



LDF 1-50

LDF1-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket

Construction Materials

Jacket Material PE

Outer Conductor Material Corrugated copper

Dielectric Material Foam PE Flexibility Standard

Inner Conductor Material Copper-clad aluminum wire

Jacket Color Black

Dimensions

Nominal Size 1/4 in

 Cable Weight
 0.06 lb/ft | 0.09 kg/m

 Diameter Over Dielectric
 6.858 mm | 0.270 in

 Diameter Over Jacket
 8.763 mm | 0.345 in

 Inner Conductor OD
 2.5400 mm | 0.1000 in

 Outer Conductor OD
 7.874 mm | 0.310 in

Electrical Specifications

Cable Impedance 50 ohm ±1 ohm

Capacitance 23.4 pF/ft | 76.8 pF/m

dc Resistance, Inner Conductor 1.570 ohms/kft | 5.151 ohms/km dc Resistance, Outer Conductor 1.220 ohms/kft | 4.003 ohms/km

5000 V

dc Test Voltage 2200 V

Inductance $0.194 \mu H/m \mid 0.059 \mu H/ft$

Insulation Resistance 100000 Mohms•km

Jacket Spark Test Voltage (rms)

Operating Frequency Band 1 – 15800 MHz Peak Power 12.1 kW

Velocity 86%

Environmental Specifications

Installation Temperature $-40 \,^{\circ}\text{C}$ to $+60 \,^{\circ}\text{C}$ ($-40 \,^{\circ}\text{F}$ to $+140 \,^{\circ}\text{F}$)

Operating Temperature $-55 \,^{\circ}\text{C}$ to $+85 \,^{\circ}\text{C}$ ($-67 \,^{\circ}\text{F}$ to $+185 \,^{\circ}\text{F}$)

Storage Temperature $-70 \,^{\circ}\text{C}$ to $+85 \,^{\circ}\text{C}$ ($-94 \,^{\circ}\text{F}$ to $+185 \,^{\circ}\text{F}$)

General Specifications

Brand HELIAX®

Mechanical Specifications

Bending Moment 1.4 N-m | 1.0 ft lb
Flat Plate Crush Strength 80.0 lb/in | 1.4 kg/mm
Minimum Bend Radius, Multiple Bends 76.20 mm | 3.00 in
Minimum Bend Radius, Single Bend 38.10 mm | 1.50 in



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Number of Bends, minimum 15 Number of Bends, typical 30

Tensile Strength 91 kg | 200 lb

Note

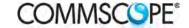
Performance Note Values typical, unless otherwise stated

Standard Conditions

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

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
806-960 MHz	1.15	23.00
1700-2000 MHz	1.15	23.00



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Attenuation

Frequency (MHz) 0.5	Attenuation (dB/100 m) 0.278	Attenuation (dB/100 ft) 0.085	Average Power (kW) 12.10
1	0.394	0.12	12.10
1.5	0.483	0.147	12.10
2	0.558	0.17	12.10
	1.254	0.382	5.83
10 20	1.781	0.543	4.11
30	2.188	0.667	3.34
50	2.838	0.865	2.58
85	3.724	1.135	1.96
88	3.791	1.156	1.93
100	4.049	1.234	1.81
108	4.213	1.284	1.74
150	4.993	1.522	1.47
174	5.392	1.644	1.36
200	5.798	1.767	1.26
204	5.858	1.785	1.25
300	7.168	2.185	1.02
400	8.342	2.543	0.88
450	8.88	2.706	0.82
500	9.391	2.862	0.78
512	9.511	2.899	0.77
600	10.351	3.155	0.71
700	11.244	3.427	0.65
800	12.084	3.683	0.61
824	12.278	3.742	0.60
894	12.833	3.911	0.57
960	13.339	4.066	0.55
1000	13.639	4.157	0.54
1218	15.192	4.63	0.48
1250	15.41	4.697	0.47
1500	17.04	5.194	0.43
1700	18.266	5.567	0.40
1800	18.858	5.748	0.39
2000	20.003	6.097	0.37
2100	20.559	6.266	0.36
2200	21.104	6.432	0.35
2300	21.64	6.596	0.34
2500	22.686	6.914	0.32
2700	23.701	7.224	0.31
3000	25.171	7.672	0.29
3400	27.048	8.244	0.27
3700	28.403	8.657	0.26
4000	29.719	9.058	0.25
5000	33.871	10.323	0.22
6000	37.742	11.503	0.19
8000	44.888	13.681	0.16
8800	47.579	14.501	0.15
10000	51.475	15.689	0.14
12000	57.664	17.575	0.13
14000	63.552	19.37	0.12
15800	68.646	20.922	0.11

^{*} Values typical, guaranteed within 5%



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Regulatory Compliance/Certifications

RoHS 2011/65/EU

China RoHS SJ/T 11364-2006 ISO 9001:2008 **Classification**Compliant

Below Maximum Concentration Value (MCV)

Designed, manufactured and/or distributed under this quality management system



