

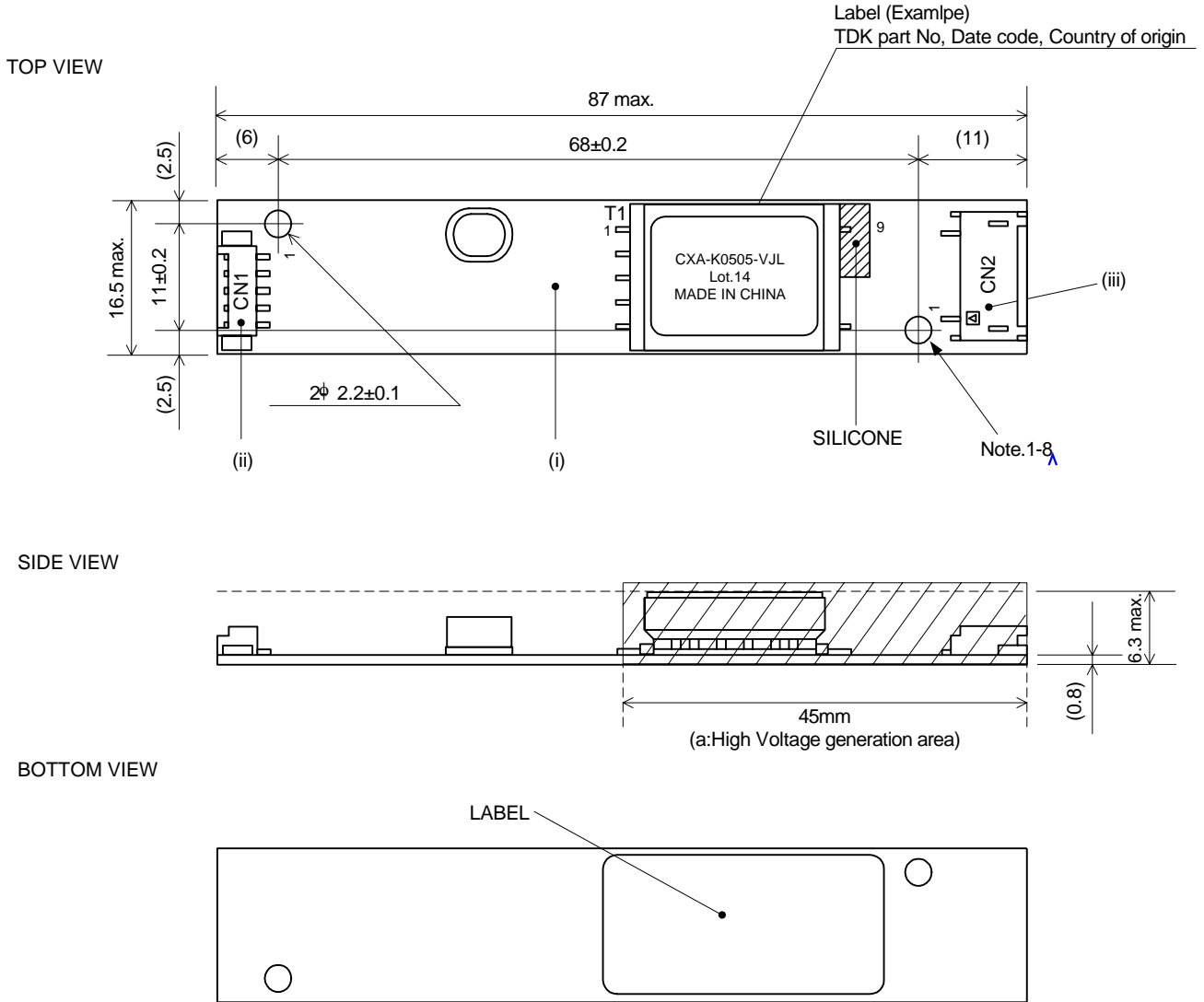
• The specifications may be changed without any notice.  
 • When placing orders, please confirm "Specifications" or Product Drawing" through TDK sales or distributors.

•Features•

- This inverter is for one lamp. It has Dimming function and Remote function.
- The high-voltage terminals are coated with silicone so as to avoid the defects caused by dust.

[1] Outline  
 1-1. Outline

CAT# INV-505

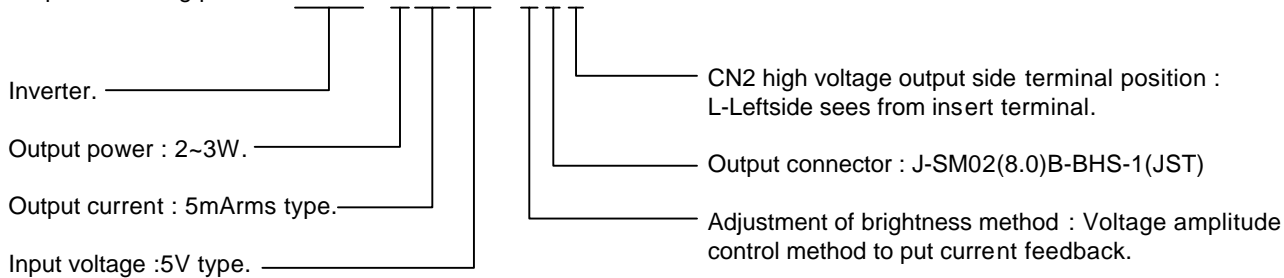


Unit:mm  
 Weight:8.4g.typ.

No.	Part Description	Material	QU.	REMARK	MATES WITH
(I)	PCB	Composite (CEM-3)	1	UL94V-0 t=0.8	-
(II)	Input Connector CN1	53261-0590	1	MOLEX	51021-0500
(III)	Output Connector CN2	SM02(8.0)B-BHS-1	1	JST	BHR-03VS-1

PRODUCT NAME or MODEL, TITLE			
DC-AC INVERTER UNIT CXA-K0505-VJL			
TDK CORPORATION	NAME OF DRAWING	DRAWING No.	PAGE
	PRODUCT DRAWING	CTR-0730-A	2

Example of naming product C X A - K 0 5 0 5 - V J L



1-2. Connector Configuration

Input side CN1

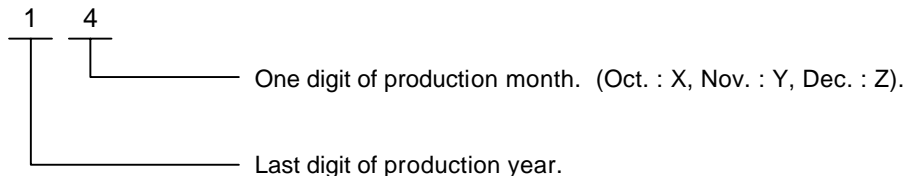
Pin No.	Symbols	Ratings	Notes
CN1-1	Vin	5~12V	
CN1-2	GND	0V	
CN1-3	Vrmt	0V / 2.5V~Vin	0~0.4V : OFF 2.5V~Vin : ON
CN1-4	Vbr	0~3V	Power supply for adjustment of brightness.
CN1-5	N.C.	-	For an internal circuit use. Don't connect.

Output side CN2

Pin No.	Symbols	Ratings
CN2-1	VHIGH	500Vrms 5mArms
CN2-2	N.C.	-
CN2-3	VLOW	(2V)

Note1-1. Marking of TDK part No, Date code, Country of origin.

- 1) TDK part No., Date code, Country of origin, is marked on the transformer.
- 2) Date code example. (ex. APR. 2001)



- 3) Country of origin code example. (ex. MADE IN JAPAN. MADE IN CHINA).

Note1-2. For circuit connection, please prefer to test circuit diagram [4].

Note1-3. Please use minimum of 2mm clearance (all directions) between inverter high voltage area and any conductors. Please refer to mechanical drawing for marking of high voltage area.

Note1-4. Open voltage (strike voltage) is measured across the transformer secondary winding at no load as the reading at the output connector would be less than the actual value.

Note1-5. If the start up voltage falls below Cold Cathode Tube strike voltage, the CCFL will not light up easily specially at lower ambient temperature. Please review mounting instruction to avoid any abnormal operation due to coupling/leakagecapacitance of inverter high voltage area to any surrounding conductor.

Note1-6. Please check your lamp characteristic for minimum operational current and set the limit point in your design to avoid flickering and/or abnormal operation.

Note1-7. For proper operation of circuit protection (fuse or IC PROTECTOR), Please use minimum of 2A capacity for input powersupply.

Note1-8. Don't use the conductive objects (ex.metal screw) on the mounting hole(CN2 side).

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	DC-AC INVERTER UNIT CXA-K0505-VJL		
TDK CORPORATION	NAME OF DRAWING	DRAWING No.	PAGE
	PRODUCT DRAWING	CTR-0730-A	3

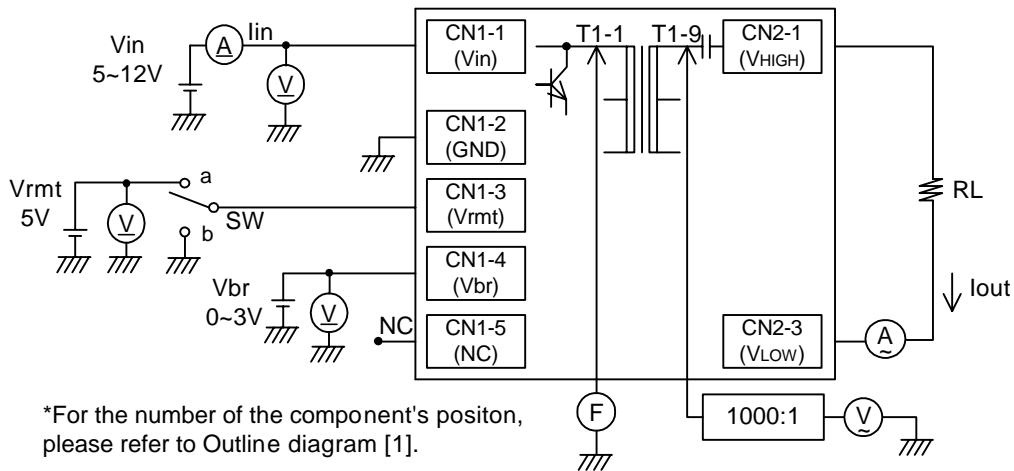
[2] Absolute maximum ratings

Item	Symbol	Specification	Unit	Notes
Input Voltage	Vin	0~15	V	
Load Resistance	RL	80	kΩ	
Operating Temp. range	Ta	0~60	°C	
Storage Temp. range	Ts	-20~85	°C	
Humidity range	RH	95	%RH	A maximum wet ball temperature is 38°C. No dew.

[3] Electrical specifications

Item	Symbol	Conditions				Specifications			Unit
		Vin(V)	Vbr(V)	Ta(°C)	RL1(kΩ)	MIN.	TYP.	MAX.	
Output Current (Brightness max.)	lout1	5~12	0	0~60	60~80	4.1	5	5.9	mA rms
	lout2	5	0	23±5	70	4.5	5	5.5	
Output Current (Brightness min.)	lout3	5	3	23±5	140	1.5	2	2.5	
Input Current	lin	5~12	0	0~60	60~80	-	0.50	0.7	A
Frequency	F	5~12	0	0~60	60~80	35	40	45	kHz
Open Circuit Voltage	Vopen	5	0	0~60	∞	0.9	1.1	-	kV rms

[4] Test circuit



Note4-1. SW(ON/OFF) Operation is as following;

SW	Operation of unit
a	Operation
b	Non operation

Note4-2. Test Equipments

- (V) Digital Multiple Meter(ADVANTEST R6451A or equivalent)
- (A) DC Current Meter(ADVANTEST R6451A or equivalent)
- (F) Frequency Counter(ADVANTEST R6451A or equivalent)
- (V) True RMS Meter(KEITHLEY 2001 or equivalent.)
- (A) High Frequency Current Meter(KEITHLEY 2001 or equivalent)
- (1000:1) High Voltage Probe(Tektronix P3000 or equivalent)

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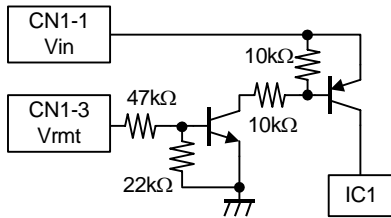
CTR-0730-A

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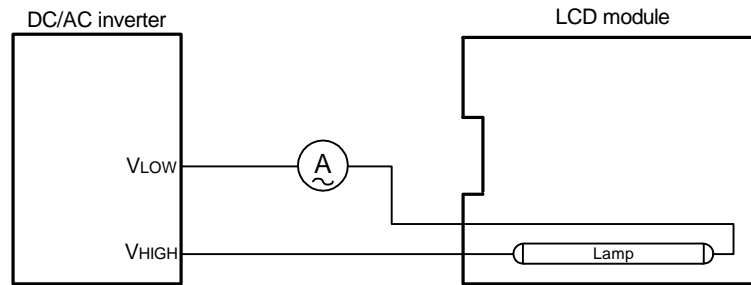
4

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Remote terminal circuit (Reference)



Connection diagram of LCD module (Reference)



\*Connect the High Frequency Current Meter to the Low-Voltage (VLOW) side.

[5] Reliability test

Following test items are assured.

Item	Conditions	Judgement
Low Temp.Non operational	-40°C 96h	Electrical and apperrance should be in the spec.
Low Temp.operational	-10°C 240h Load cond.:TYP	
High Temp.Non operational	85°C 96h	
High Temp.operational	60°C 240h Load cond.:TYP	
Heat shock	-20°C ↔ 75°C 30min.Each 100 Cycles	
Humidity (Non operational)	40°C 90~95%RH 240h	
Vibration	10~55Hz Amplitude 0.35mm or 5G Sweep:1min 30min each axis X,Y,Z	
Shock	60G 6ms Harf-sine pulse 1 time each axis ±X,Y,Z	

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PRODUCT DRAWING

DRAWING No.

CTR-0730-A

PAGE

5