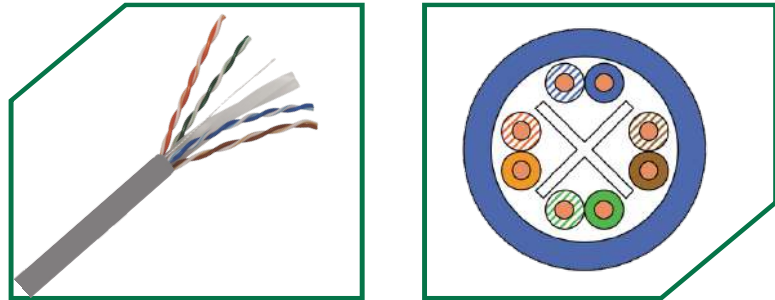


Part Number:

LSZH : PL-CA6UTL

PVC : PL-CA6UTP



High-performance Category 6 U/UTP cable engineered for structured cabling systems, fully compliant with international standards. Designed to deliver reliable and stable high-speed data transmission for commercial, residential, and enterprise network environments.

The cable supports Gigabit Ethernet applications up to 250 MHz and is optimized for PoE, PoE+, and structured LAN installations up to 100 meters.

“Engineered for Performance. Built for Reliability.”

1. General Description

High-performance Category 6 UTP cable engineered for structured cabling systems, fully compliant with international standards. Designed to deliver reliable and consistent performance in commercial and enterprise network environments.

2. Construction

Parameter	Specification
Conductor Material	100% Bare Copper (CU)
Conductor Size	23 AWG (0.565 – 0.57 mm)
Number of Conductors	8 (4 Twisted Pairs)
Insulation Material	High-Density Polyethylene (HDPE)
Pair Separator	Cross Filler (PE)
Shielding	UTP (Unshielded)
Outer Jacket	PVC / LSZH (Optional)
Jacket Type	Virgin Material (Non-Recycled)
Cable Diameter	6.0 ± 0.3 mm
Jacket Color	Standard: Grey. Options: RED & Black

Part Number: LSZH : PL-CA6UTL PVC : PL-CA6UTP

3. Electrical Characteristics

Resistance Unbalance	≤ 5%
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 9.38 Ω/100m
Loop Resistance	≤ 18.76 Ω/100m
Capacitance	≤ 5.6 nF/100m
Frequency Range	Up to 250 MHz
Operating Voltage	IEEE 802.3 PoE Standard (up to 57V DC)

4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	4 × Cable Diameter
Pulling Force	≤ 110 N
Operating Temperature	-20°C to +60°C
Installation Temperature	0°C to +50°C
Flame Rating	Optional (IEC 60332-1 compliant upon request)

5. Applications

- Structured Cabling Systems
- Gigabit Ethernet Networks (1000Base-T)
- Office Building & Enterprise Networks
- IP CCTV Systems
- Data Centres
- VoIP, PoE Systems & Video Transmission
- Smart Home & Industrial Networks

6. Technical Performance

The following table represents the baseline Cat6 UTP performance at 100-meter channel. Designed with performance margins above standard requirements to ensure stable transmission.

Frequency (MHz)	RL (≥ dB)	ATT (≤ dB)	NEXT (≥ dB)	ACRF (≥ dB)	PS NEXT (≥ dB)	PS ACRF (≥ dB)
1	19	3	65	64	62	61
4	21	3.8	64	52	61	49
8	21	5.3	59	46	57	43
10	21	6	57	44	55	41
16	20	7.6	54	40	52	37
20	19	8.5	53	38	50	35
25	19	9.5	51	36	49	33
31.25	18	10.7	50	34	47	31
62.5	16	15	45	28	42	25
100	14	19	41	24	39	21
200	11	28	36	18	34	15
250	10	32	35	16	32	13

Part Number: LSZH : PL-CA6UTL PVC : PL-CA6UTP

7. Transmission Performance

- Supports 10/100/1000 Mbps (Gigabit Ethernet)
- Bandwidth up to 250 MHz
- Designed for PoE / PoE+ / PoE++ applications
- Excellent NEXT, FEXT, and Return Loss performance

8. Key Features

- 23AWG Solid Bare Copper Conductors for optimal conductivity
- Enhanced NEXT & FEXT performance for signal integrity
- Low attenuation for long-distance stable transmission
- Precision twisted pairs with cross filler for reduced crosstalk
- Fully optimized for PoE / PoE+ / PoE++ applications
- Durable outer jacket (100% virgin material) for long service life
- High performance verified through Fluke testing

9. Standards Compliance

- ISO/IEC 11801 Class E
- ANSI/TIA-568.2-D
- RoHS Compliant
- CE Compliant
- CPR (EN 50575) – upon request
- UL / ETL Verified – upon request

10. Quality Assurance

Manufactured under strict quality control to ensure:

- Consistent electrical performance
- Long-term reliability
- Compliance with international standards

Testing:

- 100% Fluke Tested (Channel & Permanent Link)

Part Number: LSZH : PL-CA6UTL PVC : PL-CA6UTP

11. Key Advantages

- High Copper Purity for maximum transmission efficiency
- Excellent balance between cost and performance
- Stable performance under PoE load conditions
- Suitable for professional enterprise installations

12. Warranty:

25-Year System Warranty

(Subject to proper installation and certified components usage)