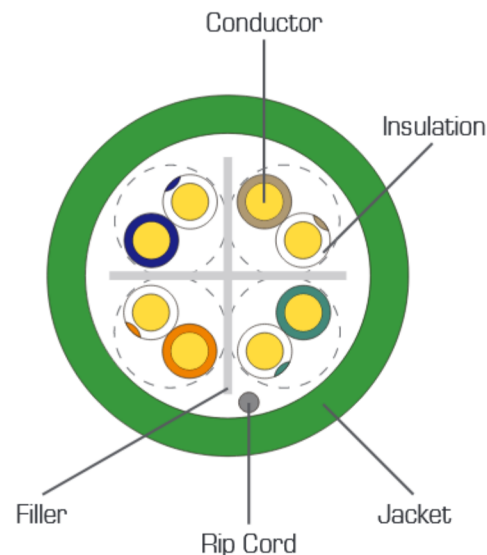


## BCLS-21GR-3

### CAT6 U/UTP LSZH Cable



Kramer's BCLS-21GR is a high performance CAT6 U/UTP cable designed for IT, LAN and Ethernet installations. Constructed with 23AWG solid bare copper conductors with a cross filler in a LSZH jacket with internal rip cord and sequential markings every meter and packed in a Reelex II carton for easy to pull-out make this cable exceed CAT6 specifications to provide additional performance and bandwidth over the basic standard



Product Description	CAT6 U/UTP, 23AWG solid bare copper, LSZH. With cross filler.
Product Features	High performance of transmission. High quality of safety properties. Sweep frequency up to 600 MHz. Reelex II carton and easy to pull out.
Applications	Structure cabling for horizontal and building backbone cable. Designed for IT, LAN and Ethernet installations. IEEE 802.3ab 1000BASE-T, 1000BASE-TX and legacy speeds. CDDI / ATM / Token Ring IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

#### Applicable Standard

#### Performance Standards:

ANSI/TIA-568-C.2 (2009)	Balanced Twisted-Pair Telecommunications Cabling and Components Standards
ISO/IEC 11801 (Edition 2.2)	Information technology - Generic cabling for customer premises
IEC 61156-5 (Edition 2.0)	Multicore and symmetrical pair/quad cables for digital communications - Part 5: Symmetrical pair/quad cables with transmission characterized up to 1000 MHz - Horizontal floor wiring - Sectional specification
EN 50288-6-1:2013	Multi-element metallic cables used in analogue and digital communication and control - Part 6-1: Sectional specification for unscreened cables characterized up to 250 MHz - Horizontal and building backbone cables
EN 50173-1:2011	Information technology - Generic cabling systems - Part 1: General requirements

#### Standards for flammability, acidity and smoke:

IEC 60332-1-2	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame
IEC 61034-1 / 61034-2	Measurement of smoke density of cables burning under defined conditions
IEC 60754-2	Test on gases evolved during combustion of materials from cables
EU Directive 2011/65/EC (RoHS 2)	
EU Directive 2006/95/EC (LVD)	
CE compliance date: 2010.01.01	



## MATERIAL AND CONSTRUCTION

Conductor	Material	23AWG solid bare copper	
Insulation	Material	Polyolefin (PO)	
	Color code & diameter	Blue & white/blue Stripe	0.97 ± 0.02 mm
		Orange & white/orange stripe	0.93 ± 0.02 mm
		Green & white/green stripe	0.96 ± 0.02 mm
Brown & white/brown stripe		0.93 ± 0.02 mm	
Twisted	Description	Left hand direction	
Filler	Material	Polyolefin (PO)	
Assembly	Description	Left hand direction	
Rip cord	Material	Polyester multi-yarn	
Jacket	Material	Low smoke zero halogen (LSZH)	
	Diameter	6.0 ± 0.2 mm	
	Thickness	0.50 ± 0.05 mm	
	Color	Green[Pantone 363C]	

## USAGE & ENVIRONMENTAL CONDITION

Temperature range	Storage & shipping	-20°C to 60°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius		≥ 4 times of overall diameter
Maximum pulling tension		≤ 110 N

## PHYSICAL & ELECTRICAL CHARACTERISTICS (At 20°C)

Temperature & voltage rating	60°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ•m
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m
Characteristic Impedance	@1~100MHz, 100±15 Ohm
Coupling Attenuation	At 30 MHz ≤ 55dB; At 250 MHz ≤ 47 dB
Insulation Tensile Strength	2400 PSI MIN. (1.69 Kg/m²)
NVP	69%

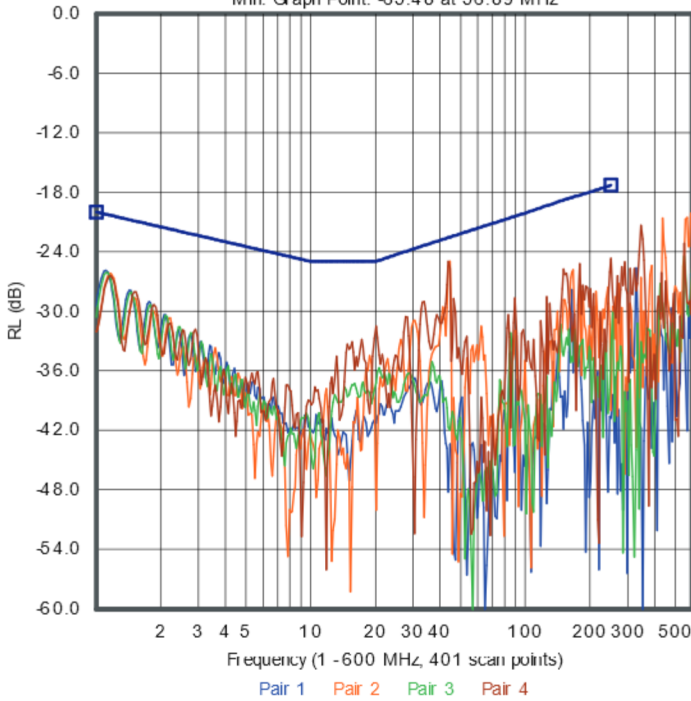
## TRANSMISSION PERFORMANCE (At 20°C)

Freq. MHz	IL	NEXT	PS NEXT	ACR	PS ACR	ACR-F	PS ACR-F	RL	Propagation Delay	Delay Skew
	Max. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Max. ns/100m	Max. ns/100m
1	2.03	80.30	78.30	78.28	76.28	73.80	70.80	20.00	570.00	45.00
4	3.78	71.27	69.27	67.49	65.49	61.76	58.76	23.01	552.00	
8	5.32	66.75	64.75	61.43	59.43	55.74	52.74	24.52	546.73	
10	5.85	65.30	63.30	59.35	57.35	53.80	50.80	25.00	545.38	
16	7.55	62.24	60.24	54.68	52.68	49.72	46.72	25.00	543.00	
20	8.47	60.78	58.78	52.31	50.31	47.78	44.78	25.00	542.05	
25	9.51	59.33	57.33	49.83	47.83	45.84	42.84	24.32	541.20	
31.25	10.67	57.88	55.88	47.20	45.20	43.90	40.90	23.64	540.44	
62.5	15.38	53.36	51.36	37.98	35.98	37.88	34.88	21.54	538.55	
100	19.80	50.30	48.30	30.50	28.50	33.80	30.80	20.11	537.60	
150	24.71	47.66	45.66	22.95	20.95	30.28	27.28	18.87	536.94	
200	28.98	45.78	43.78	16.80	14.80	27.78	24.78	18.00	536.55	
250	32.85	44.33	42.33	11.48	9.48	25.84	22.84	17.32	536.28	
300	36.43	43.14	41.14	6.72	4.72	24.26	21.26	16.77	536.08	
350	39.78	42.14	40.14	2.35	0.35	22.92	19.92	16.30	535.92	
400	42.97	41.27	39.27	N.A.	N.A.	21.76	18.76	15.89	535.80	
450	46.01	40.50	38.50	N.A.	N.A.	20.74	17.74	15.53	535.70	
500	48.94	39.82	37.82	N.A.	N.A.	19.82	16.82	15.21	535.61	
550	51.76	39.19	37.19	N.A.	N.A.	18.99	15.99	14.92	535.54	
600	54.49	38.63	36.63	N.A.	N.A.	18.24	15.24	14.66	535.47	

\*Values above 250 MHz are for information only

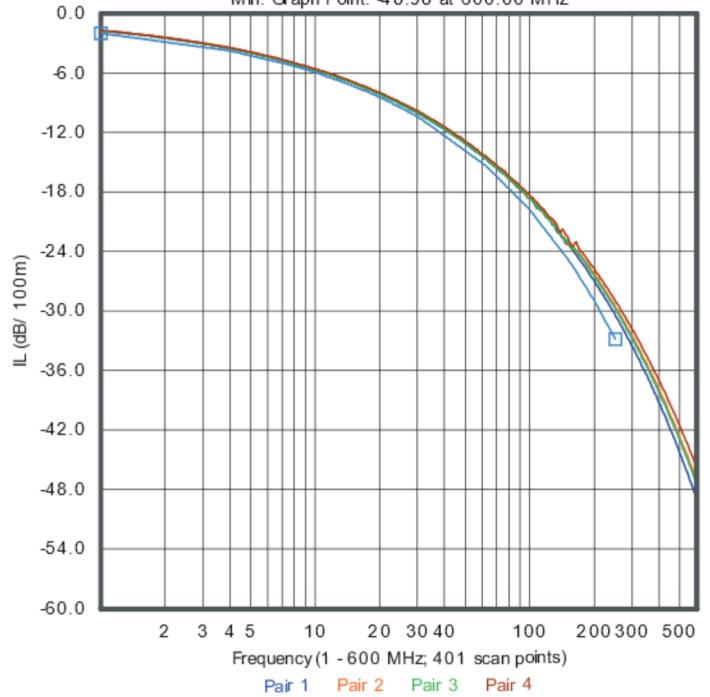
RL vs. Frequency

Max. Graph Point: -20.12 at 591.73 MHz  
 Min. Graph Point: -65.48 at 56.89 MHz



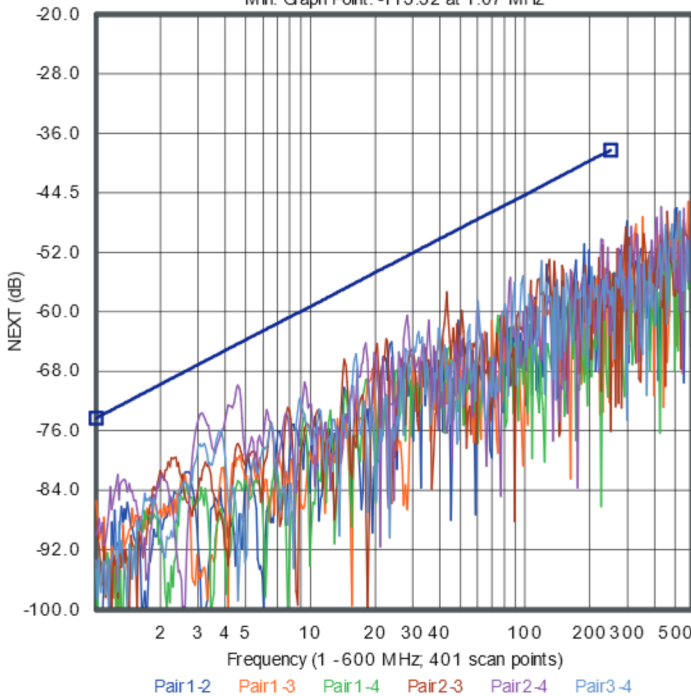
IL vs. Frequency

Max. Graph Point: -1.72 at 1.00 MHz  
 Min. Graph Point: -48.98 at 600.00 MHz



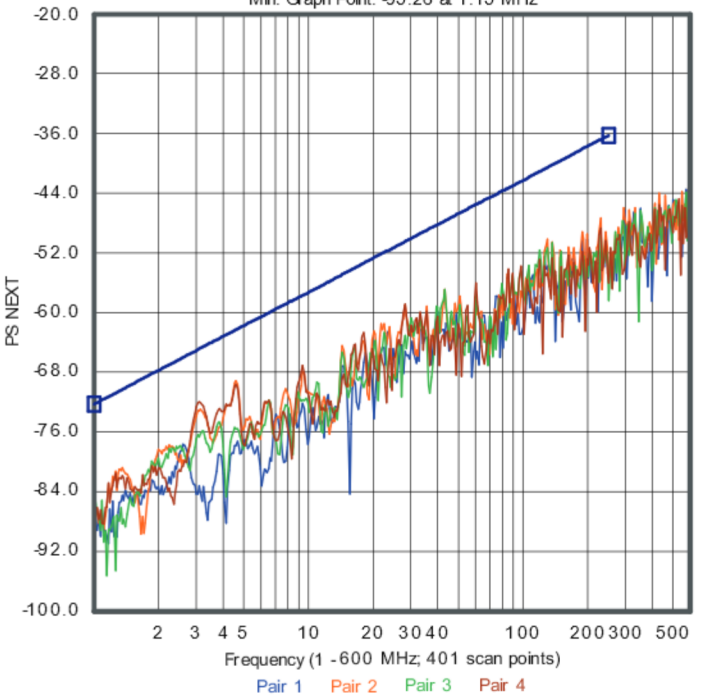
NEXT vs. Frequency

Max. Graph Point: -45.04 at 591.73 MHz  
 Min. Graph Point: -113.32 at 1.07 MHz



PS NEXT vs. Frequency

Max. Graph Point: -42.69 at 591.73 MHz  
 Min. Graph Point: -95.26 at 1.15 MHz



KRAMER ELECTRONICS  
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SHIPPING INFORMATION:

Item	Dimension	Nominal net weight
Cable	305 m	11.92 kg (26.27 lb)
Reellex II Carton	L395 x W270 x H380 mm	1200 g
Pallet	1150 x 1150 x 120 mm	14.1 kg