

# Category 5e Cable

Enhanced Transmission Throughput

## Product Construction:

### Conductors:

- 24 AWG solid bare annealed copper

### Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

### Rip Cord

- Applied longitudinally under jacket

### Jacket

- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

## Applications:

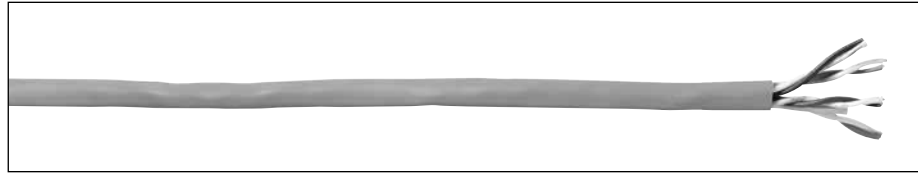
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mp/s token ring

## Compliances:

- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ICEA S-90-661 (Category 5e)
- UL & c(UL) Type CMR (UL 1666) for Non-Plenum
- UL & c(UL) Type CMP (NFPA 262 and CSA FT6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2011/65/EU
- Third-party verified for guaranteed performance

## Packaging:

- 1000' Pull-Pac® II
- 1000' Spool-Pac®



## PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	CR5.30.07	CP5.30.07	CR5.A3.07	CP5.A3.07
White	CR5.30.02	CP5.30.02	CR5.A3.02	CP5.A3.02
Gray	CR5.30.10	CP5.30.10	CR5.A3.10	CP5.A3.10
Green	CR5.30.06	CP5.30.06	CR5.A3.06	CP5.A3.06
Yellow	CR5.30.05	CP5.30.05	CR5.A3.05	CP5.A3.05
Red	CR5.30.03	CP5.30.03	CR5.A3.03	CP5.A3.03

## ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSAGR (MIN)	AGR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELFEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.7	51.7	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.7	37.7	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.8	27.8	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	16.9	19.9	—
200	—	—	32.4	27.8	30.8	14.7	17.7	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

## PHYSICAL DATA

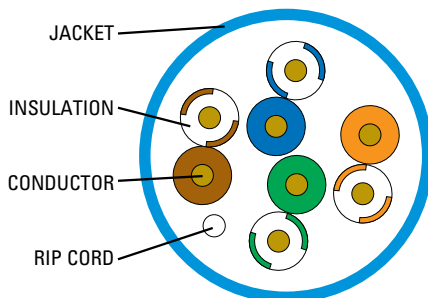
	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-10 to +60	-10 to +60

## ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20°C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMR: 72 CMR: 70
Characteristic Impedance Frequency (f):	Ohms 1-100 MHz 100 ± 15

Data subject to change.

## CATEGORY 5e CROSS-SECTION



# Industry Standards, Typical Uses and Electrical Requirements

## For 24 AWG Twisted Pair Horizontal Wiring Cable

CATEGORY	INDUSTRY STANDARDS	TYPICAL USES	FREQUENCY	ATTEN. dB/100M (MAX)	CHARACTERISTICS IMPEDANCE OHMS		NEXT dB (MIN)	PSNEXT dB (MIN)	STRUCT. RETURN LOSS dB (MIN)	RETURN LOSS dB (MIN)	PSELFEXT dB (MIN)
					MIN	MAX					
<b>Category 1*</b>	ANSI/ICEA S-80-576 ANSI/ICEA S-90-661	POTS	—	—	—	—	—	—	—	—	—
<b>Category 2</b>	IBM Type 3 ANSI/ICEA S-80-576	IBM Type 3—1 Mbps	256kHz 512kHz 772kHz 1MHz	1.3 1.8 2.2 2.6	90 87 85 84	120 117.5 114 113	— — — —	— — — —	— — — —	— — — —	— — — —
<b>Category 3</b>	ANSI/TIA/EIA 568B.2 ANSI/ICEA S-90-661 NEMA WC63.1	10 BASE-T 4 Mbps TOKEN RING 52 Mbps ATM 100 BASE VG AnyLAN	772kHz 1MHz 4MHz 8MHz 10MHz 16MHz	2.2 2.6 5.6 8.5 9.7 13.1	87 85 85 85 85 85	117 115 115 115 115 115	43 41 32 28 26 23	— — — — — —	12 12 12 12 12 10	— — — — — —	— — — — — —
<b>Category 5</b>	ANSI/TIA/EIA 568A ANSI/ICEA S-90-661 NEMA WC63.1	16 Mbps TOKEN RING 100 BASE-T 52/155 Mbps ATM 100 BASE VG AnyLAN 100 Mbps TP PMD	772kHz 1MHz 4MHz 8MHz 10MHz 16MHz 20MHz 25MHz 31.25MHz 62.5MHz 100MHz	1.8 2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0	86 85 85 85 85 85 85 85 85 85 85	117 115 115 115 115 115 115 115 115 115 115	64 62 53 48 47 44 42 41 40 35 32	— — — — — — — — — — —	23 23 23 23 23 23 23 22 21 18 16	— — — — — — — — — — —	— — — — — — — — — — —
<b>Category 5e</b>	ANSI/TIA/EIA 568B.2 ANSI/ICEA S-90-661 NEMA WC63.1 ISO 11801	16 Mbps TOKEN RING 100 BASE-T 52/155 Mbps ATM 100 BASE VG AnyLAN 100 Mbps TP PMD 1000 BASE-T (Gigabit Ethernet)	772kHz 1MHz 4MHz 8MHz 10MHz 16MHz 20MHz 25MHz 31.25MHz 62.5MHz 100MHz	1.8 2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0	87 85 85 85 85 85 85 85 85 85 85	117 115 115 115 115 115 115 115 115 115 115	67 65 56 51 50 47 44 44 43 38 35	64 62 53 48 47 44 42 41 40 35 32	— — — — — — — — — — —	— 20.0 23.0 24.5 25.0 25.0 25.0 24.3 23.6 21.5 20.1	63.0 60.8 48.7 42.7 40.8 36.7 34.7 32.8 30.9 24.8 20.8
<b>Category 6</b>	ANSI/TIA/EIA 568B.2 ANSI/ICEA S-90-661 NEMA WC66 TIA/EIA 568B.2-1 ISO 11801	16 Mbps TOKEN RING 155/622 Mbps ATM 1.2 Gbps ATM 100 Mbps TP PMD 100 BASE-T 1000 BASE-T (Gigabit Ethernet)	772kHz 1MHz 4MHz 10MHz 16MHz 20MHz 31.25MHz 62.5MHz 100MHz 200MHz 250MHz	1.8 2.0 3.8 6.0 7.6 8.5 10.7 15.4 19.8 29.0 32.8	87 85 85 85 85 85 85 85 85 85 85	117 115 115 115 115 115 115 115 115 115 115	76.0 74.3 65.3 59.3 56.2 54.8 51.9 47.4 44.3 39.8 38.3	74.0 72.3 63.3 57.3 54.2 52.8 49.9 45.4 42.3 37.8 36.3	— — — — — — — — — — —	— 20.0 23.0 25.0 25.0 25.0 23.6 21.5 20.1 18.0 17.3	67.0 64.8 52.8 44.8 40.7 38.7 36.8 34.9 24.8 18.8 16.8
<b>Category 7</b>			1MHz 4MHz 10MHz 16MHz 20MHz 31.25MHz 62.5MHz 100MHz 200MHz 250MHz 500MHz	4.0 4.0 6.0 7.6 8.5 10.6 15.2 19.4 28.0 31.6 46.2	— — — — — — — — — — —	— — — — — — — — — — —	65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 61.9 60.4 55.9	62.0 62.0 62.0 62.0 62.0 62.0 62.0 62.0 58.9 57.4 52.9	— — — — — — — — — — —	21.0 21.0 21.0 20.0 19.5 18.5 16.0 14.0 11.0 10.0 10.0	62.0 62.0 62.0 58.7 57.0 53.7 48.5 45.0 39.7 37.9 32.6

Data subject to change without notice. Contact your Customer Service Representative for latest information.

- No requirement

\*Plain old telephone system

**Note 1:** Higher category may be substituted for lower category.

**Note 2:** For Patch Cord attenuation requirement, add 20% to above.