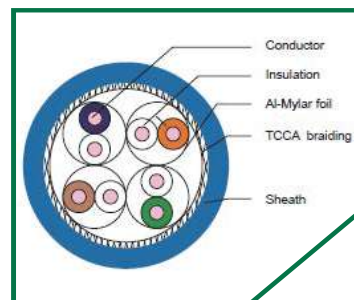
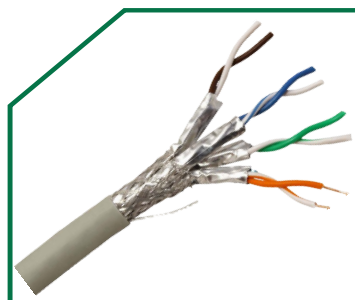


**Part Number:**

**LSZH :** PL-CA6ASTL

**PVC :** PL-CA6ASTP



**1. General Description**

High-performance Category 6A S/FTP solid bare copper cable, designed for 10GBase-T up to 100m. Each pair individually shielded with aluminum foil plus overall tinned copper braid for maximum EMI/RFI protection. Ideal for data centers, industrial automation, PoE++ (IEEE 802.3bt), and high-interference environments. Fully compliant with ISO/IEC 11801 Class EA and ANSI/TIA-568.2-D.

**2. Construction**

Parameter	Specification
Conductor Material	100% Bare Copper (CU)
Conductor Size	23 AWG (0.565–0.57 mm nominal)
Number of Conductors	8 (4 Twisted Pairs)
Insulation Material	High-Density Polyethylene (HDPE)
Pair Separator	Optional: Central cross separator
Shielding	S/FTP (Aluminum foil per pair + overall tinned copper braid)
Outer Jacket	PVC / LSZH (Optional)
Jacket Type	Virgin Material (Non-Recycled)
Cable Diameter	7.5 – 8.5 mm (Typical for S/FTP)
Jacket Colour	Grey (Standard) / Red / Black (Optional)

Part Number: LSZH : PL-CA6ASTL PVC : PL-CA6ASTP

### 3. Electrical Characteristics

Parameter	Specification
Characteristic Impedance	100 ± 15 Ω
DC Resistance	≤ 8.5 Ω/100m
Loop Resistance	≤ 17.0 Ω/100m
Resistance Unbalance	≤ 5%
Capacitance	≤ 5.0 nF/100m
Frequency Range	Up to 500 MHz
Operating Voltage	IEEE 802.3 PoE standard (up to 57V DC)

### 4. Mechanical Characteristics

Parameter	Value
Minimum Bend Radius	8 × OD during pulling, 4 × OD after installation
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
- 10 Gigabit Ethernet (10GBase-T)
- Gigabit Ethernet (1000BASE-T)
- Fast Ethernet (100BASE-TX)
- 10BASE-T Ethernet
- Data Centres & High-Speed Backbone Links
- Industrial & High EMI Environments
- IP CCTV Systems (High Bandwidth)
- VoIP, PoE, PoE+ & PoE++ Systems
- Smart Buildings & Enterprise Networks

Part Number: LSZH : PL-CA6ASTL PVC : PL-CA6ASTP

## 6. Technical Performance

The following table represents the baseline Cat6A S/FTP electrical performance at 100-meter channel up to 500 MHz. The fully shielded construction significantly reduces alien crosstalk and external interference, ensuring superior signal integrity and stable 10 Gigabit transmission. The cable is engineered with performance margins exceeding standard requirements.

MHz	RL ≥dB	ATT ≤dB	NEXT ≥dB	ACRF ≥dB	PS NEXT dB	PS ACRF dB
1	20.0	2.9	75.0	73.0	72.0	70.0
4	23.0	3.4	74.0	62.0	71.0	59.0
8	24.5	4.8	69.0	56.0	66.0	53.0
10	25.0	5.3	68.0	54.0	65.0	51.0
16	24.0	6.8	65.0	50.0	62.0	47.0
20	23.5	7.6	63.5	48.0	60.5	45.0
25	23.0	8.6	62.0	46.0	59.0	43.0
31.25	22.5	9.6	60.5	44.0	57.5	41.0
62.5	20.5	13.5	55.5	38.0	52.5	35.0
100	19.0	17.5	52.0	34.0	49.0	31.0
200	17.0	25.5	47.0	28.0	44.0	25.0
250	16.5	28.5	45.5	26.0	42.5	23.0
300	15.0	34.0	42.0	23.0	39.0	20.0
400	14.0	39.5	39.0	20.0	36.0	17.0
500	13.5	42.0	37.5	18.0	34.5	15.0

Typical values measured on 100m channel at 20°C. Actual performance may vary slightly.

## 7. Transmission Performance

- Supports 10/100/1000 Mbps & 10 Gigabit Ethernet (10GBase-T)
- Bandwidth up to 500 MHz
- Designed for PoE / PoE+ / PoE++ high-power applications
- Excellent protection against EMI / RFI interference
- Superior NEXT, FEXT, and Return Loss performance

Part Number: LSZH : PL-CA6ASTL PVC : PL-CA6ASTP

## 8. Key Features

- S/FTP shielding for maximum interference protection
- Individually foil-shielded pairs for reduced crosstalk
- 23AWG solid bare copper conductors for optimal conductivity
- Stable performance in high-noise environments
- Low attenuation for reliable 10G transmission
- Durable outer jacket (100% virgin material)
- High performance verified through Fluke testing
  - Fully compatible with all major switch brands (Cisco, Aruba, Juniper, etc.)
  - Suitable for outdoor use in conduits (UV resistant LSZH or Black PVC jacket required)

## 9. Standards Compliance

- ISO/IEC 11801 Class EA
- ANSI/TIA-568.2-D
- EN 50173-1
- IEC 61156-5
- 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
- Reliable 10G transmission
- Long-term operational stability
- Full compliance with international standards

Testing:

- 100% Fluke Tested (Channel & Permanent Link)

## 11. Key Advantages

- Superior shielding compared to UTP cables
- Ideal for high-interference environments
- Stable 10 Gigabit performance over long distances
- Reduced signal loss and alien crosstalk
- Perfect for data centers and industrial applications

## 12. Warranty

25-Year System Warranty

(Subject to proper installation and