

# LDF12P-50-42



LDF12-50, HELIAX® Low Density Foam Premium Coaxial Cable, corrugated copper, 2-1/4 in, black PE jacket

**OBSOLETE**

## Product Classification

<b>Brand</b>	HELIAX®
<b>Product Series</b>	LDF12-50
<b>Product Type</b>	Coaxial wireless cable

## 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>	Corrugated copper tube
<b>Jacket Color</b>	Black

## Dimensions

<b>Nominal Size</b>	2-1/4 in
<b>Cable Weight</b>	1.22 lb/ft   1.82 kg/m
<b>Diameter Over Dielectric</b>	52.832 mm   2.080 in
<b>Diameter Over Jacket</b>	59.690 mm   2.350 in
<b>Inner Conductor OD</b>	21.0820 mm   0.8300 in
<b>Outer Conductor OD</b>	55.880 mm   2.200 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	22.7 pF/ft   74.5 pF/m
<b>dc Resistance, Inner Conductor</b>	0.210 ohms/kft   0.689 ohms/km
<b>dc Resistance, Outer Conductor</b>	0.090 ohms/kft   0.295 ohms/km
<b>dc Test Voltage</b>	13000 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>	10000 V
<b>Operating Frequency Band</b>	1 – 2200 MHz
<b>Peak Power</b>	425.0 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)

## Mechanical Specifications

**Bending Moment** 94.9 N-m | 70.0 ft lb  
**Flat Plate Crush Strength** 150.0 lb/in | 2.7 kg/mm  
**Minimum Bend Radius, Multiple Bends** 558.80 mm | 22.00 in  
**Minimum Bend Radius, Single Bend** 241.30 mm | 9.50 in  
**Number of Bends, minimum** 15  
**Number of Bends, typical** 50  
**Tensile Strength** 680 kg | 1500 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)
806–960 MHz	1.13	24.29
1700–2200 MHz	1.13	24.29

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.037	0.011	323.89
1	0.052	0.016	228.42
1.5	0.064	0.02	186.13
2	0.074	0.023	160.92
10	0.169	0.052	70.86
20	0.242	0.074	49.54
30	0.299	0.091	40.10
50	0.391	0.119	30.64
85	0.519	0.158	23.08
88	0.529	0.161	22.65
100	0.566	0.173	21.14
108	0.591	0.18	20.28
150	0.707	0.215	16.95
174	0.767	0.234	15.61
200	0.829	0.253	14.45
204	0.838	0.255	14.29
300	1.041	0.317	11.51
400	1.227	0.374	9.76
450	1.313	0.4	9.12
460	1.33	0.405	9.00
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500	1.396	0.426	8.58
512	1.416	0.432	8.46
600	1.554	0.474	7.71
700	1.703	0.519	7.03
800	1.845	0.562	6.49
824	1.878	0.572	6.38
894	1.973	0.601	6.07
960	2.06	0.628	5.81
1000	2.112	0.644	5.67
1218	2.385	0.727	5.02
1250	2.423	0.739	4.94
1500	2.716	0.828	4.41
1700	2.94	0.896	4.07
1794	3.042	0.927	3.94
1800	3.049	0.929	3.93
2000	3.262	0.994	3.67
2100	3.366	1.026	3.56
2200	3.469	1.057	3.45

\* Values typical, guaranteed within 5%