

# LDF4RN-50A

LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, gray non-halogenated, fire retardant polyolefin jacket



## OBSOLETE

This product was discontinued on: May 9, 2017

### Replaced By:

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)
LDF4RKD-50A	LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket

## Product Classification

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

## General Specifications

<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Gray
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	12.954 mm   0.51 in
<b>Diameter Over Jacket</b>	16.002 mm   0.63 in
<b>Inner Conductor OD</b>	4.826 mm   0.19 in
<b>Outer Conductor OD</b>	13.97 mm   0.55 in
<b>Nominal Size</b>	1/2 in

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## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	75.8 pF/m   23.104 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.48 ohms/km   0.451 ohms/kft
<b>dc Resistance, Outer Conductor</b>	2.69 ohms/km   0.82 ohms/kft
<b>dc Test Voltage</b>	4000 V
<b>Inductance</b>	0.19 $\mu$ H/m   0.058 $\mu$ H/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
<b>Peak Power</b>	40 kW
<b>Velocity</b>	88 %

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.3
800–960 MHz	1.13	24.3
1700–2200 MHz	1.13	24.3
2300–2700 MHz	1.13	24.3

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.211	0.064	36.11
1.5	0.259	0.079	29.46
2.0	0.299	0.091	25.5
10.0	0.672	0.205	11.35
20.0	0.954	0.291	7.99
30.0	1.172	0.357	6.51
50.0	1.521	0.463	5.02
85.0	1.995	0.608	3.82
88.0	2.031	0.619	3.76
100.0	2.169	0.661	3.52
108.0	2.256	0.688	3.38
150.0	2.673	0.815	2.85

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<b>174.0</b>	2.887	0.88	2.64
<b>200.0</b>	3.103	0.946	2.46
<b>204.0</b>	3.135	0.956	2.43
<b>300.0</b>	3.835	1.169	1.99
<b>400.0</b>	4.462	1.36	1.71
<b>450.0</b>	4.749	1.447	1.61
<b>460.0</b>	4.804	1.464	1.59
<b>500.0</b>	5.021	1.53	1.52
<b>512.0</b>	5.085	1.55	1.5
<b>600.0</b>	5.533	1.686	1.38
<b>700.0</b>	6.009	1.831	1.27
<b>800.0</b>	6.456	1.968	1.18
<b>824.0</b>	6.56	1.999	1.16
<b>894.0</b>	6.855	2.089	1.11
<b>960.0</b>	7.124	2.171	1.07
<b>1000.0</b>	7.284	2.22	1.05
<b>1218.0</b>	8.11	2.472	0.94
<b>1250.0</b>	8.226	2.507	0.93
<b>1500.0</b>	9.093	2.771	0.84
<b>1700.0</b>	9.744	2.97	0.78
<b>1794.0</b>	10.039	3.06	0.76
<b>1800.0</b>	10.058	3.066	0.76
<b>2000.0</b>	10.666	3.251	0.72
<b>2100.0</b>	10.961	3.341	0.7
<b>2200.0</b>	11.251	3.429	0.68
<b>2300.0</b>	11.535	3.516	0.66
<b>2500.0</b>	12.09	3.685	0.63
<b>2700.0</b>	12.627	3.849	0.6
<b>3000.0</b>	13.407	4.086	0.57
<b>3400.0</b>	14.401	4.389	0.53
<b>3600.0</b>	14.882	4.536	0.51
<b>3700.0</b>	15.118	4.608	0.5
<b>3800.0</b>	15.353	4.679	0.5
<b>3900.0</b>	15.585	4.75	0.49
<b>4000.0</b>	15.815	4.82	0.48

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4100.0	16.042	4.889	0.48
4200.0	16.268	4.958	0.47
4300.0	16.492	5.027	0.46
4400.0	16.714	5.094	0.46
4500.0	16.934	5.161	0.45
4600.0	17.153	5.228	0.44
4700.0	17.37	5.294	0.44
4800.0	17.585	5.36	0.43
4900.0	17.798	5.425	0.43
5000.0	18.01	5.489	0.42
6000.0	20.055	6.113	0.38
8000.0	23.826	7.262	0.32
8800.0	25.244	7.694	0.3

## 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>	127 mm   5 in
<b>Minimum Bend Radius, single Bend</b>	50.8 mm   2 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>	3.8 N-m   33.633 in lb
<b>Flat Plate Crush Strength</b>	2 kg/mm   111.995 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-25 °C to +60 °C (-13 °F to +140 °F)
<b>Operating Temperature</b>	-30 °C to +80 °C (-22 °F to +176 °F)
<b>Storage Temperature</b>	-30 °C to +80 °C (-22 °F to +176 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C

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<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C
<b>Fire Retardancy Test Method</b>	UL 1666/CATVR
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

<b>Cable weight</b>	0.22 kg/m   0.148 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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UL/ETL Certification	CATVR
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