

# LDF4RK-50A



LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d1,a1 (CPR testing is conducted annually please reference the website for latest classification)

## Product Classification

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

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	B2ca   s1a   d1   a1
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## Construction Materials

<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<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>	0.17 lb/ft   0.25 kg/m
<b>Diameter Over Dielectric</b>	12.954 mm   0.510 in
<b>Diameter Over Jacket</b>	16.002 mm   0.630 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 ±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 µH/m   0.058 µH/ft
<b>Insulation Resistance</b>	100000 Mohms•km
<b>Jacket Spark Test Voltage (rms)</b>	5000 V
<b>Operating Frequency Band</b>	1 – 8800 MHz

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<b>Peak Power</b>	40.0 kW
<b>Velocity</b>	88 %

## Environmental Specifications

<b>Installation Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)

## General Specifications

<b>Ordering Note</b>	CommScope® standard product in Asia Pacific   CommScope® standard product in Europe, the Middle East, and Africa
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## Mechanical Specifications

<b>Bending Moment</b>	3.8 N-m   2.8 ft lb
<b>Fire Retardancy Test Method</b>	NFPA 130-2010   UL 1666/CATVR/CMR
<b>Flat Plate Crush Strength</b>	110.0 lb/in   2.0 kg/mm
<b>Minimum Bend Radius, Multiple Bends</b>	127.00 mm   5.00 in
<b>Minimum Bend Radius, Single Bend</b>	50.80 mm   2.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	50
<b>Smoke Index Test Method</b>	IEC 61034
<b>Tensile Strength</b>	113 kg   250 lb
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

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

## Return Loss/VSWR

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
680–800 MHz	1.13	24.30
800–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30
2300–2700 MHz	1.13	24.30

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## 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

UL/ETL Certification  
RoHS 2011/65/EU  
ISO 9001:2015  
China RoHS SJ/T 11364-2014  
CENELEC

### Classification

CATVR/CMR  
Compliant  
Designed, manufactured and/or distributed under this quality management system  
Below Maximum Concentration Value (MCV)  
EN 50575 compliant, Declaration of Performance (DoP) available

