

# Berk-Tek LANmark-C637 Cat 6A 26 AWG High Flex Shielded TPE

Berk-Tek LANmark Industrial Heavy-Duty Ethernet Cables enable the expansion and integration of Ethernet into the Industrial environment. With over 50 years of manufacturing expertise, you can be sure these Industrial Cables will perform both mechanically and electrically. With its 600V AWM design, durable TPE jacket, cold-bend performance, and resistance to oil, weld spatter, and sunlight, this cable is suitable for the most demanding, continuous-motion, industrial applications. This product has both a foil shield and a braid to protect against low- and high-frequency noise on the factory floor. Additionally, the stranded conductors also help maintain performance in a high-vibration environment. It is rated CMR and CMX Outdoor, so it easily transitions from indoor to outdoor environments. It is also suitable for cable tray installations.

## DESCRIPTION

### Construction

26 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filler form the basic unit, enclosed by polypropylene tape and shielded with an aluminum/polyester tape and 75% optical coverage braid contained within a TPE jacket.

### Related Standards

Low Voltage - EU Directive 2014/35/EU, CE Approved

RoHS - EU Directive 2011/65/EU

PoE+ - Type 2 (802.3at)

### Ratings

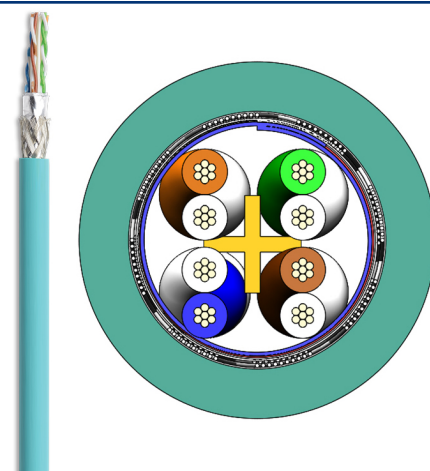
Description	Method	
Listed Type	UL1666	CMR
Listed Type	UL444	CMX Outdoor
Oil Resistance	UL1277 11.2	II (75°C)
Sunlight Resistance	UL444 7.22	Yes (720 hrs)

### Attributes

Description	Method	
AWM Style	UL758	2463 (600V, 80°C)
Flex Life	C-Track, 5" radius	> 35 million cycles
Flex Life	Torsion (+/- 270°)	> 3 million cycles

Installation Pull Tension (Max):

Bend Radius: > 3 inch	Internal	40 lbs.
Bend Radius: > 1.16 inch	TIA 568-C.0	25 lbs.
Abrasion	UL2556 7.10	75 cycles/1.5 lb. load



**Ethernet/IP™**  
ODVA

**CC-Link IE**  
**Field** Compliant

### STANDARDS

International ISO/IEC 11801

National ANSI/TIA-568.2-D;  
UL 444

## CHARACTERISTICS

### Construction characteristics

Conductor material	26 AWG Stranded Tinned Copper (7/34)
Filler	HDPE Cross Filler
Insulation	HDPE
Jacket Material	TPE
Braid	Tinned copper - 75% optical coverage
Shielding	Aluminum/Polyester
Core Tape	Foamed polypropylene

### Dimensional characteristics

Insulated conductor diameter (Nominal)	0.034 in
Average jacket thickness	0.033 in
Minimum jacket thickness at any point	0.026 in
Cable diameter (Nominal)	0.29 in
Nominal cable weight	40 lb/kft
Length per reel	1000.0 ft

### Electrical characteristics

Mutual capacitance	5.6 nF/100m max.
DC Resistance (max.)	9.38 Ohm/100m
DC resistance unbalance (max.)	4 %
Nominal velocity of propagation	68 %
Maximum pair to ground unbalance	330 pF/100m



### Transmission characteristics



Skew (max.)	45 ns/100m
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### Usage characteristics

Minimum Bending Radius - Install	2.32 in
Recommended installation temperature range	-20 .. 80 °C
Recommended operating temperature range	-40 .. 80 °C
Recommended storage temperature range	-40 .. 80 °C
Maximum cable length	66 m
Cold Bend	-40 °C
Weld spatter resistance	Yes

## PRODUCT LIST

Part Number	Description	Packaging	Colour
 11099211	LANmark-C637 Cat 6A 26 AWG High Flex Shielded TPE	Reel	Teal
 11101963	LANmark-C637 Cat 6A 26 AWG High Flex Shielded TPE	Reel	Black

 = Make to order,  = In stock

## LANMARK-C637 - TECHNICAL INFORMATION

Electrical Characteristics		
Parameter	Frequency	Equation
RL (dB)	1-10 MHz	$20+5*\text{Log}(F)$
	10-20 MHz	25
	20-500 MHz	$25-7*\text{Log}(F/20)$
Insertion Loss (dB/100m)	1-500 MHz	$1.5(1.82*\sqrt{F}+.0091*.25/\sqrt{F})$
NEXT (dB)	1-500 MHz	$44.3-15*\text{log}(F/100)$
PS-NEXT (dB)	1-500 MHz	$42.3-15*\text{log}(F/100)$
ACR (dB/100m)	1-500 MHz	NEXT - Insertion Loss
PS-ACR	1-500 MHz	PS-NEXT - Insertion Loss
ACRF (dB)	1-500 MHz	$27.8-20*\text{Log}(F/100)$
PSACRF (dB)	1-500 MHz	$24.8-20*\text{Log}(F/100)$
Propagation Delay	1-500 MHz	$534+(36/\sqrt{F})$
Max Transfer Impedance (mΩm)	1; 10; 30; 100 MHz	50; 100; 200; 1000
Min Coupling Attenuation (dB/100m)	30-100 MHz	≥ 85
	100-1000 MHz	$\geq 85-20*\text{log}(F/100)$
Transmission Characteristics		
Description		
ISO/IEC 11801	66 m	Category 6A
ANSI/TIA-568.2-D	66 m	Category 6A
Coupling Attenuation	IEC 61156-5	Type I
Transfer Impedance	IEC 61156-5	Grade 2
Color Code		
Pair-1	White/Blue	Blue
Pair-2	White/Orange	Orange
Pair-3	White/Green	Green
Pair-4	White/Brown	Brown