



Cable Master Electric Wire & Cable Co., Ltd

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CATEGORY 6A U-UTP, 500MHz

STANDARD COMPLIANCE

UL LISTED: UL 444

ETL VERIFIED TO ANSI/TIA-568-C.2 CATEGORY 6A: HORIZONTAL CABLE & PATCH CABLE

IEC 61156-5 FOR HORIZONTAL CABLE

RoHS COMPLIANCE FOR THE REQUIREMENT OF EUROPEAN UNION ISSUED DIRECTIVE 2011/65/EU

IEC 60332-1-2 FLAME TEST

UL VERIFIED TO IEC 62821-1 LSHF(Low-Smoke-Halogen-Free) JACKET



CONSTRUCTION

		CAT. 6A U-UTP SOLID	CAT. 6A U-UTP STRANDED
CONDUCTOR	MATERIAL & SIZE	BARE COPPER, 23AWG	BARE COPPER, 24AWG
INSULATION	MATERIAL	HDPE(CMI-75E)	HDPE(CMI-75E)
	THICKNESS	MIN. AVERAGE THICKNESS: 0.208mm MIN. THICKNESS: 0.195mm	MIN. AVERAGE THICKNESS: 0.201mm: MIN. THICKNESS: 0.175mm
	COLOR CODE	Pair 1: Blue & White/Blue Pair 2: Orange & White/Orange	Pair 3: Green & White/Green Pair 4: Brown & White/Brown
JACKET	MATERIAL	75 ° C PVC Compound (CMI-80S) OR 75 ° C LSHF (Low-Smoke Halogen Free)	75 ° C PVC Compound (CMI-80S) OR 75 ° C LSHF (Low-Smoke Halogen Free)
	THICKNESS	MIN. AVERAGE THICKNESS: 0.685mm MIN. THICKNESS: 0.558mm	MIN. AVERAGE THICKNESS: 0.585mm: MIN. THICKNESS: 0.458mm
	OVERALL DIAMETER	7.8 mm +/- 0.3mm	6.6 mm +/- 0.3mm
CROSS	MATERIAL	HDPE	

ELECTRIC REQUIREMENT (CABLE LENGTH/100M)

	CAT. 6A U-UTP SOLID	CAT. 6A U-UTP STRANDED
CHARACTERISTIC IMPEDENCE(Zo)	85~115Ω (1~500 MHz)	85~115Ω (1~500 MHz)
DC. RESISTANCE CAPACITANCE UNBALANCE	2%	2%
PAIR-TO-GROUND CAPACITANCE UNBALANCE	330 pF/100M Max	330 pF/100M Max
CONDUCTOR RESISTANCE	7.32Ω/ 100M 20 ° C MAX.	8.76Ω/ 100M 20 ° C MAX.
MUTUAL CAPACITANCE	5600 pF/100M MAXIMUM	5600 pF/100M MAXIMUM
SPARK TEST	2.5KV	2.5KV
NOMINAL VELOCITY OF	68%	68%



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PROPAGATION (N.V.P.)		
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ENVIRONMENTAL CONDITION & USAGE

TEMPERATURE RANGE	SHIPPING & STORAGE	-20°C to 75°C
	INSTALLATION	0°C to 60°C
	OPERATION	-20°C to 75°C
MINIMUM BENDING RADIUS	≥ 4 TIMES OF OVERALL DIAMETER	
MAXIMUM PULLING TENSION	≤ 110 N	

SECTION PLANS



TRANSMISSION REQUIREMENTS

FREQUENCY (MHz)	MAX. ATTENUATION (dB/100m)		MIN, Pr-Pr NEXT (dB)	MIN. PSNEXT (dB)	MIN. RETURN LOSS (dB)	
	SOLID	STRANDED			SOLID	STRANDED
1	2.1	2.5	74.3	72.3	20.0	20.0
4	3.8	4.6	65.3	63.3	23.0	23.0
8	5.3	7.1	60.8	58.8	24.5	24.5
16	7.5	9.0	56.2	54.2	25.0	25.0
25	9.4	11.3	53.3	51.3	24.3	24.2
100	19.1	22.9	44.3	42.3	20.1	19.0
250	31.1	37.3	38.3	36.3	17.3	15.6
400	40.1	48.1	35.3	33.3	15.9	13.8
500	45.3	54.4	33.8	31.8	15.2	13.0

Values show on tables above are for reference purpose only.