

# LANmark-1000 Enhanced Category 6 Plenum Rated

LANmark-1000 Plenum

## Contact

Copper LAN Product Inquiry  
Phone: 717-354-6200  
berktek.support@nexans.com

Part Number: [10033811](#)

LANmark-1000 has been improved to offer best-in-class electrical performance. Berk-Tek's engineers completely redesigned LANmark-1000 so that all crosstalk parameters could be improved by five dB. As a result, the Power Sum Attenuation to Crosstalk ratio (PSACR) is nearly 3 times better (at 250 MHz) allowing for much greater signal strength and less vulnerability to noise interference.

## DESCRIPTION

### Berk-Tek LANmark-1000, Performance Guaranteed

Before any cable can display the Berk-Tek LANmark-1000 legend, it must pass factory tests with a minimum of 5dB of crosstalk margin beyond the CAT 6 standard for NEXT, PSNEXT, ACR and PSACR. If the margin is missing, so is the legend. That is our guarantee to you.

Your business demands continuous performance from your IT network, so our specifications aren't simply numbers on the page. They define the way that we do business. This means that you are guaranteed industry-leading performance and quality for all Berk-Tek products.

Some other manufacturers talk about "typical" values, at Berk-Tek, we hold ourselves to a higher standard. We won't talk about typicals, we talk about what is true, guaranteed, and independently verified.

Based on Berk-Tek's advanced testing, LANmark-1000 has a Converged Application Score (CA Score) of 7.3 and is a good choice for high bandwidth applications and to support a network with more devices using PoE. For more information on CA Score, please click [here](#).

*Perform Beyond Expectations... Choose Berk-Tek*

### Construction

23 AWG bare copper wire insulated with FEP and FRPP. 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.

### Flame Rating

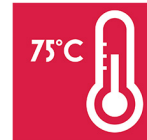
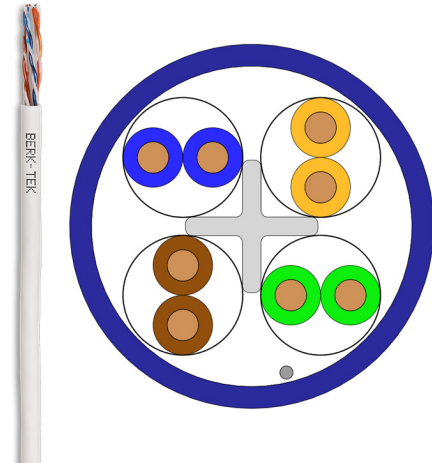
Plenum - NFPA 262, CMP, UL Listed

### Features

- Full Power Sum Performance
- Documented balance characteristics (LCL, LCTL)
- ETL verified to ANSI/TIA-568.2-D
- RoHS Compliant

### Benefits

- Optimal support for Gigabit Ethernet with headroom
- Power sum characterization gives highest performance using existing applications
- Provides additional bandwidth required for future applications
- Addition of balance requirements improves overall cable performance and reduces cable emissions which results in reduced transmission errors
- Characterized to 550 MHz, 300 MHz greater than the standard



## STANDARDS

International ISO/IEC 11801

National ANSI/TIA 568.2-D;  
UL 444

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## CHARACTERISTICS

### Construction characteristics

Type of cable	UTP
Colour	Pink

### Dimensional characteristics

Length per reel	1000.0 ft
Number of pairs	4

### Usage characteristics

Packaging	Box
Field of application	Indoor
Category	Cat. 6
Fire safety	CMP - Plenum Rated
Recommended operating temperature range	-20 .. 75 °C
Recommended installation temperature range	0 .. 50 °C

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## LANMARK-1000 PLENUM - TECHNICAL INFORMATION

### Electrical Characteristics

FQ = Frequency (MHz) / TIA = TIA Spec / PG = Product Guarantee

	RL (dB)	NEXT (dB)	PSNEXT (dB)	ACRF (dB)	LCL/TCL
FQ	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	20.00 / 20.00	74.30 / 79.30	72.30 / 77.30	67.80 / 72.80	50.00
4	23.00 / 23.60	65.30 / 70.30	63.30 / 68.30	55.80 / 60.70	44.00
10	25.00 / 26.00	59.30 / 64.30	57.30 / 62.30	47.80 / 52.80	40.00
16	25.00 / 26.00	56.20 / 61.30	54.20 / 59.30	43.70 / 48.70	38.00
20	25.00 / 26.00	54.80 / 59.80	41.80 / 57.80	41.80 / 46.80	37.00
31.25	23.60 / 25.00	51.90 / 56.90	49.90 / 54.90	37.90 / 42.90	35.10
62.5	21.50 / 23.50	47.40 / 52.40	45.40 / 50.40	31.90 / 36.80	32.00
100	20.10 / 22.50	44.30 / 49.30	42.30 / 47.30	27.80 / 32.80	30.00
150	18.90 / 21.60	41.70 / 46.70	39.70 / 44.70	24.30 / 29.30	28.20
200	18.00 / 21.00	39.80 / 44.80	37.80 / 42.80	21.80 / 26.70	27.00
250	17.30 / 20.50	38.30 / 43.30	36.30 / 41.30	19.80 / 24.80	26.00
300	— / 20.10	— / 42.10	— / 40.10	— / 23.30	25.20
350	— / 19.80	— / 41.20	— / 39.20	— / 21.90	24.60
400	— / 19.50*	— / 40.30*	— / 38.30*	— / 20.70*	24.00*
450	— / 19.20*	— / 39.50*	— / 37.50*	— / 19.70*	23.50*
500	— / 19.00*	— / 38.80*	— / 36.80*	— / 18.80*	23.00*
	IL (dB/100 m)	ACR (dB/100 m)	PSACR (dB/100 m)	PSACRF (dB/100 m)	EL TCTL
FQ	TIA / PG	TIA / PG	TIA / PG	TIA / PG	PG
1	2.00 / 2.00	72.20 / 77.30	70.30 / 75.30	64.80 / 69.80	35.00
4	3.80 / 3.80	61.50 / 66.60	59.50 / 64.50	52.80 / 57.70	23.00
10	6.00 / 5.90	53.40 / 58.40	51.30 / 56.40	44.80 / 49.80	15.00
16	7.60 / 7.50	48.80 / 53.80	46.70 / 51.70	40.70 / 45.70	10.90
20	8.50 / 8.40	46.40 / 51.40	44.30 / 49.40	38.80 / 43.80	9.00
31.25	10.70 / 10.60	41.40 / 46.40	39.20 / 44.30	37.90 / 39.90	—
62.50	15.40 / 15.30	32.40 / 37.10	30.00 / 35.10	28.90 / 33.80	—
100	19.80 / 19.70	25.20 / 29.70	22.50 / 27.60	24.80 / 29.80	—
150	24.70 / 24.50	16.90 / 22.20	14.90 / 20.20	21.30 / 26.30	—
200	29.00 / 28.80	10.80 / 16.00	8.80 / 14.00	18.80 / 23.70	—
250	32.80 / 32.60	7.30 / 10.80	3.50 / 8.70	16.80 / 21.80	—
300	— / 36.20	— / 6.00	— / 4.00	— / 20.30	—
350	— / 39.50	— / 1.70	— / —	13.90 / 18.90	—
400	— / 42.70*	— / —	— / —	12.80 / 17.70*	—
450	— / 45.70*	— / —	— / —	— / 16.70*	—
500	— / 48.60*	— / —	— / —	10.80 / 15.80*	—

\*Values provided for reference only

### Parametric Measurements

#### Description

Mutual Capacitance	5.1 nF Ohms/100m max.
DC Resistance	9.38 Ohms/100m max.
Skew	45 ns/100m max.
Pair-to-Ground Unbalance	330 pF/100m max.
Velocity of Propagation	68% nom.
DC Resistance Unbalance	5% max.

#### Color Code

Pair-1	White/Blue	Blue
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Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown

## Supported Category 6 Applications

Standard	Application	Speed
IEEE 802.3	1000BASE-T	1 Gb/s
ATM	155 Mb/s	155 Mb/s
CDDI		100 Mb/s
IEEE 802.3	100BASE-T	10 Mb/s
IEEE 802.3 af	PoE	1 GB/s
IEEE 802.3 at	PoE+, Type 1 & 2	1 Gb/s
IEEE 802.3 bt	PoE++, Type 3 & 4, draft	10 Gb/s

## Technical Data - Physical

Conductor	23 AWG Bare Copper	
Conductor Diameter - in. (mm)	0.022	(0.56)
Insulated Conductor Diameter - in. (mm)	0.040	(1.02)
Cable Diameter - in. (mm)	0.225	(5.72)
Nom. Cable Weight - lb./kft (kg/kft)	30	(13.61)
Max. Installation Tension - lb. (N)	25	(110)
Min. Bend Radius - in. (mm)	1.00	(25.40)

## LANMARK-1000 CONVERGED APPLICATION SCORE

A cable's Converged Application Score (CA Score) is an indicator of how well IP traffic is protected and how much heat rise there is when the cable undergoes PoE testing. The score is represented by a numeric value between 1 and 10, with 1 being the lowest and 10 being the highest. In reality, a score of 1 is unattainable because it would represent no connection, as is a score of 10 because it would mean zero heat rise with high power PoE. CA Scores range between 2 and 9.

### LANmark-1000

CA Score	Score	> 3.6	3.6 - 5.5	5.6 - 6.5	6.6 - 7.5	7.6 - 8.5	8.6 +
	Performance	Unacceptable	Poor	Limited	Good	Better	Best
	Heat Rise	Severe	Significant	Moderate	Moderate	Moderate	Low

What does the CA Score tell you? A performance rating of "Poor" (less than 3.6) means that there were consistent noticeable flaws (dropped frames, media loss, etc) in the applications tested. As you move towards higher performance scores, you would notice fewer and fewer flaws, until you reach a score of 9, which is almost flawless. PoE testing is also an important factor; cables that experienced less temperature rise achieve higher CA Scores.

## LANMARK-1000 UTP PLENUM JACKET LEGEND

BERK-TEK LANMARK-1000 23 AWG CMP 75C C(UL)US ETL VERIFIED TIA-568.2-D CAT 6 [ANY APPLICABLE PATENTS] [DATECODE] [SEQ#] FT

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## SELLING INFORMATION

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