



LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d1,a1

Product Classification

Brand	HELIAX® SureFlex®
Product Series	LDF4-50A
Product Type	Coaxial wireless cable

Standards And Qualifications

EN50575 CPR Cable EuroClass	B2ca s1a d1 a1
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Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
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	0.17 lb/ft 0.25 kg/m
Diameter Over Dielectric	12.954 mm 0.510 in
Diameter Over Jacket	16.002 mm 0.630 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 ±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	0.820 ohms/kft 2.690 ohms/km
dc Test Voltage	4000 V
Inductance	0.190 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	40.0 kW

Velocity 88%

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)

General Specifications

Ordering Note CommScope® standard product in Asia Pacific | CommScope® standard product in Europe, the Middle East, and Africa

Mechanical Specifications

Bending Moment 3.8 N-m | 2.8 ft lb
Fire Retardancy Test Method NFPA 130-2010 | UL 1666/CATVR/CMR
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
Smoke Index Test Method IEC 61034
Tensile Strength 113 kg | 250 lb
Toxicity Index Test Method IEC 60754-1 | IEC 60754-2

Note

Performance Note Values typical, unless otherwise stated

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/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.30
800–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30
2300–2700 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
85	1.995	0.608	3.82
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
204	3.135	0.956	2.43
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
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
1218	8.11	2.472	0.94
1250	8.226	2.507	0.93
1500	9.093	2.771	0.84
1700	9.744	2.97	0.78
1794	10.039	3.06	0.76
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

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency

UL/ETL Certification
RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2008
CENELEC

Classification

CATVR/CMR
Compliant
Below Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system
Compliant, DoP (Declaration of Performance) document available

