



## 1/4" Foam-Dielectric Coaxial Cable Corrugated Copper – 50 Ohm

ITEM NUMBER	DESCRIPTION
EC1-50	Low Loss Cable, standard jacket
EC1-50-HLFR	Low Loss Cable, fire retardant, halogen free jacket

### CONSTRUCTION

- **Inner conductor**
  - Material copper clad aluminum
  - Diameter, in (mm) 0.094 (2.4)
- **Dielectric**
  - Material microcell gas-injected PE
  - Diameter, in (mm) 0.256 (6.5)
- **Outer conductor**
  - Material corrugated copper
  - Diameter, in (mm) 0.295 (7.5)
- **Outer sheath**
  - Material Durathene™
  - Thickness, in (mm) 0.043 (1.1)
  - Diameter, in (mm) 0.382 (9.7)

### MECHANICAL CHARACTERISTICS

- **Minimum bending radius**
  - a) Single bending, in (cm) 1.2 (3)
  - b) 15 repeated bends, in (cm) 3.1 (8)
- **Maximum pulling strength, lb (kg) 88 (40)**
- **Recommended temperature range**
  - Storage -94 to +185°F (-70 to +85°C)
  - Installation -40 to +140°F (-40 to +60°C)
  - Operation -67 to +185°F (-55 to +85°C)
- **Maximum length per hoisting grip, ft (m) 230 (70)**
- **Maximum hanger spacing, ft (m) —**
- **Flat plate crush resistance, lb/in (kg/mm) 45 (0.8)**
- **Bending moment, lb-ft (N•m) 1.1 (1.5)**
- **Weight, lb/ft (kg/m) 0.07 (0.11)**

### ELECTRICAL CHARACTERISTICS

- **Characteristic impedance, 50 ± 1**
- **Nominal capacitance, pF/ft (pF/m) 25 (82)**
- **Relative propagation velocity, % 82**
- **Inductance, μH/ft (μH/m) 0.061 (0.20)**
- **DC-resistance at 68°F (20°C)**
  - Inner conductor, /1000 ft (/1000 m) 1.78 (5.85)
  - Outer conductor, /1000 ft (/1000 m) 1.01 (3.30)
- **RF peak voltage, kV 0.83**
- **RF peak power, kW 6.9**
- **Cut-off frequency, GHz 18.6**
- **Insulation resistance, M /km ≥5000**

### ELECTRICAL CHARACTERISTICS

Frequency (MHz)	Attenuation at 68°F (20°C)*		Mean power rating** (kW)
	(dB/100 ft)	(dB/100m)	
10	0.406	1.33	5.64
20	0.576	1.89	3.98
30	0.708	2.32	3.24
50	0.918	3.01	2.50
88	1.23	4.02	1.87
100	1.31	4.29	1.75
108	1.36	4.46	1.68
150	1.61	5.29	1.42
174	1.74	5.71	1.32
200	1.87	6.14	1.23
300	2.31	7.58	0.99
400	2.69	8.81	0.85
450	2.86	9.38	0.80
500	3.02	9.91	0.76
512	3.06	10.0	0.75
600	3.33	10.9	0.69
700	3.61	11.9	0.63
800	3.88	12.7	0.59
824	3.94	12.9	0.58
894	4.12	13.5	0.56
960	4.28	14.0	0.54
1000	4.38	14.4	0.52
1250	4.94	16.2	0.46
1500	5.46	17.9	0.42
1700	5.85	19.2	0.39
1800	6.03	19.8	0.38
2000	6.39	21.0	0.36
2100	6.57	21.6	0.35
2200	6.74	22.1	0.34
2300	6.91	22.7	0.33
3000	8.02	26.3	0.29
3400	8.62	28.3	0.27
4000	9.45	31.0	0.24
5000	10.8	35.3	0.21
6000	12.0	39.3	0.19

\* Nominal values

\*\* Ambient temperature = 104°F (40°C); temperature of inner conductor = 212°F (100°C); VSWR = 1.0; no solar loading