

LDF12P-50-42

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



OBSOLETE

This product was discontinued on: February 16, 2016

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	LDF12-50

General Specifications

Flexibility	Standard
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%

Dimensions

Diameter Over Dielectric	52.832 mm 2.08 in
Diameter Over Jacket	59.69 mm 2.35 in
Inner Conductor OD	21.082 mm 0.83 in
Outer Conductor OD	55.88 mm 2.2 in
Nominal Size	2-1/4 in

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	74.5 pF/m 22.708 pF/ft
dc Resistance, Inner Conductor	0.689 ohms/km 0.21 ohms/kft
dc Resistance, Outer Conductor	0.295 ohms/km 0.09 ohms/kft

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dc Test Voltage	13000 V
Inductance	0.19 μ H/m 0.058 μ H/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 2200 MHz
Peak Power	425 kW
Velocity	88 %

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.052	0.016	228.42
1.5	0.064	0.02	186.13
2.0	0.074	0.023	160.92
10.0	0.169	0.052	70.86
20.0	0.242	0.074	49.54
30.0	0.299	0.091	40.1
50.0	0.391	0.119	30.64
85.0	0.519	0.158	23.08
88.0	0.529	0.161	22.65
100.0	0.566	0.173	21.14
108.0	0.591	0.18	20.28
150.0	0.707	0.215	16.95
174.0	0.767	0.234	15.61
200.0	0.829	0.253	14.45
204.0	0.838	0.255	14.29
300.0	1.041	0.317	11.51
400.0	1.227	0.374	9.76
450.0	1.313	0.4	9.12
460.0	1.33	0.405	9
500.0	1.396	0.426	8.58
512.0	1.416	0.432	8.46
600.0	1.554	0.474	7.71
700.0	1.703	0.519	7.03
800.0	1.845	0.562	6.49
824.0	1.878	0.572	6.38

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894.0	1.973	0.601	6.07
960.0	2.06	0.628	5.81
1000.0	2.112	0.644	5.67
1218.0	2.385	0.727	5.02
1250.0	2.423	0.739	4.94
1500.0	2.716	0.828	4.41
1700.0	2.94	0.896	4.07
1794.0	3.042	0.927	3.94
1800.0	3.049	0.929	3.93
2000.0	3.262	0.994	3.67
2100.0	3.366	1.026	3.56
2200.0	3.469	1.057	3.45

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.29
1700–2200 MHz	1.13	24.29

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Corrugated copper tube
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	22 in 558.8 mm
Minimum Bend Radius, single Bend	9.5 in 241.3 mm
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	680 kg 1,499.142 lb
Bending Moment	94.9 N-m 839.936 in lb
Flat Plate Crush Strength	2.7 kg/mm 151.193 lb/in

Environmental Specifications

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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)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Packaging and Weights

Cable weight	1.82 kg/m 1.223 lb/ft
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