LDF4RK-50A



LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d1,a1 (CPR testing is conducted annually please reference the website for latest classification)

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX® | SureFlex®
Product Series	LDF4-50A
Ordering Note	CommScope® standard product in Asia Pacific | CommScope® standard product in Europe, the Middle East, and Africa

General Specifications

Flexibility	Standard
Jacket Color	Black
Performance Note	Values typical, guaranteed within 5% | Values typical, unless otherwise stated

Dimensions

Diameter Over Dielectric	12.954 mm | 0.51 in
Diameter Over Jacket	16.002 mm | 0.63 in
Inner Conductor OD	4.826 mm | 0.19 in
Outer Conductor OD	13.97 mm | 0.55 in
Nominal Size	1/2 in

Electrical Specifications

Attenuation, Ambient Temperature	68 °F | 20 °C
Cable Impedance	50 ohm ±1 ohm
Capacitance	75.8 pF/m | 23.104 pF/ft
dc Resistance, Inner Conductor	1.48 ohms/km | 0.451 ohms/kft
dc Resistance, Outer Conductor	2.69 ohms/km | 0.82 ohms/kft
dc Test Voltage	4000 V

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 16, 2020

LDF4RK-50A

Inductance	0.19 µH/m | 0.058 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 8800 MHz
Peak Power	40 kW
Power Attenuation	2.325
Pulse Reflection	0.5%
Velocity	88 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.3
800–960 MHz	1.13	24.3
1700–2000 MHz	1.13	24.3
2300–2700 MHz	1.13	24.3

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.211	0.064	36.11
1.5	0.259	0.079	29.46
2.0	0.299	0.091	25.5
10.0	0.672	0.205	11.35
20.0	0.954	0.291	7.99
30.0	1.172	0.357	6.51
50.0	1.521	0.463	5.02
85.0	1.995	0.608	3.82
88.0	2.031	0.619	3.76
100.0	2.169	0.661	3.52
108.0	2.256	0.688	3.38
150.0	2.673	0.815	2.85
174.0	2.887	0.88	2.64
200.0	3.103	0.946	2.46
204.0	3.135	0.956	2.43
300.0	3.835	1.169	1.99
400.0	4.462	1.36	1.71

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 16, 2020

450.0	4.749	1.447	1.61
460.0	4.804	1.464	1.59
500.0	5.021	1.53	1.52
512.0	5.085	1.55	1.5
600.0	5.533	1.686	1.38
700.0	6.009	1.831	1.27
800.0	6.456	1.968	1.18
824.0	6.56	1.999	1.16
894.0	6.855	2.089	1.11
960.0	7.124	2.171	1.07
1000.0	7.284	2.22	1.05
1218.0	8.11	2.472	0.94
1250.0	8.226	2.507	0.93
1500.0	9.093	2.771	0.84
1700.0	9.744	2.97	0.78
1794.0	10.039	3.06	0.76
1800.0	10.058	3.066	0.76
2000.0	10.666	3.251	0.72
2100.0	10.961	3.341	0.7
2200.0	11.251	3.429	0.68
2300.0	11.535	3.516	0.66
2500.0	12.09	3.685	0.63
2700.0	12.627	3.849	0.6
3000.0	13.407	4.086	0.57
3400.0	14.401	4.389	0.53
3600.0	14.882	4.536	0.51
3700.0	15.118	4.608	0.5
3800.0	15.353	4.679	0.5
3900.0	15.585	4.75	0.49
4000.0	15.815	4.82	0.48
4100.0	16.042	4.889	0.48
4200.0	16.268	4.958	0.47
4300.0	16.492	5.027	0.46
4400.0	16.714	5.094	0.46
4500.0	16.934	5.161	0.45
4600.0	17.153	5.228	0.44

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 16, 2020

4700.0	17.37	5.294	0.44
4800.0	17.585	5.36	0.43
4900.0	17.798	5.425	0.43
5000.0	18.01	5.489	0.42
6000.0	20.055	6.113	0.38
8000.0	23.826	7.262	0.32
8800.0	25.244	7.694	0.3

Material Specifications

Dielectric Material	Foam PE
Jacket Material	Non-halogenated, fire retardant polyolefin
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	5 in | 127 mm
Minimum Bend Radius, single Bend	2 in | 50.8 mm
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	113 kg | 249.122 lb
Bending Moment	3.8 N-m | 33.633 in lb
Flat Plate Crush Strength	2 kg/mm | 111.995 lb/in

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Inner Conductor Temperature	212 °F | 100 °C
EN50575 CPR Cable EuroClass	B2ca | a1 | d1 | s1a
Fire Retardancy Test Method	NFPA 130-2010 | UL 1666/CATVR/CMR
Smoke Index Test Method	IEC 61034
Toxicity Index Test Method	IEC 60754-1 | IEC 60754-2

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 16, 2020

LDF4RK-50A

Packaging and Weights

Cable weight	0.25 kg/m | 1.808 lb/ft

Regulatory Compliance/Certifications

Agency	Classification
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Below maximum concentration value
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
UL/ETL Certification	CATVR/CMR

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 16, 2020