

# LDF4.5RK-50



LDF4.5RK-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 5/8 in, black non-halogenated, fire retardant polyolefin jacket  
B2ca-s1a,d0,a1

**OBSOLETE**

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	LDF4.5-50
<b>Ordering Note</b>	CommScope® non-standard product

## General Specifications

<b>Product Number</b>	520098802/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

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

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	76 pF/m   23.165 pF/ft
<b>dc Resistance, Inner Conductor</b>	0.722 ohms/km   0.22 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.378 ohms/km   0.42 ohms/kft
<b>dc Test Voltage</b>	5000 V
<b>Inductance</b>	0.187 µH/m   0.057 µH/ft

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<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	1 – 6100 MHz
<b>Peak Power</b>	62 kW
<b>Velocity</b>	88 %

## VSWR/Return Loss

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

## 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>	0.149	0.045	53.9
<b>1.5</b>	0.183	0.056	43.97
<b>2.0</b>	0.211	0.064	38.04
<b>10.0</b>	0.476	0.145	16.88
<b>20.0</b>	0.678	0.207	11.86
<b>30.0</b>	0.834	0.254	9.64
<b>50.0</b>	1.084	0.33	7.41
<b>85.0</b>	1.427	0.435	5.63
<b>88.0</b>	1.453	0.443	5.53
<b>100.0</b>	1.553	0.473	5.17
<b>108.0</b>	1.617	0.493	4.97
<b>150.0</b>	1.921	0.586	4.18
<b>174.0</b>	2.078	0.633	3.87
<b>200.0</b>	2.237	0.682	3.59
<b>204.0</b>	2.261	0.689	3.56
<b>300.0</b>	2.778	0.847	2.89
<b>400.0</b>	3.244	0.989	2.48
<b>450.0</b>	3.459	1.054	2.32
<b>460.0</b>	3.501	1.067	2.3
<b>500.0</b>	3.664	1.117	2.19
<b>512.0</b>	3.712	1.131	2.17
<b>600.0</b>	4.049	1.234	1.99

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<b>700.0</b>	4.41	1.344	1.82
<b>800.0</b>	4.75	1.448	1.69
<b>824.0</b>	4.829	1.472	1.66
<b>894.0</b>	5.054	1.54	1.59
<b>960.0</b>	5.261	1.603	1.53
<b>1000.0</b>	5.383	1.641	1.49
<b>1218.0</b>	6.02	1.835	1.34
<b>1250.0</b>	6.109	1.862	1.32
<b>1500.0</b>	6.783	2.067	1.19
<b>1700.0</b>	7.292	2.222	1.1
<b>1794.0</b>	7.523	2.293	1.07
<b>1800.0</b>	7.538	2.297	1.07
<b>2000.0</b>	8.017	2.443	1
<b>2100.0</b>	8.249	2.514	0.97
<b>2200.0</b>	8.478	2.584	0.95
<b>2300.0</b>	8.704	2.653	0.92
<b>2500.0</b>	9.145	2.787	0.88
<b>2700.0</b>	9.574	2.918	0.84
<b>3000.0</b>	10.198	3.108	0.79
<b>3400.0</b>	10.998	3.352	0.73
<b>3600.0</b>	11.387	3.471	0.71
<b>3700.0</b>	11.579	3.529	0.69
<b>3800.0</b>	11.769	3.587	0.68
<b>3900.0</b>	11.957	3.644	0.67
<b>4000.0</b>	12.144	3.701	0.66
<b>4100.0</b>	12.33	3.758	0.65
<b>4200.0</b>	12.514	3.814	0.64
<b>4300.0</b>	12.697	3.87	0.63
<b>4400.0</b>	12.878	3.925	0.62
<b>4500.0</b>	13.058	3.98	0.62
<b>4600.0</b>	13.237	4.035	0.61
<b>4700.0</b>	13.415	4.089	0.6
<b>4800.0</b>	13.592	4.143	0.59
<b>4900.0</b>	13.767	4.196	0.58
<b>5000.0</b>	13.942	4.249	0.58

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6000.0 15.632 4.765 0.51

## Material Specifications

<b>Dielectric Material</b>	PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<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>	203.2 mm   8 in
<b>Minimum Bend Radius, single Bend</b>	76.2 mm   3 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	40
<b>Tensile Strength</b>	363 kg   800.277 lb
<b>Bending Moment</b>	12.5 N-m   110.634 in lb
<b>Flat Plate Crush Strength</b>	1.3 kg/mm   72.797 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<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 Fire Performance</b>	B2ca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s1a
<b>EN50575 CPR Cable EuroClass Droplets Rating</b>	d0
<b>EN50575 CPR Cable EuroClass Acidity Rating</b>	a1
<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   NFPA 130-2010   UL 1666/CATVR
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

<b>Cable weight</b>	0.4 kg/m   0.269 lb/ft
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## Regulatory Compliance/Certifications

### Agency

CENELEC

ISO 9001:2015



### Classification

EN 50575 compliant, Declaration of Performance (DoP) available

Designed, manufactured and/or distributed under this quality management system