

LDF4.5-50



LDF4.5-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 5/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)

OBSOLETE

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	LDF4.5-50

General Specifications

Product Number	520098002/00
Flexibility	Standard
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%

Dimensions

Diameter Over Dielectric	18.034 mm 0.71 in
Diameter Over Jacket	22.098 mm 0.87 in
Inner Conductor OD	7.112 mm 0.28 in
Outer Conductor OD	19.812 mm 0.78 in
Nominal Size	5/8 in

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	76.1 pF/m 23.195 pF/ft
dc Resistance, Inner Conductor	0.722 ohms/km 0.22 ohms/kft
dc Resistance, Outer Conductor	1.378 ohms/km 0.42 ohms/kft
dc Test Voltage	5000 V
Inductance	0.187 μ H/m 0.057 μ H/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	8000 V

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Operating Frequency Band	1 – 6100 MHz
Peak Power	62 kW
Velocity	88 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.3
1700–2000 MHz	1.13	24.3

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.149	0.045	53.9
1.5	0.183	0.056	43.97
2.0	0.211	0.064	38.04
10.0	0.476	0.145	16.88
20.0	0.678	0.207	11.86
30.0	0.834	0.254	9.64
50.0	1.084	0.33	7.41
85.0	1.427	0.435	5.63
88.0	1.453	0.443	5.53
100.0	1.553	0.473	5.17
108.0	1.617	0.493	4.97
150.0	1.921	0.586	4.18
174.0	2.078	0.633	3.87
200.0	2.237	0.682	3.59
204.0	2.261	0.689	3.56
300.0	2.778	0.847	2.89
400.0	3.244	0.989	2.48
450.0	3.459	1.054	2.32
460.0	3.501	1.067	2.3
500.0	3.664	1.117	2.19
512.0	3.712	1.131	2.17
600.0	4.049	1.234	1.99
700.0	4.41	1.344	1.82
800.0	4.75	1.448	1.69

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824.0	4.829	1.472	1.66
894.0	5.054	1.54	1.59
960.0	5.261	1.603	1.53
1000.0	5.383	1.641	1.49
1218.0	6.02	1.835	1.34
1250.0	6.109	1.862	1.32
1500.0	6.783	2.067	1.19
1700.0	7.292	2.222	1.1
1794.0	7.523	2.293	1.07
1800.0	7.538	2.297	1.07
2000.0	8.017	2.443	1
2100.0	8.249	2.514	0.97
2200.0	8.478	2.584	0.95
2300.0	8.704	2.653	0.92
2500.0	9.145	2.787	0.88
2700.0	9.574	2.918	0.84
3000.0	10.198	3.108	0.79
3400.0	10.998	3.352	0.73
3600.0	11.387	3.471	0.71
3700.0	11.579	3.529	0.69
3800.0	11.769	3.587	0.68
3900.0	11.957	3.644	0.67
4000.0	12.144	3.701	0.66
4100.0	12.33	3.758	0.65
4200.0	12.514	3.814	0.64
4300.0	12.697	3.87	0.63
4400.0	12.878	3.925	0.62
4500.0	13.058	3.98	0.62
4600.0	13.237	4.035	0.61
4700.0	13.415	4.089	0.6
4800.0	13.592	4.143	0.59
4900.0	13.767	4.196	0.58
5000.0	13.942	4.249	0.58
6000.0	15.632	4.765	0.51

Material Specifications

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Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	203.2 mm 8 in
Minimum Bend Radius, single Bend	76.2 mm 3 in
Number of Bends, minimum	15
Number of Bends, typical	40
Tensile Strength	363 kg 800.277 lb
Bending Moment	12.5 N-m 110.634 in lb
Flat Plate Crush Strength	1.3 kg/mm 72.797 lb/in

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)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C
EN50575 CPR Cable EuroClass Fire Performance	Fca

Packaging and Weights

Cable weight	0.4 kg/m 0.269 lb/ft
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Regulatory Compliance/Certifications

Agency	Classification
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

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