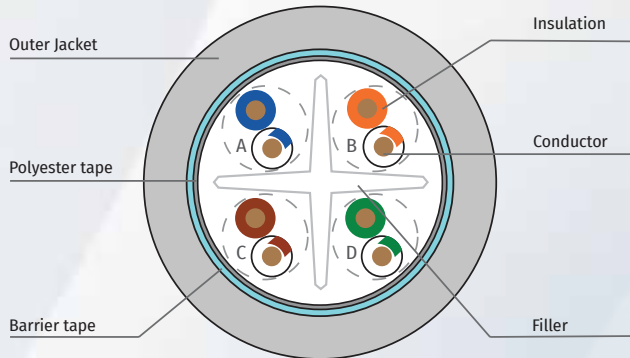


## 4PR 23AWG U/UTP CAT6A LSZH COPPER TWISTED PAIR CABLE



### Color

- A.White/Blue (Stripe) & Blue
- B.White/Orange (Stripe) & Orange
- C.White/Green (Stripe) & Green
- D.White/Brown (Stripe) & Brown



## Construction

|                                   |                   |
|-----------------------------------|-------------------|
| Structure                         |                   |
| Construction                      | U/UTP             |
| Number of pairs                   | 4 Pairs           |
| Conductor                         |                   |
| Material                          | Solid Bare copper |
| AWG                               | 23 AWG            |
| Dimension                         | 0.566±0.020mm     |
| Insulation                        |                   |
| Material                          | Foam PE & HDPE    |
| Dimension(Blue ,Green)            | 1.15±0.05 mm      |
| Dimension(Orange ,Brown)          | 1.11 ±0.05 mm     |
| Cabling                           |                   |
| Twisting lay length               | ≤30mm             |
| Cabling lay length                | ≤200mm            |
| Filler                            |                   |
| Filler                            | PE                |
| Binder                            |                   |
| Binder Material                   | Polyester tape    |
| Shield                            |                   |
| Individual Shield & material      | N/A               |
| Primary overall shield & material | Barrier tape      |
| Drain wire                        | N/A               |
| Outer jacket                      |                   |
| Material                          | LSZH              |
| Thickness (min)                   | 0.4 mm            |
| Outer diameter                    | 7.3±0.4 mm        |
| Rip cord                          | N/A               |
| Outer jacket colour               | Customer request  |

## Physical Characteristics

|  |  |
|--|--|
| Operating temperature range              | -20 ~ +75 °C                             |
| Installation temperature range           | 0 ~ +50 °C                               |
| Outer jacket                             |  |
| Recom. pulling tension (max.)            | 110N (TIA-568.2-D)                       |
| Bending radius (Installation) (min.)     | 8 x O.D.                                 |
| Outer jacket tensile strength            | ≥ 8.3 Mpa( UL 444)                       |
| Outer jacket elongation                  | ≥ 100%( UL 444)                          |
| Outer jacket aging condition             | 100 °C x 48 hrs ( UL 444)                |
| Tensile strength retention after aging   | ≥ 75% of Unaging(UL 4444)                |
| Elongation retention after aging         | ≥ 75% of Unaging(UL 4444)                |
| Cold bend                                | No crack (@ -20°C x 4hrs ) (IEC 61156-5) |
| Halogen Acid Gas Amount Max.Conductivity | 10 μS/mm(IEC 60754-2)                    |
| Halogen Acid Gas Amount Min. Ph          | 4.3(IEC 60754-2)                         |
| Smoke Density Min. Transmittance         | 60% (IEC 61034-2)                        |

## Electrical Characteristics

|  |  |
|--|--|
| Insulation resistance (min.)             | 5000 M $\Omega$ .Km (IEC 61156-5)            |
| Operating voltage (max.)                 | 300V (UL444)                                 |
| Mutual capacitance (nom.)                | $\leq$ 5.6 nF/100m @1kHz (IEC 61156-5)       |
| Capacitance unbalance:<br>pair-to-ground | $\leq$ 160 pF/100m @1kHz (IEC 61156-5)       |
| Delay skew (max.)                        | 93.8 $\Omega$ /km @20 °C (TIA-568.2-D)       |
| Conductor DC resistance (max.)           | $\leq$ 4% @20 °C within a pair (TIA-568.2-D) |
| Conductor DC resistance unbalance        | $\leq$ 5% @20 °C between pairs (IEC 61156-5) |
| Nominal velocity of propagation          | 65%  |

## Transmission characteristics ( Test length :100m)

TIA-568.2-D & IEC 61156-5, ISO/IEC 11801

| Frequency<br>(MHz) | Characteristic<br>Impedance<br>Upper limit<br>Zu ( $\Omega$ ) | Characteristic<br>Impedance<br>Lower limit<br>Zl ( $\Omega$ ) | ATT<br>(dB/<br>100m<br>Max) | RL<br>(dB<br>Min) | NEXT<br>(dB<br>Min) | PS NEXT<br>(dB Min) | ACR-F<br>(dB Min) | PS ACR-F<br>(dB Min) | PS ANEXT<br>(dB Min) | PS AACRF<br>(dB Min) | PD<br>(ns/<br>100m<br>Max) | TCL<br>(dB<br>Min) |
|--------------------|---|---|-----------------------------|-------------------|---------------------|---------------------|-------------------|----------------------|----------------------|----------------------|----------------------------|--------------------|
| 1                  | ---   | ---   | 2.08                        | 20.0              | 74.3                | 72.3                | 67.8              | 64.8                 | 67.0                 | 67.0                 | 570.0                      | 40.0               |
| 4                  | 115.2   | 86.8  | 3.80                        | 23.0              | 65.3                | 63.3                | 55.8              | 52.8                 | 67.0                 | 66.2                 | 552.0                      | 40.0               |
| 8                  | 112.6   | 88.8  | 5.31                        | 24.5              | 60.8                | 58.8                | 49.7              | 46.7                 | 67.0                 | 60.1                 | 546.7                      | 40.0               |
| 10                 | 111.9   | 89.4  | 5.93                        | 25.0              | 59.3                | 57.3                | 47.8              | 44.8                 | 67.0                 | 58.2                 | 545.4                      | 40.0               |
| 16                 | 111.9   | 89.4  | 7.49                        | 25.0              | 56.2                | 54.2                | 43.7              | 40.7                 | 67.0                 | 54.1                 | 543.0                      | 38.0               |
| 20                 | 111.9   | 89.4  | 8.38                        | 25.0              | 54.8                | 52.8                | 41.8              | 38.8                 | 67.0                 | 52.2                 | 542.0                      | 37.0               |
| 25                 | 113.0   | 88.5  | 9.38                        | 24.3              | 53.3                | 51.3                | 39.8              | 36.8                 | 67.0                 | 50.2                 | 541.2                      | 36.0               |
| 31.25              | 114.1   | 87.6  | 10.50                       | 23.6              | 51.9                | 49.9                | 37.9              | 34.9                 | 67.0                 | 48.3                 | 540.4                      | 35.1               |
| 62.5               | 118.4   | 84.5  | 14.99                       | 21.5              | 47.4                | 45.4                | 31.9              | 28.9                 | 65.6                 | 42.3                 | 538.6                      | 32.0               |
| 100                | 121.9   | 82.0  | 19.14                       | 20.1              | 44.3                | 42.3                | 27.8              | 24.8                 | 62.5                 | 38.2                 | 537.6                      | 30.0               |
| 150                | 125.7   | 79.6  | 23.68                       | 18.9              | 41.7                | 39.7                | 24.3              | 21.3                 | 59.9                 | 34.7                 | 536.9                      | 28.2               |
| 200                | 128.8   | 77.6  | 27.58                       | 18.0              | 39.8                | 37.8                | 21.8              | 18.8                 | 58.0                 | 32.2                 | 536.5                      | 27.0               |
| 250                | 131.5   | 76.0  | 31.07                       | 17.3              | 38.3                | 36.3                | 19.8              | 16.8                 | 56.5                 | 30.2                 | 536.3                      | 26.0               |
| 300                | 133.9   | 74.7  | 34.27                       | 16.8              | 37.1                | 35.1                | 18.3              | 15.3                 | 55.3                 | 28.7                 | 536.1                      | 25.2               |
| 400                | 138.2   | 72.3  | 40.05                       | 15.9              | 35.3                | 33.3                | 15.8              | 12.8                 | 53.5                 | 26.2                 | 535.8                      | 24.0               |
| 500                | 142.0   | 70.4  | 45.26                       | 15.2              | 33.8                | 31.8                | 13.8              | 10.8                 | 52.0                 | 24.2                 | 535.6                      | 23.0               |

\* Cable that meet the requirements of the characteristic impedance are not required to be measured for return loss; alternately cables that meet the return loss requirements are not required to be measured for characteristic impedance.

\* Test ambient temp. is 20°C

\* Mutual capacitance, capacitance unbalance, characteristic impedance, return loss, insertion loss, SRL, NEXT loss, ACRF, TCL, and TCTL measurements and calculations shall be performed on cable samples of 100 m (328 ft) removed from the reel or packaging. The test sample shall be laid out along a non-conducting surface, loosely coiled, or supported in aerial spans, and all pairs shall be terminated according to the specific requirements of this annex. Other test configurations are acceptable if correlation to the reference

## Ordering Information

\* Ordering Code Example

LIGC6AUL

PN  
LIGC6AUL

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| L | I | G | C | 6 | A | U | L |
|---|---|---|---|---|---|---|---|