

## LANmark-2000 Enhanced Category 6 Plenum

LANMARK-2000 is Berk-Tek's highest-performing Premium Category 6 cable. Every key electrical property has been improved when measured against the TIA/EIA-568-B.2-1 Category 6 standard for transmitted signals, making them stronger and less susceptible to outside interference. LANmark-2000 is a true multimedia cable and is specifically designed to handle voice, video and data simultaneously. It is also ideal for Power over Ethernet (PoE) applications where a larger gauge for greater current carrying capacity is needed.

### Description

#### Construction

Bare copper wire insulated with FEP. Two insulated conductors twisted together to form a pair and four such pairs laid up with crossfiller to form the basic unit jacketed with flame-retardant PVC.

#### Standards

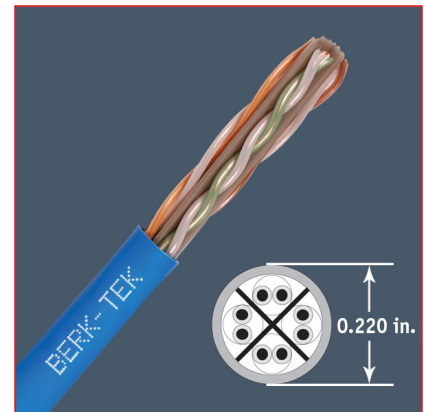
North America: ANSI/TIA/EIA-568-B.2-1 Category 6, UL444 and C22.2 No. 214-02

International: ISO/IEC 11801-2nd Edition category 6, EU directive 2002/95/EC (RoHS)

#### Flame Rating

Plenum; NFPA 262, CMP

UL Listed



#### Standards

**National TIA/EIA-568-B.2**

#### Applications

- IEEE 802.3 1000BASE-T 1 Gb/s
- TIA/EIA-854 1000BASE-TX 1 GB/s
- ATM 155 Mb/s 155 Mb/s
- IEEE 802.3 100BASE-TX 100 Mb/s
- CDDI 100 Mb/s
- IEEE 802.3 10BASE-T 10Mb/s
- IP Video
- Broadband Video

#### Features

- Full duplex operation capable over four cable pairs
- Increased usable bandwidth vs. the category 6 standard
- Documented balance characteristics (LCL/TCL, EL TCTL)
- Reduced attenuation (Insertion Loss)
- ETL verified to ANSI/TIA/EIA-568-B.2-1 Category 6 standard

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### Benefits

- Provides additional performance margin to reliably support Gigabit Ethernet in high-noise environments
- Provides bandwidth required for multimedia, broadband video analog video and other future applications
- Balance characteristics improve overall cable performance and reduce cable emissions which results in reduced transmission errors
- Reduced diameter allows for more efficient space utilization
- Characterized to 600 MHz, 350 MHz greater than the standard
- Improved ACR allows improved signal to reach the receiver resulting in cleaner data and video transmission

### Characteristics

Dimensional characteristics	
Length per reel	1000.0 ft
Number of pairs	4
Usage characteristics	
Fire safety	Plenum Rated

### Technical Data - Physical

Technical Data - Physical			Color Code	
			<b>Pair-1</b>	White/Blue Blue
<b>Conductor</b>	23 AWG solid bare copper		<b>Pair-2</b>	White/Orange Orange
<b>Conductor diameter-in. (mm)</b>	0.022	(0.56)	<b>Pair-3</b>	White/Green Green
<b>insulated conductor diameter</b>	0.037	(0.94)	<b>Pair-4</b>	White/Brown Brown
<b>Cable diameter-in. (mm)</b>	0.22	(5.59)		
<b>Nominal cable weight-lb./kft. (kg/km)</b>	30	(45)	<b>Temperature Rating</b>	
<b>Max. installation tension-lb. (N)</b>	25	(110)	<b>Installation</b>	0°C to +50°C
<b>Min. bend radius-in. (mm)</b>	1	(25.4)	<b>Operation</b>	-20°C to +60°C

### Parametric Measurements

<b>Mutual Capacitance</b>	5.6 nF/100m max.
<b>DC resistance max.</b>	9.38 Ohms/100 m max.
<b>Skew</b>	35 ns/100 m nom. 45 ns/100 m max
<b>Pair to ground Unbalance</b>	330 pF/100 m max. at 1 kHz
<b>Velocity of Propagation</b>	72% nom. Plenum
<b>Input Impedance</b>	100 ± 13% 0.772-100 MHz, 100 ± [13 +15log (F/100)] 100-500 MHz
<b>DC Resistance Unbalance</b>	3% max.

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### Technical Data - Electrical

FREQ (MHz)	SRL (dB)		RL (dB)		INSERTION LOSS (dB/100m)		PS-NEXT (dB)		NEXT (dB)		ACR (dB/100m)	
	min.	typical	min.	typical	max.	typical	min.	typical	min.	typical	min.	typical
1	na	44.0	20.0	36.8	2.0	1.7	82.3	101.8	84.3	107.8	82.3	102.7
4	na	46.6	23.6	34.5	3.7	3.5	73.3	88.9	75.3	97.6	71.6	87.2
10	26.0	47.8	26.0	38.3	5.8	5.6	67.3	82.6	69.3	89.4	63.5	79.3
16	26.0	44.5	26.0	36.8	7.4	7.2	64.3	79.7	66.3	86.5	58.9	75.3
20	26.0	45.1	26.0	38.9	8.2	8.1	62.5	77.5	64.5	86.8	56.3	71.0
31.25	25.1	53.4	25.1	39.3	10.4	10.1	59.9	74.9	61.9	81.9	51.6	66.4
62.5	23.5	41.0	23.5	39.0	15.0	14.6	55.4	68.4	57.4	74.8	42.4	56.2
100	22.5	43.0	22.5	36.4	19.3	18.7	52.3	65.0	54.3	78.1	35.1	47.4
250	20.5	38.4	20.5	34.8	32.0	30.7	46.3	63.3	48.3	69.2	16.4	35.6
350	19.8	37.8	19.8	41.2	38.7	36.9	44.2	61.0	46.2	67.4	7.6	26.5
500	19.0	35.4	19.0	33.6	47.6	45.1	41.8	51.4	43.8	60.7	—	7.2
600	18.6	33.9	18.6	33.4	53.0	49.8	40.6	50.3	42.6	56.0	—	2.0

Electrical characteristics are guaranteed to 500 MHz. Data above 500 MHz is for engineering information

### Technical data - Electrical

FREQ (MHz)	PS-ACR (dB@100m)		ELFEXT (dB)		PS-ELFEXT (dB)		LCL/TCL (dB@100m)	EL TCTL (dB@100m)
	min.	typical	min.	typical	Min.	typical	min.	min.
1	80.3	100.1	76.8	100.7	73.8	92.1	50.0	35.0
4	69.6	85.5	64.7	92	61.7	81.8	44.0	23.0
10	61.5	77.1	56.8	80.9	53.8	73.3	40.0	15.0
16	56.9	72.7	52.7	76.3	49.7	69.5	38.0	10.9
20	54.6	69.6	50.7	74.5	47.7	67.6	37.0	9.0
31.25	49.5	65	46.9	70	43.9	63.8	35.1	5.5
62.5	40.4	54.2	40.8	59.6	37.8	54.9	32.0	—
100	33.0	46.7	36.8	62.1	33.8	52.8	30.0	—
250	14.4	33.1	28.8	52.7	25.8	46.5	26.0	—
350	5.4	24.5	25.9	45.6	22.9	37.3	24.6	—
500	—	6.2	22.8	40.3	19.8	34.1	23.0	—
600	—	-0.2	—	37.1	—	29.7	22.2	—

### Product List

Part Number	Description	Type of cable	Colour	Packaging	Field of application
☐ 10163222	LANmark-2000 Enhanced Category 6 Plenum	UTP	Blue	Reel	Indoor

☞ = Make to order, ☐ = Make to stock

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## LANmark-2000 Enhanced Category 6 Plenum

Part Number	Description	Type of cable	Colour	Packaging	Field of application
10167464	LANmark-2000 Enhanced Category 6 Plenum	UTP	Light grey	Reel	Indoor
10167308	LANmark-2000 Enhanced Category 6 Plenum	UTP	Yellow	Reel	Indoor
10167311	LANmark-2000 Enhanced Category 6 Plenum	UTP	White	Reel	Indoor
10170668	LANmark-2000 Enhanced Category 6 Plenum	UTP	Green	Reel	Indoor
10170684	LANmark-2000 Enhanced Category 6 Plenum	UTP	Red	Reel	Indoor
10170672	LANmark-2000 Enhanced Category 6 Plenum	UTP	Violet	Reel	Indoor
10170670	LANmark-2000 Enhanced Category 6 Plenum	UTP	Orange	Reel	Indoor
10163780	LANmark-2000 Enhanced Category 6 Plenum	UTP	Blue	Reel in a box	Indoor
10167312	LANmark-2000 Enhanced Category 6 Plenum	UTP	White	Reel in a box	Indoor
10167309	LANmark-2000 Enhanced Category 6 Plenum	UTP	Yellow	Reel in a box	Indoor
10170673	LANmark-2000 Enhanced Category 6 Plenum	UTP	Violet	Reel in a box	Indoor
10170669	LANmark-2000 Enhanced Category 6 Plenum	UTP	Green	Reel in a box	Indoor
10167307	LANmark-2000 Enhanced Category 6 Plenum	UTP	Light grey	Reel in a box	Indoor
10170671	LANmark-2000 Enhanced Category 6 Plenum	UTP	Orange	Reel in a box	Indoor
10170685	LANmark-2000 Enhanced Category 6 Plenum	UTP	Red	Reel in a box	Indoor
10178756	LANmark-2000 Enhanced Category 6 Plenum	UTP	Pink	Reel in a box	Indoor

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### Selling delivery information

PLEASE NOTE: In the interest of product improvement, Berk-Tek, a Nexans company may make improvements or changes in the products, the programs or services described at any time without notice. Additionally, the information contained herein may include typographical errors or technical inaccuracies. Changes will be periodically made to address any such issues.