

## Data/LAN Cables

### Cat 5e U/UTP PE



#### Application

- 10 BASE-T (IEEE 802.3) Ethernet
- 100 BASE-T (IEEE 802.3u) Fast Ethernet
- 100 VG-AnyLAN (IEEE 802.12)
- 4/16 Mbps Token Ring (IEEE 802.5)
- 100 Mbps CDDI
- 52/155 Mbps ATM
- 1000 BASE-T (Gigabit Ethernet) (IEEE 802.3 ab)

#### Cable Construction

- 1 - Conductor : Electrolytic solid copper conductor
- 2 - Insulation : Solid polyethylene insulation
- 3 - Stranding : Insulations are stranded into pairs and all pairs are stranded together.
- 4 - Outer Jacket : UV resistant polyethylene outer jacket, RAL 9005 (Black)

#### Technical Characteristics

| Conductor Resistance<br>$\Omega/\text{km}$<br>(20 °C) | Insulation Resistance<br>$\text{M}\Omega/\text{km}$<br>(20 °C) | Mutual Capacitance<br>$\text{nF}/\text{km}$ | Resistance Unbalance<br>% | Propagation Velocity<br>% | Characteristic Impedance<br>$\Omega$<br>(1-100 MHz) | Operating Voltage<br>V DC | Test Voltage<br>V<br>(DC, 1 minute) |
|-------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------|---------------------------|---------------------------|-----------------------------------------------------|---------------------------|-------------------------------------|
| Max. 94                                               | 5000                                                           | Max. 56                                     | %2                        | %67-69                    | 100 $\pm$ %15                                       | 250                       | 1200                                |

#### Mechanical Characteristics

| Bending Radius | Temperature Range<br>Operating |
|----------------|--------------------------------|
| 8.0xD mm       | -55°C ~ +60°C                  |

#### Standards

##### Manufacturing

ANSI/TIA-568-C.2,  
IEC-61156-5,  
IEC-11801

#### Electrical Properties

| Frequency<br>MHz | Insertion Loss<br>dB/100m<br>(Max.) | Near-end Crosstalk (NEXT)<br>dB<br>(Min.) | Power-sum Near-end Crosstalk (PSNEXT)<br>dB<br>(Min.) | Equal-level Far-end Crosstalk (ELFEXT)<br>dB/100m<br>(Min.) | Power-sum Equal Level Far-end Crosstalk (PSELFEXT)<br>dB/100m<br>(Min.) | Return Loss (RL)<br>dB<br>(Min.) |
|------------------|-------------------------------------|-------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------|
| 1                | 2                                   | 65.3                                      | 62.3                                                  | 63.8                                                        | 63.8                                                                    | 23                               |
| 4                | 4.1                                 | 56.3                                      | 53.3                                                  | 51.8                                                        | 51.8                                                                    | 23                               |
| 8                | 5.8                                 | 51.8                                      | 48.8                                                  | 45.7                                                        | 45.7                                                                    | 23                               |
| 10               | 6.5                                 | 50.3                                      | 47.3                                                  | 43.8                                                        | 43.8                                                                    | 23                               |
| 16               | 8.2                                 | 47.2                                      | 44.2                                                  | 39.7                                                        | 39.7                                                                    | 23                               |
| 20               | 9.3                                 | 45.8                                      | 42.8                                                  | 37.8                                                        | 37.8                                                                    | 23                               |
| 25               | 10.4                                | 44.3                                      | 41.3                                                  | 35.8                                                        | 35.8                                                                    | 22                               |
| 31.25            | 11.7                                | 42.9                                      | 39.9                                                  | 33.9                                                        | 33.9                                                                    | 21                               |
| 62.5             | 17                                  | 38.4                                      | 35.4                                                  | 27.9                                                        | 27.9                                                                    | 18                               |
| 100              | 22                                  | 35.3                                      | 32.3                                                  | 23.8                                                        | 23.8                                                                    | 16                               |

## Cat 5e U/UTP PE

| Part Number             | Pair Count | Conductor Diameter (AWG) | Approx. Cable Diameter (mm) | Copper Weight (kg/km) | Approx. Weight (kg/km) | Packing Lengths (m) |
|-------------------------|------------|--------------------------|-----------------------------|-----------------------|------------------------|---------------------|
| 3.415.2.1.1.0051.0.0004 | 4          | 24                       | 5.2                         | 15.3                  | 28                     | 500/1000            |