# Coaxial Cable

## LDF4-50A

Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

### CHARACTERISTICS

#### Mechanical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressurizable:</td>
<td>No</td>
</tr>
<tr>
<td>Weight (lb/ft):</td>
<td>0.15</td>
</tr>
<tr>
<td>Weight (kg/m):</td>
<td>0.22</td>
</tr>
<tr>
<td>Tensile Strength (lb):</td>
<td>250.00</td>
</tr>
<tr>
<td>Tensile Strength (kg):</td>
<td>113.00</td>
</tr>
<tr>
<td>Flat Plate Crush Strength (lb/in):</td>
<td>110.00</td>
</tr>
<tr>
<td>Flat Plate Crush Strength (kg/mm):</td>
<td>2.00</td>
</tr>
<tr>
<td>Minimum Bending Radius (inches):</td>
<td>5.00</td>
</tr>
<tr>
<td>Minimum Bend Radius (millimeters):</td>
<td>125.00</td>
</tr>
<tr>
<td>Bending Moment (lb-ft):</td>
<td>2.80</td>
</tr>
<tr>
<td>Bending Moment (N-m):</td>
<td>3.80</td>
</tr>
<tr>
<td>Number of Bends (minimum):</td>
<td>15.00</td>
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<tr>
<td>Number of Bends (typical):</td>
<td>50.00</td>
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#### Electrical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>Cable Impedance (ohms):</td>
<td>50.00</td>
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<tr>
<td>Maximum Frequency (GHz):</td>
<td>8.80</td>
</tr>
<tr>
<td>Velocity percentage:</td>
<td>88.00</td>
</tr>
<tr>
<td>Peak Power Rating (kW):</td>
<td>40.00</td>
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<tr>
<td>DC Resistance Inner (ohms/1000ft):</td>
<td>0.45</td>
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<tr>
<td>DC Resistance Inner (ohms/1000m):</td>
<td>1.48</td>
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<tr>
<td>DC Resistance Outer (ohms/1000ft):</td>
<td>0.58</td>
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<tr>
<td>DC Resistance Outer (ohms/1000m):</td>
<td>1.90</td>
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<tr>
<td>Cable Test Voltage (VDC):</td>
<td>4000.00</td>
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<tr>
<td>Jacket Spark volts (RMS):</td>
<td>8000.00</td>
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<tr>
<td>Capacitance (pF/ft):</td>
<td>23.10</td>
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<tr>
<td>Capacitance (pF/m):</td>
<td>75.80</td>
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<tr>
<td>Inductance (microH/ft):</td>
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<td>Inductance (microH/m):</td>
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<tr>
<td>Insulation Resistance (Meg-Ohms):</td>
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#### Construction Materials

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<tr>
<th>Material</th>
<th>Value</th>
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<tr>
<td>Dielectric Type:</td>
<td>Low Density Foam Dielectric</td>
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<td>Dielectric Material:</td>
<td>Ployethylene Foam</td>
</tr>
<tr>
<td>Jacket Color:</td>
<td>Black</td>
</tr>
<tr>
<td>Jacket Description:</td>
<td>Polyethelyne</td>
</tr>
</tbody>
</table>

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**Customer Support Center:**

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12/3/2002
Coaxial Cable

PRODUCT SPECIFICATION

LDF4-50A
Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

CHARACTERISTICS

Jacket Material: Polyethelyne
Outer Conductor Material: Corrugated Copper
Inner Conductor Material: Copper-Clad Aluminum Wire

Dimensions

<p>| | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>Diameter Over Jacket (inches):</td>
<td>0.62</td>
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<tr>
<td>Diameter Over Jacket (millimeters):</td>
<td>15.70</td>
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<tr>
<td>Outer Conductor Outside Diameter (inches):</td>
<td>0.55</td>
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<tr>
<td>Outer Conductor Outside Diameter (millimeters):</td>
<td>14.00</td>
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<tr>
<td>Outer Conductor Inside Diameter (inches):</td>
<td>0.53</td>
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<tr>
<td>Outer Conductor Inside Diameter (millimeters):</td>
<td>13.50</td>
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<tr>
<td>Inner Conductor Outside Diameter (inches):</td>
<td>0.19</td>
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<tr>
<td>Inner Conductor Outside Diameter (millimeters):</td>
<td>4.80</td>
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General Specifications

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Cable Grade:</td>
<td>Standard</td>
</tr>
<tr>
<td>NEC Classification Type:</td>
<td>N/A</td>
</tr>
<tr>
<td>Nominal Size (inches):</td>
<td>1/2</td>
</tr>
<tr>
<td>Short Description:</td>
<td>1/2&quot; 50 ohm HELIAX foam coaxial cable</td>
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Available Connectors

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connector Type</th>
<th>Special Characteristics</th>
<th>Inner Contact</th>
<th>Grade</th>
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<tbody>
<tr>
<td>124990-1</td>
<td>7/8 EIA Flange</td>
<td>Right Angle</td>
<td>N/A</td>
<td>Standard</td>
</tr>
<tr>
<td>209865</td>
<td>F Flange Female</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
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<tr>
<td>L44F</td>
<td>F Flange Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
</tr>
<tr>
<td>L44J</td>
<td>HN Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
</tr>
<tr>
<td>L44M</td>
<td>LC Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
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<tr>
<td>L44NT</td>
<td>TNC Female</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
</tr>
<tr>
<td>L44P</td>
<td>UHF Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
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<tr>
<td>L44R</td>
<td>7/8 EIA Flange</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
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<tr>
<td>L44U</td>
<td>UHF Female</td>
<td>N/A</td>
<td>Solder</td>
<td>Standard</td>
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<tr>
<td>L4PDF</td>
<td>7-16 DIN Female</td>
<td>N/A</td>
<td>Solder</td>
<td>Plated</td>
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<tr>
<td>L4PDF-A</td>
<td>7-16 DIN Female</td>
<td>N/A</td>
<td>Solder</td>
<td>Plated</td>
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<tr>
<td>L4PDF-BH</td>
<td>7-16 DIN Female</td>
<td>Bulkhead</td>
<td>Solder</td>
<td>Plated</td>
</tr>
<tr>
<td>L4PDF-PM</td>
<td>7-16 DIN Female</td>
<td>Panel Mount</td>
<td>Solder</td>
<td>Plated</td>
</tr>
<tr>
<td>L4PDF-RC</td>
<td>7-16 DIN Female</td>
<td>Ring Flare</td>
<td>Captivated</td>
<td>Plated</td>
</tr>
<tr>
<td>L4PDM</td>
<td>7-16 DIN Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Plated</td>
</tr>
<tr>
<td>L4PDM-A</td>
<td>7-16 DIN Male</td>
<td>N/A</td>
<td>Solder</td>
<td>Plated</td>
</tr>
</tbody>
</table>

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Coaxial Cable

PRODUCT SPECIFICATION

LDF4-50A
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CHARACTERISTICS

<table>
<thead>
<tr>
<th>Connector</th>
<th>Type</th>
<th>Terminals</th>
<th>Mounting</th>
<th>Plating</th>
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<tbody>
<tr>
<td>L4PDM-RC</td>
<td>7-16 DIN Male</td>
<td>Ring Flare</td>
<td>Captivated</td>
<td>Plated</td>
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<tr>
<td>L4PDR</td>
<td>7-16 DIN Male</td>
<td>Right Angle</td>
<td>Solder</td>
<td>Plated</td>
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<td>L4PDR-C</td>
<td>7-16 DIN Male</td>
<td>Right Angle</td>
<td>Captivated</td>
<td>Plated</td>
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<td>L4PNF</td>
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<td>N/A</td>
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<td>L4PNF-A</td>
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<td>N/A</td>
<td>Solder</td>
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<td>N Female</td>
<td>Bulkhead</td>
<td>Solder</td>
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<tr>
<td>L4PNF-PM</td>
<td>N Female</td>
<td>Panel Mount</td>
<td>Solder</td>
<td>Plated</td>
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<tr>
<td>L4PNF-RC</td>
<td>N Female</td>
<td>Ring Flare</td>
<td>Captivated</td>
<td>Plated</td>
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<tr>
<td>L4PNM-H</td>
<td>N Male</td>
<td>Hex Head</td>
<td>Solder</td>
<td>Plated</td>
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<tr>
<td>L4PNM-HA</td>
<td>N Male</td>
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</tr>
<tr>
<td>L4PNM-RC</td>
<td>N Male</td>
<td>Ring Flare</td>
<td>Captivated</td>
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<tr>
<td>L4PNR-H</td>
<td>N Male</td>
<td>Right Angle</td>
<td>Solder</td>
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<tr>
<td>L4PNR-RC</td>
<td>N Male</td>
<td>Right Angle</td>
<td>Captivated</td>
<td>Plated</td>
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<tr>
<td>L4PN-RC</td>
<td>N Male</td>
<td>Ring Flare</td>
<td>Captivated</td>
<td>Plated</td>
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</table>

Attenuation and Average Power Ratings

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Attenuation (dB/100ft)</th>
<th>Attenuation (dB/100m)</th>
<th>Average Power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.045</td>
<td>0.149</td>
<td>40.00</td>
</tr>
<tr>
<td>1</td>
<td>0.064</td>
<td>0.211</td>
<td>36.11</td>
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<tr>
<td>1.5</td>
<td>0.079</td>
<td>0.259</td>
<td>29.46</td>
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<tr>
<td>2</td>
<td>0.091</td>
<td>0.299</td>
<td>25.50</td>
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<tr>
<td>10</td>
<td>0.205</td>
<td>0.672</td>
<td>11.35</td>
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<td>20</td>
<td>0.291</td>
<td>0.954</td>
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<td>30</td>
<td>0.357</td>
<td>1.172</td>
<td>6.51</td>
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<tr>
<td>50</td>
<td>0.463</td>
<td>1.520</td>
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<td>88</td>
<td>0.619</td>
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<td>100</td>
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<td>108</td>
<td>0.688</td>
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<td>174</td>
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<td>2.46</td>
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<td>1.99</td>
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<td>400</td>
<td>1.360</td>
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<td>1.447</td>
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<td>500</td>
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<td>512</td>
<td>1.550</td>
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<tr>
<td>700</td>
<td>1.831</td>
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<td>1.27</td>
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# Coaxial Cable

**PRODUCT SPECIFICATION**

## LDF4-50A

Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

### CHARACTERISTICS

**Attenuation and Average Power Ratings**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Attenuation (dB/100ft)</th>
<th>Attenuation (dB/100m)</th>
<th>Average Power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>1.968</td>
<td>6.456</td>
<td>1.18</td>
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<tr>
<td>824</td>
<td>1.999</td>
<td>6.559</td>
<td>1.16</td>
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<tr>
<td>860</td>
<td>2.046</td>
<td>6.712</td>
<td>1.14</td>
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<tr>
<td>894</td>
<td>2.089</td>
<td>6.855</td>
<td>1.11</td>
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<td>960</td>
<td>2.171</td>
<td>7.124</td>
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<td>1000</td>
<td>2.220</td>
<td>7.283</td>
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<td>10.057</td>
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<td>3.251</td>
<td>10.666</td>
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<td>2100</td>
<td>3.341</td>
<td>10.960</td>
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<td>2200</td>
<td>3.429</td>
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<td>4.389</td>
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<td>4000</td>
<td>4.820</td>
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<td>5200</td>
<td>5.617</td>
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<td>5.680</td>
<td>18.636</td>
<td>0.41</td>
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<td>5600</td>
<td>5.868</td>
<td>19.251</td>
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<td>20.252</td>
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<td>6600</td>
<td>6.469</td>
<td>21.224</td>
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<td>7.262</td>
<td>23.824</td>
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<tr>
<td>8800</td>
<td>7.694</td>
<td>25.243</td>
<td>0.30</td>
</tr>
</tbody>
</table>

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CHARACTERISTICS

Standard Conditions:
For Attenuation. VSWR 1.0, ambient temperature 20ºC (68ºF).
For Average Power. VSWR 1.0, ambient temperature 40ºC (104ºF), inner conductor temperature 100ºC (212ºF); no solar loading.