

# LDF4-50A



LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket (Halogen free jacketing non-fire-retardant)

## Product Classification

<b>Brand</b>	HELIAX®
<b>Product Series</b>	LDF4-50A
<b>Product Type</b>	Coaxial wireless cable

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	Fca
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## Construction Materials

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

## Dimensions

<b>Nominal Size</b>	1/2 in
<b>Cable Weight</b>	0.15 lb/ft   0.22 kg/m
<b>Diameter Over Dielectric</b>	12.954 mm   0.510 in
<b>Diameter Over Jacket</b>	15.875 mm   0.625 in
<b>Inner Conductor OD</b>	4.8260 mm   0.1900 in
<b>Outer Conductor OD</b>	13.970 mm   0.550 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	23.1 pF/ft   75.8 pF/m
<b>dc Resistance, Inner Conductor</b>	0.450 ohms/kft   1.480 ohms/km
<b>dc Resistance, Outer Conductor</b>	0.820 ohms/kft   2.690 ohms/km
<b>dc Test Voltage</b>	4000 V
<b>Inductance</b>	0.190 $\mu$ H/m   0.058 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 Mohms•km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	1 – 8800 MHz
<b>Peak Power</b>	40.0 kW

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**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)

## General Specifications

**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  
**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
3400–3800 MHz	1.25	19.00

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.149	0.045	40.00
1	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
85	1.995	0.608	3.82
88	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
400	4.462	1.36	1.71
450	4.749	1.447	1.61
460	4.804	1.464	1.59
460	4.804	1.464	1.59
500	5.021	1.53	1.52
512	5.085	1.55	1.50
600	5.533	1.686	1.38
700	6.009	1.831	1.27
800	6.456	1.968	1.18
824	6.56	1.999	1.16
894	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
1794	10.039	3.06	0.76
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
3600	14.882	4.536	0.51

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3700	15.118	4.608	0.50
3800	15.353	4.679	0.50
3900	15.585	4.75	0.49
4000	15.815	4.82	0.48
4100	16.042	4.889	0.48
4200	16.268	4.958	0.47
4300	16.492	5.027	0.46
4400	16.714	5.094	0.46
4500	16.934	5.161	0.45
4600	17.153	5.228	0.44
4700	17.37	5.294	0.44
4800	17.585	5.36	0.43
4900	17.798	5.425	0.43
5000	18.01	5.489	0.42
6000	20.055	6.113	0.38
8000	23.826	7.262	0.32
8800	25.244	7.694	0.30

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

CENELEC

### Classification

Compliant

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

Above Maximum Concentration Value (MCV)

EN 50575 compliant, Declaration of Performance (DoP) available

