



IDF4-50A

LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 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
 1/2 in

 Cable Weight
 0.15 lb/ft | 0.22 kg/m

 Diameter Over Dielectric
 12.954 mm | 0.510 in

 Diameter Over Jacket
 15.875 mm | 0.625 in

 Inner Conductor OD
 4.8260 mm | 0.1900 in

Outer Conductor OD 4.8260 mm | 0.1900 i

Electrical Specifications

Cable Impedance 50 ohm ±1 ohm

Capacitance 23.1 pF/ft | 75.8 pF/m

dc Resistance, Inner Conductor0.450 ohms/kft| 1.480 ohms/kmdc Resistance, Outer Conductor0.820 ohms/kft| 2.690 ohms/km

dc Test Voltage 4000 V

Inductance 0.190 μ H/m | 0.058 μ H/ft

100000 Mohms•km

8000 V

Jacket Spark Test Voltage (rms)

Insulation Resistance

Operating Frequency Band 1 – 8800 MHz
Peak Power 40.0 kW
Velocity 88%

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®

Ordering Note CommScope® standard product (Global)

Mechanical Specifications

Bending Moment 3.8 N-m | 2.8 ft lb Flat Plate Crush Strength 110.0 lb/in | 2.0 kg/mm



LDF4-50A

Minimum Bend Radius, Multiple Bends 127.00 mm | 5.00 in Minimum Bend Radius, Single Bend 50.80 mm | 2.00 in

Number of Bends, minimum 15 Number of Bends, typical 50

Tensile Strength 113 kg | 250 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)
680-800 MHz	1.13	24.30
800-960 MHz	1.13	24.30
1700-2200 MHz	1.13	24.30
2300-2700 MHz	1.13	24.30



LDF4-50A

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.149	0.045	40.00
L	0.211	0.064	36.11
1.5	0.259	0.079	29.46
2	0.299	0.091	25.50
10	0.672	0.205	11.35
20	0.954	0.291	7.99
30	1.172	0.357	6.51
50	1.521	0.463	5.02
35	1.995	0.608	3.82
38	2.031	0.619	3.76
100	2.169	0.661	3.52
108	2.256	0.688	3.38
150	2.673	0.815	2.85
174	2.887	0.88	2.64
200	3.103	0.946	2.46
204	3.135	0.956	2.43
300	3.835	1.169	1.99
100	4.462	1.36	1.71
450 450	4.749	1.447	1.61
500	5.021	1.53	1.52
512	5.085	1.55	1.50
500	5.533	1.686	1.38
700	6.009	1.831	1.27
300	6.456	1.968	1.18
324	6.56	1.999	1.16
394	6.855	2.089	1.11
960	7.124	2.171	1.07
1000	7.284	2.22	1.05
1218	8.11	2.472	0.94
1250	8.226	2.507	0.93
1500	9.093	2.771	0.84
1700	9.744	2.97	0.78
1800	10.058	3.066	0.76
2000	10.666	3.251	0.72
2100	10.961	3.341	0.70
2200	11.251	3.429	0.68
2300	11.535	3.516	0.66
2500	12.09	3.685	0.63
2700	12.627	3.849	0.60
3000	13.407	4.086	0.57
3400	14.401	4.389	0.53
3700	15.118	4.608	0.50
1000	15.815	4.82	0.48
5000	18.01	5.489	0.42
5000	20.055	6.113	0.38
3000	23.826	7.262	0.32
3800	25.244	7.694	0.30

^{*} Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency

Classification



LDF4-50A

RoHS 2011/65/EU China RoHS SJ/T 11364-2006 ISO 9001:2008 Compliant
Below Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system



