

- ▶ ETL Verified
- ▶ Tested to 100 MHz
- ▶ Premium Signal Isolation
- ▶ Riser and Plenum Rated



www.berktek.com
1-800-237-5835

Berk-Tek's GUARDmark-5e FTP cables are designed for horizontal applications in a structured cabling network to connect between the user outlet and the horizontal cross-connect. With independently verified performance that meets the TIA/EIA Category 5e standard, GUARDmark-5e provides the additional signal isolation advantages of an FTP design and is ideal for general installations that may be subjected to higher than normal external electromagnetic noise sources.

CONSTRUCTION

0.54 mm (24 AWG), bare copper wire insulated with foam polyethylene (non-plenum) or foam FEP (plenum). Two insulated conductors twisted together to form a pair and four such pairs laid up to form the basic unit. The cable is shielded with an overall polyester aluminum foil with stranded tinned copper drain wire and is jacketed with flame-retardant PVC.

STANDARDS

North American ANSI/TIA/EIA-568-B.2 Category 5e
International ISO/IEC 11801

FLAME RATING

Non-plenum—UL 1666, CMR, CMG, IEC 332-1 UL 1581, CM
Plenum—NFPA 262

APPLICATIONS

GUARDmark-5e FTP cable is intended for high speed data applications up to 100 MHz including:

- ATM 155 Mb/s
- FDDI/CDDI 100 Mb/s
- Ethernet 1000BASE-T, 100BASE-TX, 10BASE-T and Token Ring

FEATURES

- ▶ Independently verified to TIA/EIA Category 5e
- ▶ Supports 10BASE-T, 100BASE-T, 1000BASE-T
- ▶ Can be used with RJ-45 style connectivity

BENEFITS

- ▶ Reduced cable interference problems in areas of high EMI
- ▶ Extends performance limits for network applications thus increasing cabling lifetime
- ▶ Cables satisfy a variety of safety requirements

TECHNICAL DATA—PHYSICAL

	CMR		CMP		CM (PATCH)*	
Conductor diameter-in. (mm)	.021	(0.54)	.021	(0.55)	.019	(0.48)
Cable diameter-in. (mm) (horizontal)	.24	(6.10)	.224	(5.69)	.197	(5.0)
Nominal cable weight-lb./kft. (kg/km)	29	(43.5)	29	(43.5)	20	(29.5)
Max. installation tension-lb. (N)	25	(110)	25	(110)	25	(110)
Min. bend radius-in. (mm)	2.0	(50.8)	2.0	(50.8)	3.0	(76.2)

*Patch cables utilize 26 AWG stranded tinned conductors.

PARAMETRIC MEASUREMENTS

	HORIZONTAL/PATCH
Mutual Capacitance	5.6 nF/100 m nominal
DC resistance	9.38 Ohms/100 m max. / 14 Ohms/100 m patch
Skew	45 ns/100 m max.
Pair to ground Unbalance	330 pF/100 m
Velocity of Propagation	72% CMP, 70% CMR
Characteristic Impedance	100 ± 15 Ohms 1-100 MHz

COLOR CODE (CMP)

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

COLOR CODE (CMR)

Pair	Color 1	Color 2
Pair 1	White	Blue
Pair 2	White	Orange
Pair 3	White	Green
Pair 4	White	Brown

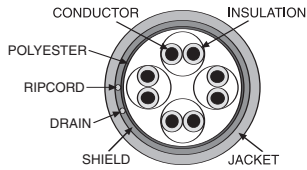
TEMPERATURE RATING

Installation	0 °C to +50 °C
Operation	-10 °C to +60 °C

CATEGORY 5e

FTP/4 PAIR

GUARDMARK-5e



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TECHNICAL DATA—ELECTRICAL

HORIZONTAL									
FREQ	SRL	RL	INSERTION LOSS (Attenuation)	PS-NEXT	NEXT	ACR	PS-ACR	ELFEXT	PS-ELFEXT
MHz	dB	dB	dB/100 m	dB	dB	dB	dB	dB	dB
	min.	min.	max. (Patch)	min.	min.	min.	min.	min.	min.
1	25.0	20.0	2.0 (3.2)	62.3	65.3	63.3	60.3	63.8	60.8
4	25.0	23.0	4.1 (6.5)	53.3	56.3	52.2	49.2	51.7	48.7
10	25.0	25.0	6.5 (9.9)	47.3	50.3	43.8	40.8	43.8	40.8
16	25.0	25.0	8.2 (12.3)	44.3	47.3	39.0	36.0	39.7	36.7
20	25.0	25.0	9.3 (13.8)	42.8	45.8	36.5	33.5	37.7	34.7
31.25	23.6	23.6	11.7 (17.7)	39.9	42.9	31.2	28.2	33.9	30.9
62.5	21.5	21.5	17.0 (25.7)	35.4	38.4	21.4	18.2	27.8	24.8
100	20.1	20.1	22.0 (33.0)	32.3	35.3	13.3	10.3	23.8	20.8

IMPORTANT: Berk-Tek performance guarantees are based on swept-frequency testing and apply to all frequencies for the entire specified frequency range and are not limited to the tables of data shown which are presented to demonstrate our guarantees at "representative" frequencies.

PART NUMBERS—CATEGORY 5e

NO. PAIRS	PART NUMBER	SHEATH	FLAME RATING	JACKET COLOR
4	10032121	FRPVC	CMP	Gray
4	10063566	FRPVC	CMP	Red
4	10061862	FRPVC	CMP	Black
4	10043494	FRPVC	CMR	Gray
4	10063684	FRPVC	CMR	Red
4	10068822	FRPVC	CMR	Black
4	10035109	FRPVC	CM Patch	Gray

NOTE: Standard Lengths 1,000 feet (305 meters). Specifications subject to change without notice. Low Smoke Zero Halogen available. Cat. 5e FTP patch cables utilize 26 AWG stranded tinned conductors.

