Silver or Whitebronze
Inner Conductor / Pin	Silver or gold
Socket	Silver or gold
Gasket	Silicon Rubber

Advantages

- Low PIM and low VSWR for enhanced system performance.
- Excellent Return Loss performance.
- Quick and easy coupling allows tightening with standard tools for mating. Can also be assemble as a straight or right-angle plug.
- Silver / gold-plated contacts and silver, brass or white bronze-plated bodies deliver a high conductivity and corrosion resistance for a very long period of time.
- Contact and Insulation Resistance compliance with MIL-STD.
- Durability (Mating) compliance with EIA.

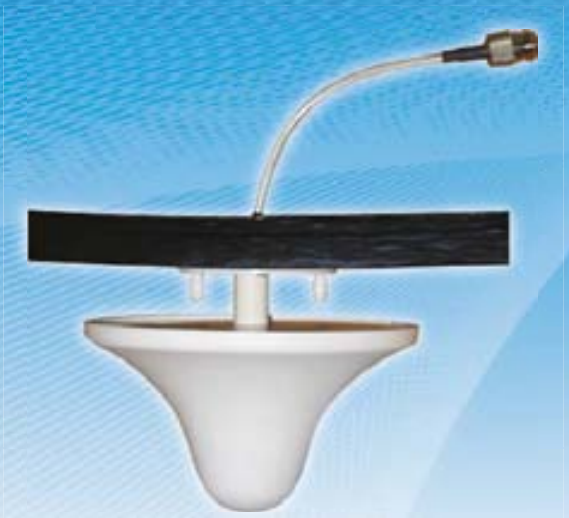
ENVIRONMENT SPECIFICATION	
Temperature Range	-65ºC ~ 165ºC
Interface Compliance	IEC 169-16
Corrosion,Vibration, Thermal Shock & Moisture Resistance	Compliance with MIL-STD-202

N TYPE CONNECTOR

Ordering Information

Cable Type	Connector Type	Part Number	Length(mm)	Diameter(mm)	Weight(g)
1/2'S	Male	LTCN-803M-03S	51.5	19.6	82.0
	Female	LTCN-804F-03S	53	15.8	81.5
	Male Right Angle	LTCN-815M-03S	56.7	19.6	135.0
	Female Right Angle	LTCN-816F-03S	58	15.8	135.0
1/2"	Male	LTCN-803M-03	52	19.6	71.5
	Female	LTCN-804F-03	52	15.8	77.5
	Male Right Angle	LTCN-815M-03	57.6	19.6	120.0
	Female Right Angle	LTCN-816F-03	57.6	15.8	120.0
7/8"	Male	LTCN-803M-05	61	19.6	146.0
	Female	LTCN-804F-05	60	15.8	140.0
1 1/4"	Male	LTCN-803M-06	75	19.6	498.5
	Female	LTCN-804F-06	72.5	15.8	491.5
1 5/8"	Male	LTCN-803M-07	87	19.6	670.5
	Female	LTCN-804F-07	84.5	15.8	674.0

Ceiling Mount Antenna



Ceiling Mount Antenna

WALL MOUNT ANTENNA

ELECTRICAL SPECIFICATION		
	Ceiling Mount Antenna	Ceiling Mount Antenna
Frequency Range	800~960Mhz	1710~2500Mhz
Gain	≥ 3dBi	
VSWR/50Ω	> 1.5	
Beamwidth	E:55	
Polarization	Vertical	
Maximum Input Power	100W	
Connector Place	Bottom	
Connector Type	N-Female or Customization	
Lightning Protection	Direct Ground	

MECHANICAL SPECIFICATION	
Dimensions (mm) (DxH)	φ165×94
Weight of Antenna	0.7kg
Weight of Insulation	0.05kg
Radome Material	ABS
Base Board Material	Aluminium

Ordering Information

Description	Part Number
0.8~2.5 GHz 3dBi Wide-Band Ceiling Mount Antenna	LTXD-08/25-3

Wall Mount Antenna

Broadband Directional Antenna

CEILING MOUNT ANTENNA

ELECTRICAL SPECIFICATION		
	Wall Mount Antenna	Broadband Directional Antenna
Frequency Range	800~960Mhz / 1710~2170Mhz	806~960Mhz / 1710~2500Mhz
Gain	7dBi / dBi	10dBi / 11dBi
VSWR/50Ω	≤ 1.5	
Horizontal Beamwidth	70º / 60º	
Vertical Beamwidth	55º / 45º	
Front To Back Ratio	> 23dBi	> 18dBi
Polarization	Vertical	
Maximum Input Power	50W	
Connector	N-Female or Customization	
Lightning Protection	Direct Ground	

MECHANICAL SPECIFICATION	
Dimensions (mm) (LxWxH)	210 x 180 x 44
Antenna Mount	Wall Mount Kits
Weight of Antenna	0.6kg
Weight of Insulation	0.05kg
Radome Meterial	UV Protected ABS
Rated Wind Speed	20km/H
Operational Temperature	PS
Radome Color	Ivory White
Operational Temperature	-20ºC~70ºC

Ordering Information

Description	Part Number
0.8-2.5GHz 7dBi Wide Band Wall Mount Antenna	LTBG-08/22-7

DIRECTIONAL COUPLER

GENERAL SPECIFICATION

Coupler Type	Couplering Loss	Distribution Loss	Insertion Loss dB Max	Weight (g)
5dB	5 ± 0.6dB	1.65dB	≤0.15dB	250
6dB	6 ± 0.6dB	1.25dB	≤0.15dB	250
10dB	10 ± 0.8dB	0.45dB	≤0.15dB	250
15dB	15 ± 0.8dB	0.15dB	≤0.15dB	250
20dB	20 ± 1.0dB	-	≤0.15dB	250
30dB	30 ± 1.5dB	-	≤0.15dB	250
40dB	40 ± 1.5dB	-	≤0.15dB	250

MECHANICAL SPECIFICATION

Material	
Inner Conductor	Beryllium Copper or Spring Bronze
Other Metal Parts (Housing)	Alum or Copper
Plating	
Inner Conductor	Silver Plated
Outer Conductor	Nickle Plated
Other Metal Parts	Plated

PHYSICAL SPECIFICATION

Operating Temperature	-35ºC ~ +65ºC
Connector Input	N Female
Connector Output	N Female

ELECTRICAL SPECIFICATION

Frequency	800 ~ 2500 MHz
VSWR Input (all ports)	1.2:1 Max.
Directivity	≥ 20dB
Power Max	200W
IPD	-143dBc, 2x43dBm
Connector	N Type Female
Impedance	50Ω

Ordering Information

Description	Part Number
5dB Directional Coupler	LTOH-08/25-5-200
6dB Directional Coupler	LTOH-08/25-6-200
10dB Directional Coupler	LTOH-08/25-10-200
15dB Directional Coupler	LTOH-08/25-15-200
20dB Directional Coupler	LTOH-08/25-20-200
30dB Directional Coupler	LTOH-08/25-30-200
40dB Directional Coupler	LTOH-08/25-10-200

GENERAL SPECIFICATION

Splitter Type	Distribution Loss	Inband Ripple	Weight (g)
2 Way	3.00dB	≤ +0.25dB	455
3 Way	4.80dB	≤ +0.30dB	510
4 Way	6.00dB	≤ +0.40dB	550

MECHANICAL SPECIFICATION

Material	
Inner Conductor	Beryllium Copper or Spring Bronze
Other Metal Parts (Housing)	Aluminium
Plating	
Inner Conductor	Silver Plated
Outer Conductor	Nickle Plated
Other Metal Parts	Plated

ELECTRICAL SPECIFICATION

Frequency	800 ~ 2500 MHz
VSWR Input (all ports)	≤ 1.20dB
Isolation	≥ 22dB
PIM	-140dBc, 2x43dBm
Input Power	200W
Impedance	50Ω / Norminal

PHYSICAL SPECIFICATION

Operating Temperature	-35ºC ~ +55ºC
Connector Input	N Female
Connector Output	N Female

Ordering Information

Description	Part Number
2 Way Power Splitter	LTGF-08/25-2-200
3 Way Power Splitter	LTGF-08/25-3-200
4 Way Power Splitter	LTGF-08/25-4-200

CAVITY POWER SPLITTER

GENERAL SPECIFICATION

Splitter Type	Split Loss	Weight (g)
2 Way	3.00dB	380
3 Way	4.80dB	440
4 Way	6.00dB	470

MECHANICAL SPECIFICATION

Material	
Inner Conductor	Beryllium Copper or Spring Bronze
Other Metal Parts (Housing)	Aluminium
Plating	
Inner Conductor	Silver Plated
Outer Conductor	Nickle Plated
Other Metal Parts	Plated

ELECTRICAL SPECIFICATION

Frequency	800 ~ 2500 MHz
VSWR Input (all ports)	1:2:1 Max
Isolation	0.1 MAX
PIM	-150dBc, 2x43dBm
Input Power	300W
Impedance	50Ω / Norminal

PHYSICAL SPECIFICATION

Operating Temperature	-35ºC ~ +75ºC
Connector Input	N Female
Connector Output	N Female

Ordering Information

Description	Part Number
2 Way Cavity Power Splitter Waterproof	LTGF-08/25W-02-200
3 Way Cavity Power Splitter Waterproof	LTGF-08/25W-03-200
4 Way Cavity Power Splitter Waterproof	LTGF-08/25W-04-200

CAVITY POWER SPLITTER (WATERPROOF)

1-2 Watt

10 Watt

20 Watt

50 Watt

100 Watt

	1-2 Watt	10 Watt	20 Watt	50 Watt	100 Watt
Tolerance	0.5dB	1.0dB	1.0dB	0.8dB	1dB
Attenuation	1-30dB	1-30dB	1-30dB	1-30dB	5-60dB
Weight	50g	100g	339g	339	1700g
Connector-Input	N Female	N Female	N Female	N Female	N Female
Connector-Output	N Male	N Male	N Male	N Male	N Male
Dimension (mm)	55 x 20	69 x ø20	70 x ø34	70 x ø55	150 x 80

GENERAL SPECIFICATION		PLATING		MATERIAL	
Operating Frequency	DC~3000MHZ	Inner Conductor	Silver Plated	Inner Conductor	Beryllium Copper or Spring Bronze
VSWR	1:1.3/MAX	Outer Conductor	Nickel Plated		
Impedance	50 ¤/Norminal	Other Metal Part	Black/- Plated	Other Metal Part (Housing)	Aluminium
Operating Temperature	-40°C ~ +80°C				

Ordering Information

Description	Part Number
1-2 Watt	LTRF-A(1-30)-1/2-W
10 Watt	LTRF-A(1-30)-10-W
20 Watt	LTRF-A(1-30)-20-W
50 Watt	LTRF-A(1-30)-50-W
100 Watt	LTRF-A(1-30)-100-W

ATTENUATOR & TERMINATOR

	1-5 Watt	10 Watt	20-30 Watt	50 Watt	100 Watt
Tolerance	-	-	-	-	-
Attenuation	-	-	-	-	-
Weight	-	50g	10g	-	1700g
Connector-Input	N Male	N Male	N Male	N Male	N Male
Connector-Output	-	-	-	-	-
Dimension (mm)	43.5 x ø20	77 x ø20	62 x ø48	110 x ø58	150mm x 80

GENERAL SPECIFICATION		PLATING		MATERIAL	
Operating Frequency	DC~3000MHZ	Inner Conductor	Silver Plated	Inner Conductor	Beryllium Copper or Spring Bronze
VSWR	1:1.3/MAX	Outer Conductor	Nickel Plated		
Impedance	50 ¤/Norminal	Other Metal Part	Black/- Plated	Other Metal Part (Housing)	Aluminium
Operating Temperature	-40°C ~ +80°C				

1-5 Watt

10 Watt

20-30 Watt

50 Watt

100 Watt

Ordering Information

Description	Part Number
1-5 Watt	LTRF-T(1-30)-1/5-W
10 Watt	LTRF-T(1-30)-10-W
20-30 Watt	LTRF-T(1-30)-20/30-W
50 Watt	LTRF-T(1-30)-50-W
100 Watt	LTRF-T(1-30)-100-W

RF HYBRID ADAPTER

Litech RF Hybrid Adapter Kit contains all common used hybrid interface for RF applications. Which provide best solutions for RF testing on different interface.

SMA Male to SMA Male
LTRF-A38-A38

SMA Female to SMA Female
LTRF-A39-A39

SMA Male to SMA Female
LTRF-A38-A39

SMA Male to N Female
LTRF-A38-839

SMA Female to N Female
LTRF-A39-839

SMA Male to BNC Male
LTRF-A38-338

SMA Female to BNC Male
LTRF-A39-338

SMA Male to BNC Female
LTRF-A38-339

SMA Female to BNC Female
LTRF-A39-339

SMA Female to N Male
LTRF-A39-838

SMA Male to N Male
LTRF-A38-838

BNC Male to BNC Male
LTRF-338-338

BNC Male to N Male
LTRF-338-838

BNC Male to N Female
LTRF-338-839

BNC Male to BNC Female
LTRF-338-339

BNC Female to N Male
LTCN-339-838

BNC Female to N Female
LTRF-339-839

N Male to N Female
LTRF-838-839

N Female to N Female
LTRF-839-839

N Male to N Male
LTRF-838-838

N Male to 7/16 Male
LTRF-838-738

N Male to 7/16 Female
LTRF-838-739

N Female to 7/16 Male
LTRF-839-738

N Female to 7/16 Female
LTRF-839-739

7/16 Female to 7/16 Female
LTRF-739-739

7/16 Male to 7/16 Male
LTRF-738-738

7/16 Male to 7/16 Male
LTRF-738-739

NOMINAL ATTENUATION	
at 1 MHz	0.63 dB / 100m
at 10 MHz	2.0 dB / 100m
at 30 MHz	3.6 dB / 100m
at 100 MHz	7.0 dB / 100m
at 300 MHz	12.5 dB / 100m
at 1000 MHz	27.2 dB / 100m

INSULATION	
Inner conductor material	Bare copper
No. of wire	7
Diameter of individual wire	0.724 mm
Insulation material	Solid polyethylene
Nominal thickness	2.50 mm
Diameter over insulation	7.2mm ± 0.2mm

SHEATH	
Sheath material	PVC
Nominal thickness	1.1 mm
Colour	Black
Overall diameter	10.3mm ± 0.2mm
Approx. weight of cable	160 kg/km
Characteristics Impedance	52 ± 2
Nominal Capacitance	97 nF/km

SHIELD / BRAIDING	
Braiding material	Plain copper
Nominal wire diameter	0.18 mm
No. of wire per carrier	8 or 12
No. of carrier	24 or 16

Ordering Information

Description	Part Number
Coaxial Cable RG 8	LTCB-22

IF CABLE
COAXIAL CABLE
RG8 & RG11

CONSTRACTION SPECIFICATION		
Inner Conductor	Solid BCCAI	2.74
Dielectric	Physical Foam Polyethylene	7.24
Outer Conductor	Bonded Aluminum Foil + Tinned Copper Braids	8.13
Jacket	Black PVC or Polyethylene	10.29

ATTENUATION AND AVG. POWER (20°C)

Frequency (MHz)	Attenuation (≤dB/100m)	Avg. Power (KW)
30	2.20	3.33
50	2.90	2.60
150	5.00	1.50
220	6.10	1.20
450	8.90	0.83
900	12.80	0.44
1500	16.80	0.40
1800	18.60	0.37
2000	19.60	0.33
2500	22.20	0.29
5800	35.50	0.21

ELECTRICAL SPECIFICATION	
Capacitance (pF/m)	78.4
Impedance (ohm)	50
Velocity (%)	85
Inner Conductor DC Resistance (ohm/km)	4.56
Outer Conductor DC Resistance (ohm/km)	5.41
Shielding Effectiveness (dB)	>95%

MECHANICAL AND ENVIRONMENT SPECIFICATION	
Mid Bend Radius (mm)	25.4
Storage Temp. (°C)	-70 to + 85
Installation Temp. (°C)	-40 to + 85
Operating Temp. (°C)	-40 to + 85

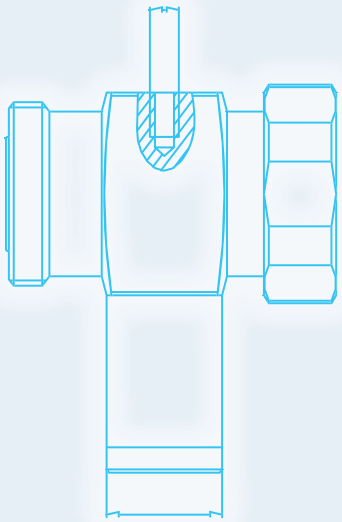
Ordering Information

Description	Part Number
Coaxial Cable LMR-400	LTCB-23

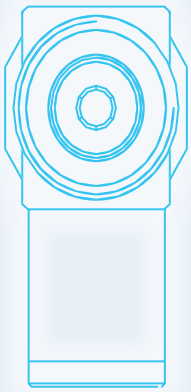
N Type

7/16 Type

EMP SURGE PROTECTOR



GENERAL SPECIFICATION	
Application	Mobile Telecom BTS
Interface Method	Series
Impedance (ohm)	50
Frequency Range (MHz)	800~2200
Insertion Loss (dB)	≤ 0.15
VSWR	≤ 1.15
Through -Current Capacity (8/20ms)	50kA
Residual Voltage	≤ 10V
Maximum Transmission Power	2000W
Operating Temperature	-60ºC ~ 100ºC
Relative Humidity	≤ 95%
Dimension	100*88*37
Connector	N, DIN 7/16



Ordering Information

Description	Part Number
EMP Arrestor - N Type	LTBL-08/22-N
EMP Arrestor - 7/16 DIN Type	LTBL-08/22-DIN

FEEDER CLAMP

RG 8/213

1/2”

7/8”

1 1/4

1 5/8”

LITECH feeder clamp are designed to hold and organize multiple runs of feeder cables in single bracket. Each clamp is design to have a firm grip over the cables without affecting the performance of the cable. The clamps are stacked together by the use of stainless steel threaded rod. Future expansions are permissible by allocating space on the threaded rod to add on clamps for additional cable without installing additional bracket.

Fit for variety of RF feeder cable type: 1/2", 7/8", 1-1/4", 1-5/8" including Andrew (HELIAX, RADIAX), RFS (CELLFLEX), Leoni (FlexLine), Acome, LS cable (LHF, HFC, HFAC, HFSC series), Draka and etc. Clamp type (feed through holes): Single, Double, Triple, and Quadruple. These clamps are stacked by the use of stainless steel rod, which can accommodate additional clamps.

TECHNICAL SPECIFICATION	
Clamp Meterial	Polypropalene with thermal and UV resistance
Inner Conductor	4.5 mm Stainless Steel
Other Metal Parts (Housing)	8mm, 10mm or 3/8" stainless steel
Plating	Stainless steel
Inner Conductor	10.30mm O.D cable (RG8/RG213/LMR400), 1/2", 7/8", 1 1/4", 1 5/8"

Ordering Information

Description	Part Number
RF Feeder Clamp RG8 2 in 1	LTRF-FED-22-2
RF Feeder Clamp RG8 3 in 1	LTRF-FED-22-3
RF Feeder Clamp 1/2" 2 in 1	LTRF-FED-03-2
RF Feeder Clamp 1/2" 3 in 1	LTRF-FED-03-3
RF Feeder Clamp 7/8" 2 in 1	LTRF-FED-05-2
RF Feeder Clamp 7/8" 3 in 1	LTRF-FED-05-3
RF Feeder Clamp 1 1/4" 2 in 1	LTRF-FED-06-2
RF Feeder Clamp 1 1/4" 3 in 1	LTRF-FED-06-3
RF Feeder Clamp 1 5/8" 2 in 1	LTRF-FED-07-2
RF Feeder Clamp 1 5/8" 3 in 1	LTRF-FED-07-3

Small Universal

RG 8/213

1/2”

GROUNDING KIT

LITECH RF Ground Kits facilitate easy installation with a pre-formed copper clamp that eliminates the needs for a coiling tool and prevents over tightening. These kits are designed to protect RF cable and the equipments connected to it from the damage triggered by lighting current in excess of 200 kA. In according to that, a fine grounding system completion will draw off electrical noise leaving a cleaner signal traveling throughout the feeder cable.

7/8”

1 1/4

1 5/8”

Wave Guide

GENERAL SPECIFICATION	
Grounding Kit Type	Universal Grounding Kits
Color	Black
Bonding Conductor Material Type	Copper
Bonding Conductor Jacketing Material Type	PE
Grounding Strap Material Type	Copper
Lug Attachment	Factory attached
Lug Type	Two-hole lug
Weatherproofing Method	Rubber sealing putty and electric tape
Operational temperature	-30°C to +125°C

Ordering Information

Description	Part Number
RF Grounding Kit RG 8/213	LTRF-GK-22
RF Grounding Kit 1/2”	LTBL-GK-03
RF Grounding Kit 7/8”	LTBL-GK-05
RF Grounding Kit 1 1/4”	LTBL-GK-06
RF Grounding Kit 1 5/8”	LTBL-GK-07
RF Grounding Kit Wave Guide	LTBL-GK-WG
RF Grounding Kit Small Universal	LTBL-GK-SU

Kit Includes:
- Grounding kit
- 2 x M10 stainless steel screw
- 1 x 16mm2 Lug
- 1 x 3M 1710 Vinyl electrical tape
- 1 x Rubber sealing putty tape

INSTALLATION ACCESSORIES

Insulation tape

Cabel tie

Grounding Cable

Cable Gland

Grounding Busbar

Cable Lug

C-Clamp

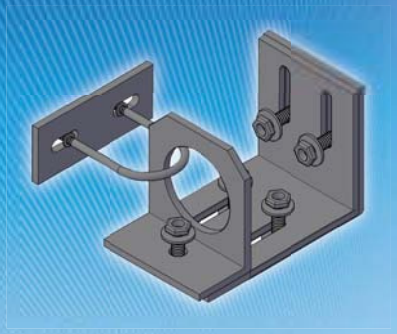
Gantry Plugs

Heat Shrink Tubes

Power Cable

Tower Fastener

Pipe Fastener

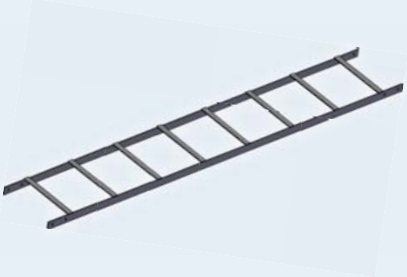


Antenna Mounting Materials

Tripod

Wall Mounted Pole

T Type Bracket



Cable Ladder

Climbing Step

Floor Support Bracket

ANTENNA MOUNTING BRACKET

Threadber

Cable Inlet Plate

Tripod Stiffener

Boom