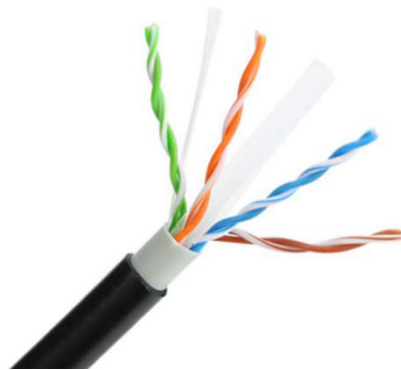
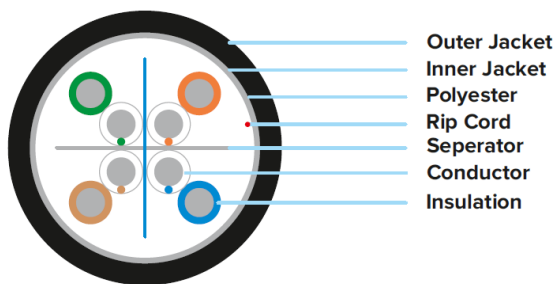


# Category 6

U/UTP 23AWG LSZH – PE (Double Jacketed)

## Cable Construction



**Genius** Category 6 U/UTP 1 Gigabit Ethernet cable is engineered with four balanced twisted copper pairs to ensure reliable signal integrity. It is designed to deliver Category 6 permanent link and channel performance up to 250MHz, in alignment with internationally defined standards. This ensures integrated networking, high speed, superior data throughput, and high efficiency, making it ideal for modern LAN infrastructure as well as outdoor application.

## Key Applications

- Designed to Supports 10/100/1000Base-T with data rates up to 1 Gbps
- Cat 6 U/UTP cable compliant with TIA, ISO/IEC & EN standards
- Digital and analogue voice and video (RGB) signals on LANs
- Operates at bandwidth of 250 MHz.
- Compatible with PoE, PoE+ and PoE++ (IEEE 802.3af/at/bt) applications
- RoHS Compliant
- Genius Network Brand Performance Warranty for 25 years

## Product Construction

Conductor Size	23 AWG
Conductor Material	Solid Bare Copper
Conductor Count	8 Nos
No of Pairs	4 Pairs
Insulation Diameter	1.0 mm (Nominal)
Insulation Material	HDPE
Pair Color	Blue-White with Blue Orange-White with Orange Green-White with Green Brown-White with Brown
Central Separator	X - Shaped
Central Separator Material	HDPE
Rip Cord	Yes
Outer Jacket Material	PE - Anti Rodent
Inner Jacket Material	LSZH
Jacket Thickness	0.55 mm (Nominal)
Outer Jacket Color	Black
Cable Diameter	6.9 ± 0.5 mm
Nominal Weight	50 ± 5 Kg/Km
Min Bending Radius	6D (D - Cable Diameter)
Minimum Elongation at Break	≥300% (Typical)
Pulling Force	11.5 kg

## Environmental Specification

Installation Temperature	-40 °C to +75 °C
Operating Temperature	-20 °C to +60 °C
Storage Temperature	-20 °C to +75 °C

## Electrical Characteristics @20°C ±1°C

Operating Frequency	250 MHz
Characteristic Impedance	100 Ω ±15 Ω @ 1-250 MHz
Conductor resistance (DC)	≤ 9.38 Ω / 100 m
Resistance unbalance	5% Max
Mutual Capacitance	≤ 5.6 nF / 100 m
Capacitance unbalance	330 pF/100 m
Cable Skew	≤ 45 ns / 100 m
NVP	69%
Max propagation delay	≤ 535 ns / 100 m @ 250 MHz
Max operating Voltage	300 V
Insulation Resistance	500 MΩ Minimum
Dielectric Strength	1.2 kv DC for 1 sec

## Transmission Characteristics Per 70 Mtrs

Freq (MHz)	IL Max dB	NEXT Min dB	ACR-N Min dB	RL Min dB	PSNEXT Min dB	PS ACR-N Min dB	ACR-F Min dB	PS ACR-F Min dB
1	2	65.3	63.3	20	62.3	60.3	63.3	60.3
4	3.8	65.3	61.5	23	62.3	58.5	51.3	48.3
8	5.3	64.8	59.5	24.5	61.8	56.5	45.3	42.3
10	6	64.3	58.3	25	61.3	55.3	43.3	40.3
16	7.6	62.8	55.2	25	59.8	52.2	39.3	36.3
20	8.5	61.8	53.3	25	58.8	50.3	37.3	34.3
25	9.5	60.8	51.3	24.3	57.8	48.3	35.3	32.3
31.25	10.7	59.3	48.6	23.6	56.3	45.6	33.3	30.3
62.5	15.4	55.3	39.9	20.8	52.3	36.9	27.3	24.3
100	19.8	52.3	32.5	18	49.3	29.5	23.3	20.3
125	22.3	51.3	29	17	48.3	26	21.3	18.3
200	29.1	48.3	19.2	12	45.3	16.2	17.3	14.3
250	32.8	47.3	14.5	10	44.3	11.5	15.3	12.3

## Standards, Certifications & Compliances

- Compliance with Transmission Standards ANSI/TIA-568-C.2, ANSI/TIA-568.2-D, ANSI/TIA-568.2-E, ISO/IEC 11801, EN 50173
- Supports PoE++ in accordance with IEEE 802.3af / 802.3at / 802.3bt
- RoHS v3 Compliant
- Compliance with IEC 60332-1-2 for Flammability Test (only for LSZH)
- Compliance with IEC 60754-1/2 for acid gas emission (only for LSZH)
- Compliance with IEC 61034-2 and ASTM D2843 for smoke density (only for LSZH)
- Compliance with ASTM D2863 for minimum oxygen index (only for LSZH)

## Packaging

Packaging

Wooden Bobbin, 305  
Meters

## Ordering Information

Part Number	Product Description
GC6CADJ3XLS3X	Genius Cat 6 U/UTP 23AWG Double Jacket cable LSZH-PE 305 Meters Black

