

# Product Specifications



## LDF2-50

LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket



## CHARACTERISTICS

### Construction Materials

Jacket Material	PE
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black
Outer Conductor Material	Corrugated copper

### Dimensions

Nominal Size	3/8 in
Cable Weight	0.08 lb/ft
Diameter Over Dielectric	0.340 in   8.636 mm
Diameter Over Jacket	0.440 in   11.176 mm
Inner Conductor OD	0.120 in   3.048 mm
Outer Conductor OD	0.380 in   9.652 mm

### Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	23 pF/ft   7546 pF/m
dc Resistance, Inner Conductor	1.060 ohms/kft
dc Resistance, Outer Conductor	0.870 ohms/kft
dc Test Voltage	4000 V
Inductance	0.058 $\mu$ H/ft   0.190 $\mu$ H/m
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 13000 MHz
Peak Power	15.6 kW
Pulse Reflection	0.5%
Velocity	88%

### Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)

### Mechanical Specifications

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Bending Moment	1.4 ft lb   1.9 N·m
Flat Plate Crush Strength	110.0 lb/in
Minimum Bend Radius, Multiple Bends	3.75 in   95.25 mm
Minimum Bend Radius, Single Bend	1.60 in   40.64 mm
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	250 lb   113 kg

## Standard Conditions

Attenuation, Ambient Temperature	68 °F   20 °C
Average Power, Ambient Temperature	104 °F   40 °C
Average Power, Inner Conductor Temperature	212 °F   100 °C

## Attenuation

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.072	0.235	15.60
1	0.101	0.332	15.60
1.5	0.124	0.407	15.60
2	0.143	0.471	15.60
10	0.323	1.059	7.28
20	0.458	1.503	5.13
30	0.563	1.847	4.17
50	0.73	2.397	3.22
88	0.976	3.203	2.41
100	1.043	3.421	2.25
108	1.085	3.559	2.17
150	1.286	4.219	1.83
174	1.389	4.558	1.69
200	1.494	4.901	1.57
300	1.847	6.062	1.27
400	2.151	7.057	1.09
450	2.29	7.513	1.03
500	2.422	7.947	0.97
512	2.453	8.048	0.96
600	2.67	8.761	0.88
700	2.901	9.519	0.81
800	3.119	10.232	0.75
824	3.169	10.398	0.74
894	3.313	10.869	0.71
960	3.444	11.299	0.68
1000	3.521	11.554	0.67
1250	3.98	13.059	0.59
1500	4.403	14.446	0.53
1700	4.721	15.49	0.50
1800	4.875	15.994	0.48
2000	5.172	16.97	0.45

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2100	5.316	17.443	0.44
2200	5.458	17.908	0.43
2300	5.597	18.365	0.42
2500	5.869	19.257	0.40
2700	6.133	20.122	0.38
3000	6.515	21.376	0.36
3400	7.003	22.978	0.34
4000	7.699	25.26	0.31
5000	8.781	28.809	0.27
6000	9.79	32.121	0.24
8000	11.656	38.244	0.20
10000	13.378	43.894	0.18
12000	14.998	49.209	0.16

## Regulatory Compliance/Certifications

**Agency**  
RoHS 2002/95/EC

**Classification**  
Compliant

