



LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket, B2ca s1a d0 a1 Compliant

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | LDF2-50 |

General Specifications

| | |
|---------------------|----------|
| Flexibility | Standard |
| Jacket Color | Black |

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 8.636 mm 0.34 in |
| Diameter Over Jacket | 11.176 mm 0.44 in |
| Inner Conductor OD | 3.048 mm 0.12 in |
| Outer Conductor OD | 9.652 mm 0.38 in |
| Nominal Size | 3/8 in |

Electrical Specifications

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|--|-------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 75 pF/m 22.86 pF/ft |
| dc Resistance, Inner Conductor | 3.478 ohms/km 1.06 ohms/kft |
| dc Resistance, Outer Conductor | 2.854 ohms/km 0.87 ohms/kft |
| dc Test Voltage | 2500 V |
| Inductance | 0.19 µH/m 0.058 µH/ft |
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 6000 V |

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|---------------------------------|---------------|
| Operating Frequency Band | 1 – 13000 MHz |
| Peak Power | 16.6 kW |
| Velocity | 85 % |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–960 MHz | 1.21 | 20.8 |
| 1700–2200 MHz | 1.21 | 20.8 |
| 2200–2700 MHz | 1.44 | 15 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.332 | 0.101 | 16.6 |
| 1.5 | 0.407 | 0.124 | 16.6 |
| 2.0 | 0.471 | 0.143 | 16.38 |
| 10.0 | 1.059 | 0.323 | 7.28 |
| 20.0 | 1.503 | 0.458 | 5.13 |
| 30.0 | 1.847 | 0.563 | 4.17 |
| 50.0 | 2.397 | 0.73 | 3.22 |
| 85.0 | 3.146 | 0.959 | 2.45 |
| 88.0 | 3.203 | 0.976 | 2.41 |
| 100.0 | 3.421 | 1.043 | 2.25 |
| 108.0 | 3.559 | 1.085 | 2.17 |
| 150.0 | 4.219 | 1.286 | 1.83 |
| 174.0 | 4.558 | 1.389 | 1.69 |
| 200.0 | 4.901 | 1.494 | 1.57 |
| 204.0 | 4.952 | 1.509 | 1.56 |
| 300.0 | 6.062 | 1.847 | 1.27 |
| 400.0 | 7.057 | 2.151 | 1.09 |
| 450.0 | 7.513 | 2.29 | 1.03 |
| 460.0 | 7.601 | 2.317 | 1.01 |
| 500.0 | 7.947 | 2.422 | 0.97 |
| 512.0 | 8.048 | 2.453 | 0.96 |
| 600.0 | 8.761 | 2.67 | 0.88 |
| 700.0 | 9.519 | 2.901 | 0.81 |

| | | | |
|--------|--------|-------|------|
| 800.0 | 10.232 | 3.119 | 0.75 |
| 824.0 | 10.398 | 3.169 | 0.74 |
| 894.0 | 10.869 | 3.313 | 0.71 |
| 960.0 | 11.299 | 3.444 | 0.68 |
| 1000.0 | 11.554 | 3.521 | 0.67 |
| 1218.0 | 12.874 | 3.924 | 0.6 |
| 1250.0 | 13.059 | 3.98 | 0.59 |
| 1500.0 | 14.446 | 4.403 | 0.53 |
| 1700.0 | 15.49 | 4.721 | 0.5 |
| 1794.0 | 15.964 | 4.866 | 0.48 |
| 1800.0 | 15.994 | 4.875 | 0.48 |
| 2000.0 | 16.97 | 5.172 | 0.45 |
| 2100.0 | 17.443 | 5.316 | 0.44 |
| 2200.0 | 17.908 | 5.458 | 0.43 |
| 2300.0 | 18.365 | 5.597 | 0.42 |
| 2500.0 | 19.257 | 5.869 | 0.4 |
| 2700.0 | 20.122 | 6.133 | 0.38 |
| 3000.0 | 21.376 | 6.515 | 0.36 |
| 3400.0 | 22.978 | 7.003 | 0.34 |
| 3600.0 | 23.754 | 7.24 | 0.32 |
| 3700.0 | 24.136 | 7.356 | 0.32 |
| 3800.0 | 24.514 | 7.471 | 0.31 |
| 3900.0 | 24.888 | 7.586 | 0.31 |
| 4000.0 | 25.26 | 7.699 | 0.31 |
| 4100.0 | 25.627 | 7.811 | 0.3 |
| 4200.0 | 25.992 | 7.922 | 0.3 |
| 4300.0 | 26.354 | 8.032 | 0.29 |
| 4400.0 | 26.713 | 8.142 | 0.29 |
| 4500.0 | 27.069 | 8.25 | 0.28 |
| 4600.0 | 27.422 | 8.358 | 0.28 |
| 4700.0 | 27.773 | 8.465 | 0.28 |
| 4800.0 | 28.12 | 8.571 | 0.27 |
| 4900.0 | 28.466 | 8.676 | 0.27 |
| 5000.0 | 28.809 | 8.781 | 0.27 |
| 6000.0 | 32.121 | 9.79 | 0.24 |

| | | | |
|----------------|--------|--------|------|
| 8000.0 | 38.244 | 11.656 | 0.2 |
| 8800.0 | 40.551 | 12.359 | 0.19 |
| 10000.0 | 43.894 | 13.378 | 0.18 |
| 12000.0 | 49.209 | 14.998 | 0.16 |

Material Specifications

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|---------------------------------|--|
| 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

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| Minimum Bend Radius, multiple Bends | 95.25 mm 3.75 in |
| Minimum Bend Radius, single Bend | 40.64 mm 1.6 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 50 |
| Tensile Strength | 113 kg 249.122 lb |
| Bending Moment | 1.9 N-m 16.816 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 lb/in |

Environmental Specifications

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| 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) |
| 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 | B2ca |
| EN50575 CPR Cable EuroClass Smoke Rating | s1a |
| EN50575 CPR Cable EuroClass Droplets Rating | d0 |
| EN50575 CPR Cable EuroClass Acidity Rating | a1 |
| Fire Retardancy Test Method | IEC 60332-1-2 IEC 60332-3C-24 NFPA 130-2010 UL 1666 /CATVR/CMR UL 1685 |
| Smoke Index Test Method | IEC 61034 |

Toxicity Index Test Method

IEC 60754-1 | IEC 60754-2

Packaging and Weights

Cable weight

0.12 kg/m | 0.081 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

