Product Specifications

ANDREW®
A CommScope Company

LDF1-50

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



CHARACTERISTICS

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	8.890 mm | 0.350 in
Inner Conductor OD	2.540 mm | 0.100 in
Outer Conductor OD	7.874 mm | 0.310 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	23 pF/ft | 77 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
dc Test Voltage	3000 V
Inductance	0.194 µH/m | 0.059 µH/ft
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 15800 MHz
Peak Power	12.1 kW
Pulse Reflection	0.5%
Velocity	86%

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)

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Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °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
Number of Bends, minimum	15
Number of Bends, typical	30
Tensile Strength	91 kg | 200 lb

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

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

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.278	0.085	12.10
1	0.394	0.12	12.10
1.5	0.483	0.147	12.10
2	0.558	0.17	12.10
10	1.254	0.382	5.83
20	1.781	0.543	4.11
30	2.188	0.667	3.34
50	2.838	0.865	2.58
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
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

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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
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

Regulatory Compliance/Certifications

Agency	**Classification**
RoHS 2002/95/EC	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)



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