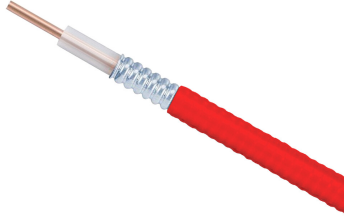


# AL4RPV-50R

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AL4RPV-50, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated aluminum, 1/2 in, Red PVC jacket

- This product is part of the CommScope Wired for Wireless® Solution

## Product Classification

<b>Product Type</b>	Air coaxial cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	AL4-50
<b>Ordering Note</b>	CommScope® standard product (Global)

## General Specifications

<b>Product Number</b>	529299903/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Red

## Dimensions

<b>Diameter Over Jacket</b>	15.748 mm   0.62 in
<b>Inner Conductor OD</b>	4.572 mm   0.18 in
<b>Outer Conductor OD</b>	14.046 mm   0.553 in
<b>Nominal Size</b>	1/2 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±2 ohm
<b>Capacitance</b>	75.459 pF/m   23 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.575 ohms/km   0.48 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.575 ohms/km   0.48 ohms/kft
<b>dc Test Voltage</b>	4000 V
<b>Inductance</b>	0.19 µH/m   0.058 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	5000 V
<b>Operating Frequency Band</b>	1 – 6000 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

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>700–894 MHz</b>	1.13	24.3
<b>806–960 MHz</b>	1.13	24.3
<b>1700–2200 MHz</b>	1.13	24.3

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
<b>1.0</b>	0.216	0.066	35.37
<b>1.5</b>	0.264	0.081	28.84
<b>2.0</b>	0.306	0.093	24.95
<b>10.0</b>	0.691	0.211	11.04
<b>20.0</b>	0.985	0.3	7.75
<b>30.0</b>	1.213	0.37	6.29
<b>50.0</b>	1.581	0.482	4.83
<b>85.0</b>	2.087	0.636	3.66
<b>88.0</b>	2.126	0.648	3.59
<b>100.0</b>	2.274	0.693	3.35
<b>108.0</b>	2.368	0.722	3.22
<b>150.0</b>	2.821	0.86	2.7
<b>174.0</b>	3.054	0.931	2.5
<b>200.0</b>	3.292	1.003	2.32
<b>204.0</b>	3.327	1.014	2.29
<b>300.0</b>	4.104	1.251	1.86
<b>400.0</b>	4.808	1.465	1.59
<b>450.0</b>	5.134	1.565	1.49
<b>460.0</b>	5.197	1.584	1.47
<b>500.0</b>	5.445	1.659	1.4
<b>512.0</b>	5.517	1.682	1.38
<b>600.0</b>	6.032	1.839	1.26
<b>700.0</b>	6.583	2.007	1.16

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<b>800.0</b>	7.105	2.166	1.07
<b>824.0</b>	7.227	2.203	1.06
<b>894.0</b>	7.574	2.308	1.01
<b>960.0</b>	7.892	2.405	0.97
<b>1000.0</b>	8.081	2.463	0.94
<b>1218.0</b>	9.068	2.764	0.84
<b>1250.0</b>	9.207	2.806	0.83
<b>1500.0</b>	10.256	3.126	0.74
<b>1700.0</b>	11.053	3.369	0.69
<b>1794.0</b>	11.416	3.48	0.67
<b>1800.0</b>	11.439	3.487	0.67
<b>2000.0</b>	12.192	3.716	0.63
<b>2100.0</b>	12.559	3.828	0.61
<b>2200.0</b>	12.92	3.938	0.59
<b>2300.0</b>	13.276	4.046	0.57
<b>2500.0</b>	13.975	4.259	0.55
<b>2700.0</b>	14.656	4.467	0.52
<b>3000.0</b>	15.649	4.77	0.49
<b>3400.0</b>	16.928	5.159	0.45
<b>3600.0</b>	17.551	5.349	0.43
<b>3700.0</b>	17.859	5.443	0.43
<b>3800.0</b>	18.164	5.536	0.42
<b>3900.0</b>	18.467	5.628	0.41
<b>4000.0</b>	18.768	5.72	0.41
<b>4100.0</b>	19.066	5.811	0.4
<b>4200.0</b>	19.363	5.902	0.39
<b>4300.0</b>	19.658	5.991	0.39
<b>4400.0</b>	19.951	6.081	0.38
<b>4500.0</b>	20.241	6.169	0.38
<b>4600.0</b>	20.531	6.257	0.37
<b>4700.0</b>	20.818	6.345	0.37
<b>4800.0</b>	21.104	6.432	0.36
<b>4900.0</b>	21.388	6.519	0.36
<b>5000.0</b>	21.671	6.605	0.35
<b>6000.0</b>	24.42	7.443	0.31

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## 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 aluminum

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	127 mm   5 in
<b>Minimum Bend Radius, single Bend</b>	63.5 mm   2.5 in
<b>Number of Bends, minimum</b>	15
<b>Tensile Strength</b>	79 kg   174.165 lb
<b>Bending Moment</b>	5 ft lb   6.779 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 +85 °C (-4 °F to +185 °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>	0.208 kg/m   0.14 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
c(ETL)us Certification	CATVP/CMP
ETL Certification	CATVP/CMP
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

