

# Product Specifications

## LDF4-50A

LDF4-50A, HELIAX<sup>®</sup> Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket



## CHARACTERISTICS

### Construction Materials

Jacket Material	PE
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black

### Dimensions

Nominal Size	1/2 in
Cable Weight	0.15 lb/ft   0.22 kg/m
Diameter Over Dielectric	12.954 mm   0.510 in
Diameter Over Jacket	15.875 mm   0.625 in
Inner Conductor OD	4.8260 mm   0.1900 in
Outer Conductor OD	13.970 mm   0.550 in

### Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	23.1 pF/ft   75.8 pF/m
dc Resistance, Inner Conductor	0.450 ohms/kft   1.480 ohms/km
dc Resistance, Outer Conductor	0.580 ohms/kft   1.903 ohms/km
dc Test Voltage	4000 V
Inductance	0.190 $\mu$ H/m   0.058 $\mu$ H/ft
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 8800 MHz
Peak Power	40.0 kW
Pulse Reflection	0.5%
Velocity	88%

### Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
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Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)

## General Specifications

Brand	HELIAX®
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## Mechanical Specifications

Bending Moment	3.8 N-m   2.8 ft lb
Flat Plate Crush Strength	110.0 lb/in   2.0 kg/mm
Minimum Bend Radius, Multiple Bends	127.00 mm   5.00 in
Minimum Bend Radius, Single Bend	50.80 mm   2.00 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	113 kg   250 lb

## 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

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.149	0.045	40.00
1	0.211	0.064	36.11
1.5	0.259	0.079	29.46
2	0.299	0.091	25.50
10	0.672	0.205	11.35
20	0.954	0.291	7.99
30	1.172	0.357	6.51
50	1.521	0.463	5.02
88	2.031	0.619	3.76
100	2.169	0.661	3.52
108	2.256	0.688	3.38
150	2.673	0.815	2.85
174	2.887	0.88	2.64
200	3.103	0.946	2.46
300	3.835	1.169	1.99
400	4.462	1.36	1.71
450	4.749	1.447	1.61
500	5.021	1.53	1.52
512	5.085	1.55	1.50

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600	5.533	1.686	1.38
700	6.009	1.831	1.27
800	6.456	1.968	1.18
824	6.56	1.999	1.16
894	6.855	2.089	1.11
960	7.124	2.171	1.07
1000	7.284	2.22	1.05
1250	8.226	2.507	0.93
1500	9.093	2.771	0.84
1700	9.744	2.97	0.78
1800	10.058	3.066	0.76
2000	10.666	3.251	0.72
2100	10.961	3.341	0.70
2200	11.251	3.429	0.68
2300	11.535	3.516	0.66
2500	12.09	3.685	0.63
2700	12.627	3.849	0.60
3000	13.407	4.086	0.57
3400	14.401	4.389	0.53
3700	15.118	4.608	0.50
4000	15.815	4.82	0.48
5000	18.01	5.489	0.42
6000	20.055	6.113	0.38
8000	23.826	7.262	0.32
8800	25.244	7.694	0.30

## Regulatory Compliance/Certifications

### Agency

RoHS 2002/95/EC

China RoHS SJ/T 11364-2006

### Classification

Compliant

Below Maximum Concentration Value (MCV)

