

Description

50 Ohm Coaxial cable

low loss for wireless communication systems


Data Sheet
WL500ZHN


Ø	3,40 (Cu)	9,40 (PEG/PE)	9,57 (Al/Pet/Al/Sur)	10,17 (CuSn)	12,70 (LSZH)
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Construction data

Inner conductor of plain copper	(Cu)	Ø 3,40 ± 0,10	mm
Dielectric of physical foam polyethylene + outer PE skin	(PEG/PE)	Ø 9,40 ± 0,15	mm
Aluminium/Polyester/Aluminium/Surlyne tape longitudinally overlapped and bonded to the dielectric	(Al/Pet/Al/Sur)		
Braid of tinned copper wires	(CuSn)		
Braid optical coverage (IEC 96-1)		78	%
Diameter under Sheath		Ø 10,17	mm
Outer sheath of Thermoplastic material - black - halogen-free, low smoke, flame retardant and UV-resistant	(LSZH)	Ø 12,70 ± 0,20	mm

Printed each meter by yellow ink-jet :

CAVEL WL 500 ZHN 50 Ohm LOW LOSS WI-FI/RF - MADE IN ITALY - ss/aa - m

(ss=week, aa=year) (m=meter marking)

Physical data

Weight of copper conductors		116,00	kg/km
Total weight of cable		212,23	kg/km
Minimum bending radius		100	mm
Maximum cable pulling strength		1.150	N
Operating temperature		-40 / +70	°C
Fire Load	2.279 MJ/km	633 kWh/km	

Electrical data

Characteristic impedance		50 ± 2	Ohm
Capacitance		78	pF/m
Velocity Ratio		86 %	
Inner conductor resistance		2,10	Ohm/km
Outer conductor resistance		4,20	Ohm/km
Loop resistance		6,30	Ohm/km
Sheat Insulation voltage (spark test)		8	kV
Maximum current (I _{eff})		34	A

Structural return loss (SRL)		Max. power			
5 - 470 MHz	>30 dB	30 MHz	4.400 W	50 MHz	3.400 W
470 - 1000 MHz	>28 dB	150 MHz	1.930 W	220 MHz	1.600 W
1000 - 2000 MHz	>26 dB	450 MHz	1.090 W	900 MHz	750 W
2000 - 3000 MHz	>22 dB	1500 MHz	570 W	1800 MHz	520 W
		2000 MHz	490 W	2500 MHz	430 W

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Date
05/06/2017
Responsible
Alberto Scardovi

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Screening Attenuation (SA)

>90 dB

Shield Transfer Impedance (Zt)

Attenuation (at 20°C)

Frequency [MHz]	Attenuation [dB/100m]	Frequency [MHz]	Attenuation [dB/100m]
50	1,90	1500	13,10
150	3,40	1800	14,50
220	4,40	2000	15,40
450	6,60	2500	17,50
900	9,70	5800	23,80

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