

# LDF2RK-50

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LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket, B2ca s1a d1 a1 Compliant

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	LDF2-50

## General Specifications

<b>Product Number</b>	520098902/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	8.636 mm   0.34 in
<b>Diameter Over Jacket</b>	11.176 mm   0.44 in
<b>Inner Conductor OD</b>	3.048 mm   0.12 in
<b>Outer Conductor OD</b>	9.652 mm   0.38 in
<b>Nominal Size</b>	3/8 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	75 pF/m   22.86 pF/ft
<b>dc Resistance, Inner Conductor</b>	3.478 ohms/km   1.06 ohms/kft
<b>dc Resistance, Outer Conductor</b>	2.854 ohms/km   0.87 ohms/kft
<b>dc Test Voltage</b>	2500 V
<b>Inductance</b>	0.19 µH/m   0.058 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	6000 V
<b>Operating Frequency Band</b>	1 – 13000 MHz
<b>Peak Power</b>	16.6 kW

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Velocity

85 %

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.201	20.79
1700–2200 MHz	1.201	20.79
2200–2700 MHz	1.433	14.99

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.332	0.101	16.6
1.5	0.407	0.124	16.6
2.0	0.471	0.143	16.38
10.0	1.059	0.323	7.28
20.0	1.503	0.458	5.13
30.0	1.847	0.563	4.17
50.0	2.397	0.73	3.22
85.0	3.146	0.959	2.45
88.0	3.203	0.976	2.41
100.0	3.421	1.043	2.25
108.0	3.559	1.085	2.17
150.0	4.219	1.286	1.83
174.0	4.558	1.389	1.69
200.0	4.901	1.494	1.57
204.0	4.952	1.509	1.56
300.0	6.062	1.847	1.27
400.0	7.057	2.151	1.09
450.0	7.513	2.29	1.03
460.0	7.601	2.317	1.01
500.0	7.947	2.422	0.97
512.0	8.048	2.453	0.96
600.0	8.761	2.67	0.88
700.0	9.519	2.901	0.81
800.0	10.232	3.119	0.75
824.0	10.398	3.169	0.74

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<b>894.0</b>	10.869	3.313	0.71
<b>960.0</b>	11.299	3.444	0.68
<b>1000.0</b>	11.554	3.521	0.67
<b>1218.0</b>	12.874	3.924	0.6
<b>1250.0</b>	13.059	3.98	0.59
<b>1500.0</b>	14.446	4.403	0.53
<b>1700.0</b>	15.49	4.721	0.5
<b>1794.0</b>	15.964	4.866	0.48
<b>1800.0</b>	15.994	4.875	0.48
<b>2000.0</b>	16.97	5.172	0.45
<b>2100.0</b>	17.443	5.316	0.44
<b>2200.0</b>	17.908	5.458	0.43
<b>2300.0</b>	18.365	5.597	0.42
<b>2500.0</b>	19.257	5.869	0.4
<b>2700.0</b>	20.122	6.133	0.38
<b>3000.0</b>	21.376	6.515	0.36
<b>3400.0</b>	22.978	7.003	0.34
<b>3600.0</b>	23.754	7.24	0.32
<b>3700.0</b>	24.136	7.356	0.32
<b>3800.0</b>	24.514	7.471	0.31
<b>3900.0</b>	24.888	7.586	0.31
<b>4000.0</b>	25.26	7.699	0.31
<b>4100.0</b>	25.627	7.811	0.3
<b>4200.0</b>	25.992	7.922	0.3
<b>4300.0</b>	26.354	8.032	0.29
<b>4400.0</b>	26.713	8.142	0.29
<b>4500.0</b>	27.069	8.25	0.28
<b>4600.0</b>	27.422	8.358	0.28
<b>4700.0</b>	27.773	8.465	0.28
<b>4800.0</b>	28.12	8.571	0.27
<b>4900.0</b>	28.466	8.676	0.27
<b>5000.0</b>	28.809	8.781	0.27
<b>6000.0</b>	32.121	9.79	0.24
<b>8000.0</b>	38.244	11.656	0.2
<b>8800.0</b>	40.551	12.359	0.19

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<b>10000.0</b>	43.894	13.378	0.18
<b>12000.0</b>	49.209	14.998	0.16

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Inner Conductor Material</b>	Copper-clad aluminum wire
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	95.25 mm   3.75 in
<b>Minimum Bend Radius, single Bend</b>	40.64 mm   1.6 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	50
<b>Tensile Strength</b>	113 kg   249.122 lb
<b>Bending Moment</b>	1.9 N-m   16.816 in lb
<b>Flat Plate Crush Strength</b>	2 kg/mm   111.995 lb/in

## 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)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C
<b>EN50575 CPR Cable EuroClass Fire Performance</b>	B2ca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s1a
<b>EN50575 CPR Cable EuroClass Droplets Rating</b>	d1
<b>EN50575 CPR Cable EuroClass Acidity Rating</b>	a1
<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   IEC 60332-3C-24   NFPA 130-2010   UL 1666 /CATVR/CMR   UL 1685
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

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## Packaging and Weights

### Cable weight

0.12 kg/m | 0.081 lb/ft

## Regulatory Compliance/Certifications

### Agency

### Classification

CENELEC

EN 50575 compliant, Declaration of Performance (DoP) available

CHINA-ROHS

Below maximum concentration value

ISO 9001:2015

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

REACH-SVHC

Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

ROHS

Compliant

UK-ROHS

Compliant

