

L4P43A-PNM-7M

LDF4-50A SureFlex® Jumper with interface type N Male, 7 m



Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Wireless transmission cable assembly |
| Product Brand | HELIAX® SureFlex® |
| Product Series | LDF4-50A |

General Specifications

| | |
|---|-----------------|
| Body Style, Connector A | Straight |
| Interface, Connector A | N Male |
| Interface, Connector B | Sold separately |
| Specification Sheet Revision Level | A |

Dimensions

| | |
|---------------------|-----------------|
| Length | 7 m 22.966 ft |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|-------------------------|--------|
| DTF, Connector A | -32 dB |
|-------------------------|--------|

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 710–806 MHz | 1.201 | 20.79 |
| 806–970 MHz | 1.15 | 23.13 |
| 1420–1530 MHz | 1.15 | 23.13 |
| 1700–2180 MHz | 1.15 | 23.13 |
| 2535–2655 MHz | 1.201 | 20.79 |
| 3400–3800 MHz | 1.25 | 19.08 |
| 4400–4900 MHz | 1.41 | 15.56 |

Jumper Assembly Sample Label

L4P43A-PNM-7M



Environmental Specifications

Immersion Test Method

Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

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

Included Products

- L4PNM – Type N Male for 1/2 in LDF4-50A cable
- L4PNM-H – Type N Male for 1/2 in LDF4-50A cable. Only available through distribution
- LDF4-50A – LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only)

L4PNM

Type N Male for 1/2 in LDF4-50A cable

Product Classification

| | |
|----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |

General Specifications

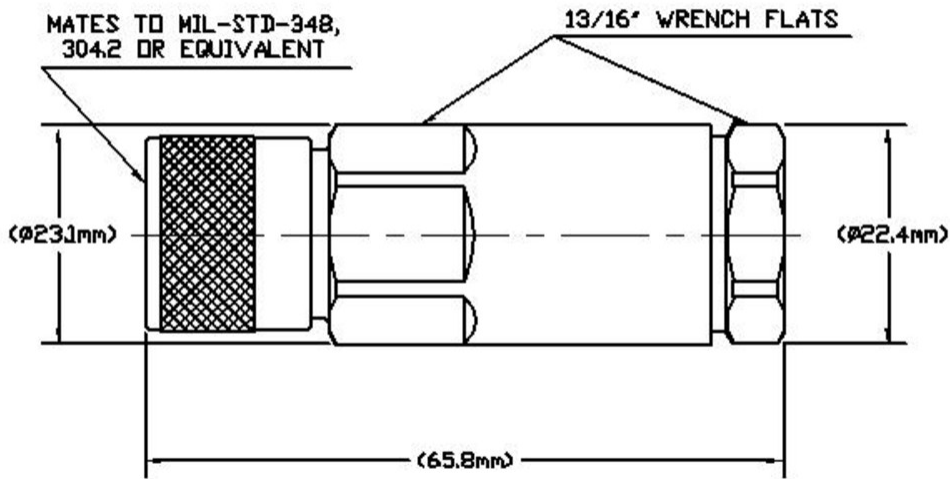
| | |
|--|------------|
| Body Style | Straight |
| Cable Family | LDF4-50A |
| Inner Contact Attachment Method | Solder |
| Inner Contact Plating | Gold |
| Interface | N Male |
| Mounting Angle | Straight |
| Outer Contact Attachment Method | Self-flare |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------|--------------------|
| Length | 65.79 mm 2.59 in |
| Diameter | 23.11 mm 0.91 in |
| Nominal Size | 1/2 in |

Outline Drawing

L4PNM



Electrical Specifications

| | |
|---|----------------------|
| 3rd Order IMD at Frequency | -116 dBm @ 910 MHz |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| Insertion Loss Coefficient, typical | 0.05 |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| Inner Contact Resistance, maximum | 2 mOhm |
| Operating Frequency Band | 0 – 8800 MHz |
| Outer Contact Resistance, maximum | 0.3 mOhm |
| RF Operating Voltage, maximum (vrms) | 707 V |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 3.5–4.4 GHz | 1.152 | 23.02 |
| 45–920 MHz | 1.036 | 35.05 |
| 920–2700 MHz | 1.058 | 31 |
| 2700–3500 MHz | 1.106 | 25.96 |
| 4400–5300 MHz | 1.196 | 20.99 |
| 5300–6200 MHz | 1.222 | 20.01 |
| 6200–8800 MHz | 1.29 | 18 |

L4PNM

Mechanical Specifications

| | |
|--|---------------------------|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 5.42 N-m 47.998 in lb |
| Coupling Nut Proof Torque | 4.52 N-m 39.997 in lb |
| Coupling Nut Retention Force | 444.82 N 100 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-16:9.5 |

Environmental Specifications

| | |
|---|----------------|
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |

Packaging and Weights

| | |
|--------------------|--------------------|
| Weight, net | 108.86 g 0.24 lb |
|--------------------|--------------------|

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|-----------------------------------|
| CHINA-ROHS | Below maximum concentration value |
| ROHS | Compliant |
| UK-ROHS | Compliant |



* Footnotes

Insertion Loss Coefficient, typical 0.05√freq (GHz) (not applicable for elliptical waveguide)

L4PNM-H



Type N Male for 1/2 in LDF4-50A cable. Only available through distribution

Product Classification

| | |
|-----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |
| Product Series | LDF4-50A |
| Ordering Note | CommScope® non-standard product |

General Specifications

| | |
|--|------------|
| Body Style | Straight |
| Cable Family | LDF4-50A |
| Inner Contact Attachment Method | Solder |
| Inner Contact Plating | Gold |
| Interface | N Male |
| Mounting Angle | Straight |
| Outer Contact Attachment Method | Self-flare |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------|-------------------|
| Length | 66.04 mm 2.6 in |
| Diameter | 25.4 mm 1 in |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|--|--------|
| Insertion Loss Coefficient, typical | 0.05 |
| Cable Impedance | 50 ohm |

L4PNM-H

| | |
|---|--------------|
| Connector Impedance | 50 ohm |
| Inner Contact Resistance, maximum | 2 mOhm |
| Operating Frequency Band | 0 – 8800 MHz |
| Outer Contact Resistance, maximum | 0.3 mOhm |
| RF Operating Voltage, maximum (vrms) | 707 V |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 3.5–4.4 GHz | 1.152 | 23.02 |
| 45–920 MHz | 1.036 | 35.05 |
| 920–2700 MHz | 1.058 | 31 |
| 2700–3500 MHz | 1.106 | 25.96 |
| 4400–5300 MHz | 1.196 | 20.99 |
| 5300–6200 MHz | 1.222 | 20.01 |
| 6200–8800 MHz | 1.29 | 18 |

Mechanical Specifications

| | |
|--|---------------------------|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 5.42 N-m 47.998 in lb |
| Coupling Nut Proof Torque | 4.52 N-m 39.997 in lb |
| Coupling Nut Retention Force | 444.82 N 100 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-16:9.5 |

Environmental Specifications

| | |
|---|----------------|
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |

Packaging and Weights

| | |
|--------------------|--------------------|
| Weight, net | 108.86 g 0.24 lb |
|--------------------|--------------------|

Regulatory Compliance/Certifications

L4PNM-H

Agency

CHINA-ROHS

ISO 9001:2015

ROHS

UK-ROHS



Classification

Below maximum concentration value

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

Compliant

Compliant

* Footnotes

Insertion Loss Coefficient, typical $0.05\sqrt{\text{freq (GHz)}}$ (not applicable for elliptical waveguide)

LDF4-50A



LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only)

Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® |
| Product Series | LDF4-50A |
| Ordering Note | CommScope® standard product (Global) |

General Specifications

| | |
|-------------------------|--|
| Product Number | 520094002/00 SZ520094902/00 |
| Flexibility | Standard |
| Jacket Color | Black |
| Performance Note | Attenuation values typical, guaranteed within 5% |

Dimensions

| | |
|---------------------------------|----------------------|
| Diameter Over Dielectric | 12.954 mm 0.51 in |
| Diameter Over Jacket | 15.875 mm 0.625 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

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

LDF4-50A

| | |
|--|-----------------------------------|
| Inductance | 0.19 μ H/m 0.058 μ H/ft |
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 8000 V |
| Operating Frequency Band | 1 – 8800 MHz |
| Peak Power | 40 kW |
| 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 |
| 1700–2200 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 |
| 450.0 | 4.749 | 1.447 | 1.61 |
| 460.0 | 4.804 | 1.464 | 1.59 |

LDF4-50A

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|---------------|--------|-------|------|
| 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 |
| 4700.0 | 17.37 | 5.294 | 0.44 |

LDF4-50A

| | | | |
|---------------|--------|-------|------|
| 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 | PE |
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

| | |
|--|-------------------------|
| Minimum Bend Radius, multiple Bends | 127 mm 5 in |
| Minimum Bend Radius, single Bend | 50.8 mm 2 in |
| 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 | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -70 °C to +85 °C (-94 °F to +185 °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 |

Packaging and Weights

| | |
|---------------------|-------------------------|
| Cable weight | 0.22 kg/m 0.148 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

LDF4-50A

Agency

CENELEC

CHINA-ROHS

ISO 9001:2015

REACH-SVHC

ROHS

UK-ROHS

Classification

EN 50575 compliant, Declaration of Performance (DoP) available

Below maximum concentration value

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

Compliant as per SVHC revision on www.commscope.com/ProductCompliance

Compliant

Compliant

