

# 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>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	LDF4-50A
<b>Ordering Note</b>	CommScope® standard product (Global)

## General Specifications

<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Values typical, guaranteed within 5%   Values typical, unless otherwise stated

## Dimensions

<b>Diameter Over Dielectric</b>	12.954 mm   0.51 in
<b>Diameter Over Jacket</b>	15.875 mm   0.625 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

## Electrical Specifications

<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Cable Impedance</b>	50 ohm ±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

# LDF4-50A

<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>	8000 V
<b>Operating Frequency Band</b>	1 – 8800 MHz
<b>Peak Power</b>	40 kW
<b>Power Attenuation</b>	2.325
<b>Pulse Reflection</b>	0.5%
<b>Velocity</b>	88 %

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>680–800 MHz</b>	1.13	24.3
<b>800–960 MHz</b>	1.13	24.3
<b>1700–2200 MHz</b>	1.13	24.3
<b>2300–2700 MHz</b>	1.13	24.3
<b>3400–3800 MHz</b>	1.26	19

## Attenuation

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

# LDF4-50A

---

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

# LDF4-50A

---

<b>4600.0</b>	17.153	5.228	0.44
<b>4700.0</b>	17.37	5.294	0.44
<b>4800.0</b>	17.585	5.36	0.43
<b>4900.0</b>	17.798	5.425	0.43
<b>5000.0</b>	18.01	5.489	0.42
<b>6000.0</b>	20.055	6.113	0.38
<b>8000.0</b>	23.826	7.262	0.32
<b>8800.0</b>	25.244	7.694	0.3

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
<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>	5 in   127 mm
<b>Minimum Bend Radius, single Bend</b>	2 in   50.8 mm
<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>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-55 °C to +85 °C (-67 °F to +185 °F)
<b>Storage Temperature</b>	-70 °C to +85 °C (-94 °F to +185 °F)
<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</b>	Fca

## Packaging and Weights

<b>Cable weight</b>	0.22 kg/m   1.591 lb/ft
---------------------	-------------------------

# LDF4-50A

---

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant

