

Product Description

- The high performance and low attenuation of this coaxial cable allows it to be used in different RF systems, such as 3G, 4G mobile communication.
- Wide range of applications, such as indoor distribution, broadcast, various base stations, wireless cellular, and others.
- Lower VSWR, perfect shielding effectiveness, and extraordinary PIM performance lead to smaller energy loss and interference.
- UV resistance of UL 1581 Standard



Construction		
Component	Material	Diameter, mm
Inner conductor	Copper-clad Aluminum	4.80±0.05
Insulation	Polyethylene spline	11.80±0.05
Outer conductor	Ring-corrugated Aluminum	13.80±0.05
Jacket	Polyvinylchloride (PVC)	16.00±0.05

Mechanical Characteristics	
Minimum single bending radius, mm	63.5
Minimum repeated bending radius, mm	127
Minimum number of bends	15
Maximum tensile strength, N	≥790
Bending moment, N-m	6.779
Fiat plate crush strength, kg/mm	1.429
Recommended maximum clamp spacing, m	1

Electrical Properties	
Impedance, Ohms	50±2
Nominal capacitance, pF/m	75.459
Nominal inductance, µH/m	0.19
Propagation velocity, %	88
DC breakdown voltage, kV	4.0
Jacket spark-test voltage, V _{rms}	5000
Operating frequency band, MHz	1-6000
Insulation resistance, MOhms-km	10 ⁵
Peak power rating, kW	40
Cut-off frequency, MHz	8800

Transmission Properties			
Frequency, MHz	Attenuation, dB/100 m	Attenuation, dB/100 ft	Average Power, kW
1.0	0.216	0.066	35.37
1.5	0.264	0.081	28.84
2.0	0.306	0.093	24.95
10.0	0.691	0.211	11.04
20.0	0.985	0.300	7.75
30.0	1.213	0.370	6.29
50.0	1.581	0.482	4.83
85.0	20.87	0.636	3.66
88.0	2.126	0.648	3.59
100.0	2.274	0.693	3.35
108.0	2.368	0.722	3.22
150.0	2.821	0.860	2.70
174.0	3.054	0.931	2.50
200.0	3.292	1.003	2.32
204.0	3.327	1.014	2.29
300	4.104	1.251	1.86

Transmission Properties			
Frequency, MHz	Attenuation, dB/100 m	Attenuation, dB/100 ft	Average Power, kW
400.0	4.808	1.465	1.59
450.0	5.134	1.565	1.49
460.0	5.194	1.584	1.47
500.0	5.445	0.211	1.40
512.0	5.517	1.659	1.38
600.0	6.032	1.682	1.26
700.0	6.583	1.839	1.16
800.0	7.105	2.007	1.07
824.0	7.227	2.166	1.06
894.0	7.574	2.203	1.01
960.0	7.892	2.308	0.97
1000.0	8.081	2.405	0.94
1218.0	9.068	2.463	0.84
1250.0	9.207	2.764	0.83
1500.0	10.256	2.806	0.74
1700.0	11.053	3.126	0.69
1794.0	11.416	3.480	0.67
1800.0	11.439	3.487	0.67
2000.0	12.192	3.716	0.63
2100.0	12.559	3.828	0.61
2200.0	12.920	3.938	0.59
2300.0	13.276	4.046	0.57
2500.0	13.975	4.259	0.55
2700.0	14.656	4.467	0.52

Transmission Properties			
Frequency, MHz	Attenuation, dB/100 m	Attenuation, dB/100 ft	Average Power, kW
3000.0	15.649	4.770	0.49
3400.0	16.928	5.159	0.45
3600.0	17.551	5.349	0.43
3700.0	17.859	5.443	0.43
3800.0	18.164	5.536	0.42
3900.0	18.467	5.628	0.41
4000.0	18.768	5.72	0.41
4100.0	19.066	5.811	0.40
4200.0	19.363	5.902	0.39
4300.0	19.658	5.991	0.39
4400.0	19.951	6.081	0.38
4500.0	20.241	6.169	0.38
4600.0	20.531	6.257	0.37
4700.0	21.818	6.345	0.37
4800.0	21.108	6.432	0.36
4900.0	21.388	6.519	0.36
5000.0	21.671	6.605	0.35
6000.0	24.420	7.443	0.31

Return Loss	
Frequency Range	VSWR (dB)
700-894MHz	≤1.25(-19)
806-960MHz	≤1.25(-19)
1700-2200MHz	≤1.25(-19)

Environmental Properties	
Recommended storage temperature, °C	-20 to 85
Recommended installation temperature, °C	-5 to 60
Recommended operating temperature, °C	-20 to 85

Regulatory Compliance	
2011/California Proposition 65/EU(RoHS)	Compliant
REACH-SVHC	Compliant
ETL Certification	CMP/CATVP/NFPA 262

Ordering Information		
Description	Part Number	Spool Length, Feet
Aluminum-Shielded Coaxial Air-Core Cable	PLN-AL-50-[COLOR CODE]-SP	1000

[COLOR CODE]: Blue=BLU, White=WHT, Red=RED

P/N Example: 1000 FT Spool of Blue Aluminum-Shielded Coaxial Air Core Cable = PLN-AL-50-BLU-SP