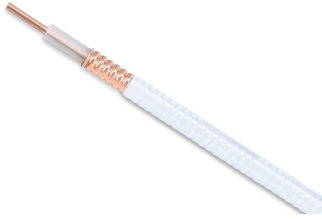


# HL4RPV-50W-CBAND | HL4RPV-50-CBAND



HL4-50, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated copper, 1/2 in, off white PVC jacket

## Product Classification

<b>Product Type</b>	Air coaxial cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	HL4-50A

## General Specifications

<b>Product Number</b>	520098102/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Off-white
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Jacket</b>	15.367 mm   0.605 in
<b>Inner Conductor OD</b>	4.801 mm   0.189 in
<b>Outer Conductor OD</b>	13.843 mm   0.545 in
<b>Nominal Size</b>	1/2 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 2 ohm
<b>Capacitance</b>	75.459 pF/m   23 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.476 ohms/km   0.45 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.903 ohms/km   0.58 ohms/kft
<b>dc Test Voltage</b>	4000 V
<b>Inductance</b>	0.19 $\mu$ H/m   0.058 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	5000 V
<b>Operating Frequency Band</b>	1 – 8800 MHz
<b>Peak Power</b>	40 kW

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<b>Power Attenuation</b>	2.325
<b>Pulse Reflection</b>	0.5%
<b>Velocity</b>	88 %

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
450–680 MHz	1.288	18
680–960 MHz	1.13	24.3
1695–2200 MHz	1.13	24.3
2300–2700 MHz	1.173	22
3100–3300 MHz	1.288	18
3300–4200 MHz	1.288	18
5150–5925 MHz	1.377	16

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.211	0.064	36.18
1.5	0.259	0.079	29.51
2.0	0.299	0.091	25.54
10.0	0.673	0.205	11.34
20.0	0.957	0.292	7.97
30.0	1.177	0.359	6.48
50.0	1.529	0.466	4.99
85.0	2.011	0.613	3.79
88.0	2.048	0.624	3.73
100.0	2.188	0.667	3.49
108.0	2.278	0.694	3.35
150.0	2.705	0.824	2.82
174.0	2.924	0.891	2.61
200.0	3.147	0.959	2.42
204.0	3.18	0.969	2.4
300.0	3.903	1.19	1.95
400.0	4.554	1.388	1.68
450.0	4.853	1.479	1.57
460.0	4.911	1.497	1.55

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500.0	5.138	1.566	1.48
512.0	5.205	1.586	1.47
600.0	5.675	1.73	1.34
700.0	6.176	1.882	1.24
800.0	6.648	2.026	1.15
824.0	6.758	2.06	1.13
894.0	7.07	2.155	1.08
960.0	7.357	2.242	1.04
1000.0	7.526	2.294	1.01
1218.0	8.407	2.562	0.91
1250.0	8.531	2.6	0.89
1500.0	9.461	2.884	0.81
1700.0	10.164	3.098	0.75
1794.0	10.483	3.195	0.73
1800.0	10.503	3.201	0.73
2000.0	11.163	3.402	0.68
2100.0	11.483	3.5	0.66
2200.0	11.798	3.596	0.65
2300.0	12.108	3.69	0.63
2500.0	12.714	3.875	0.6
2700.0	13.303	4.055	0.57
3000.0	14.159	4.315	0.54
3400.0	15.256	4.65	0.5
3600.0	15.788	4.812	0.48
3700.0	16.051	4.892	0.48
3800.0	16.311	4.971	0.47
3900.0	16.568	5.05	0.46
4000.0	16.824	5.128	0.45
4100.0	17.078	5.205	0.45
4200.0	17.329	5.282	0.44
4300.0	17.579	5.358	0.43
4400.0	17.827	5.433	0.43
4500.0	18.073	5.508	0.42
4600.0	18.317	5.583	0.42
4700.0	18.559	5.657	0.41

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<b>4800.0</b>	18.8	5.73	0.41
<b>4900.0</b>	19.04	5.803	0.4
<b>5000.0</b>	19.277	5.875	0.4
<b>6000.0</b>	21.581	6.577	0.35
<b>8000.0</b>	25.869	7.884	0.29
<b>8800.0</b>	27.494	8.38	0.28

## Material Specifications

<b>Dielectric Material</b>	PE spline
<b>Jacket Material</b>	PVC
<b>Inner Conductor Material</b>	Copper-clad aluminum wire
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	127 mm   5 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	25
<b>Tensile Strength</b>	113 kg   249.122 lb
<b>Bending Moment</b>	4 ft lb   5.423 N-m
<b>Flat Plate Crush Strength</b>	1.429 kg/mm   80 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-5 °C to +60 °C (+23 °F to +140 °F)
<b>Operating Temperature</b>	-20 °C to +80 °C (-4 °F to +176 °F)
<b>Storage Temperature</b>	-20 °C to +85 °C (-4 °F to +185 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C
<b>Fire Retardancy Test Method</b>	NFPA 262/CATVP/CMP

## Packaging and Weights

<b>Cable weight</b>	0.253 kg/m   0.17 lb/ft
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