

# CXA-0538

## Features

- 4 outputs
  - UL60950-1 acquisition product
  - Applicable panel size\*: 14 to 17 inches
  - With brightness control function (Pulse Width Modulation Dimming).
  - With shut down function.
  - With a sensing function for running out of lamp (alarm output).
  - In the high-voltage generator (a terminal and a pattern), an anti-dust measure by silicone application is taken.
- (Notice) Applicable panel size becomes a standard.

## Applications



DC-AC Inverter

## CXA-0538 Specifications (Please refer to each specification before use)

### Electrical Characteristics

Item	Unit	Symbol	Specification			Condition							Remarks
			min	typ	max	V <sub>in</sub> (V)	V <sub>rmt</sub> (V)	V <sub>br</sub> (V)	R <sub>br</sub> (kΩ)	T <sub>a</sub> (°C)	R <sub>L</sub> (kΩ)	C <sub>L</sub> (pF)(*3)	
Output Current	mA	I <sub>out</sub> (Maximum dimmer)	5.9	6.5	7.1	12 ± 1.2	5	0	-	-30 to +80	90	6	Voltage dimmer (*1)
			5.9	6.5	7.1	12 ± 1.2	5	-	0	-30 to +80	90	6	Volume dimmer (*1)
		I <sub>out</sub> (Minimum dimmer)	2.2	3.0	3.8	12 ± 1.2	5	2.5	-	-30 to +80	90	6	Voltage dimmer (*1)
			2.2	3.0	3.8	12 ± 1.2	5	-	50	-30 to +80	90	6	Volume dimmer (*1)
Input Current	A	I <sub>in1</sub>	-	1.7	2.5	12 ± 1.2	5	0	-	-30 to +80	90	6	Remote ON
	mA	I <sub>in2</sub>	-	-	1	12 ± 1.2	0	0 to 2.5	0 to 50	-30 to +80	90	6	Remote OFF
Oscillatory Frequency	kHz	Freq1	45	50	55	12 ± 1.2	5	0	-	-30 to +80	90	6	
		Freq2(Duty frequency)	125	155	185	12 ± 1.2	5	2.5	50	-30 to +80	90	6	
Open Circuit Voltage	V <sub>rms</sub>	V <sub>open</sub>	1700	2000	2300	12 ± 1.2	5	0	-	-30 to +80	∞		Open load
			4.5	5.0	5.5	12 ± 1.2	5	0 to 2.5	0 to 50	-30 to +80	∞		In case of lamp anomaly (*2)
Alarm Signal	V	V <sub>st</sub>	-	0	0.5	12 ± 1.2	5	0 to 2.5	0 to 50	-30 to +80	90	6	On a normal operation (*2)

(\*1) Please refer to the connection diagram for details of a dimming method.

(\*2) Please refer to the connection diagram for details of alarm output.

(\*3) As equivalent circuit of panel load, connect resistance load (RL) and distributed capacity (CL), and have provided by an electrical characteristic.

### Other Specifications

Dimming Function		Yes
Operating Temperature	°C	-30 to +80
Storage Temperature	°C	-30 to +85
Operating Humidity Ratio	RH%	95max
Safety Standard		UL60950-1
Weight	g	46typ.
Dimensions (WxDxH)	mm	150x50x8.5 (*4)
Fused Input		Yes
Remote ON / OFF		Yes
Alarm Signal Function		Yes
Shutdown Function		Yes
Silicone Coating on High Voltage Area		Yes

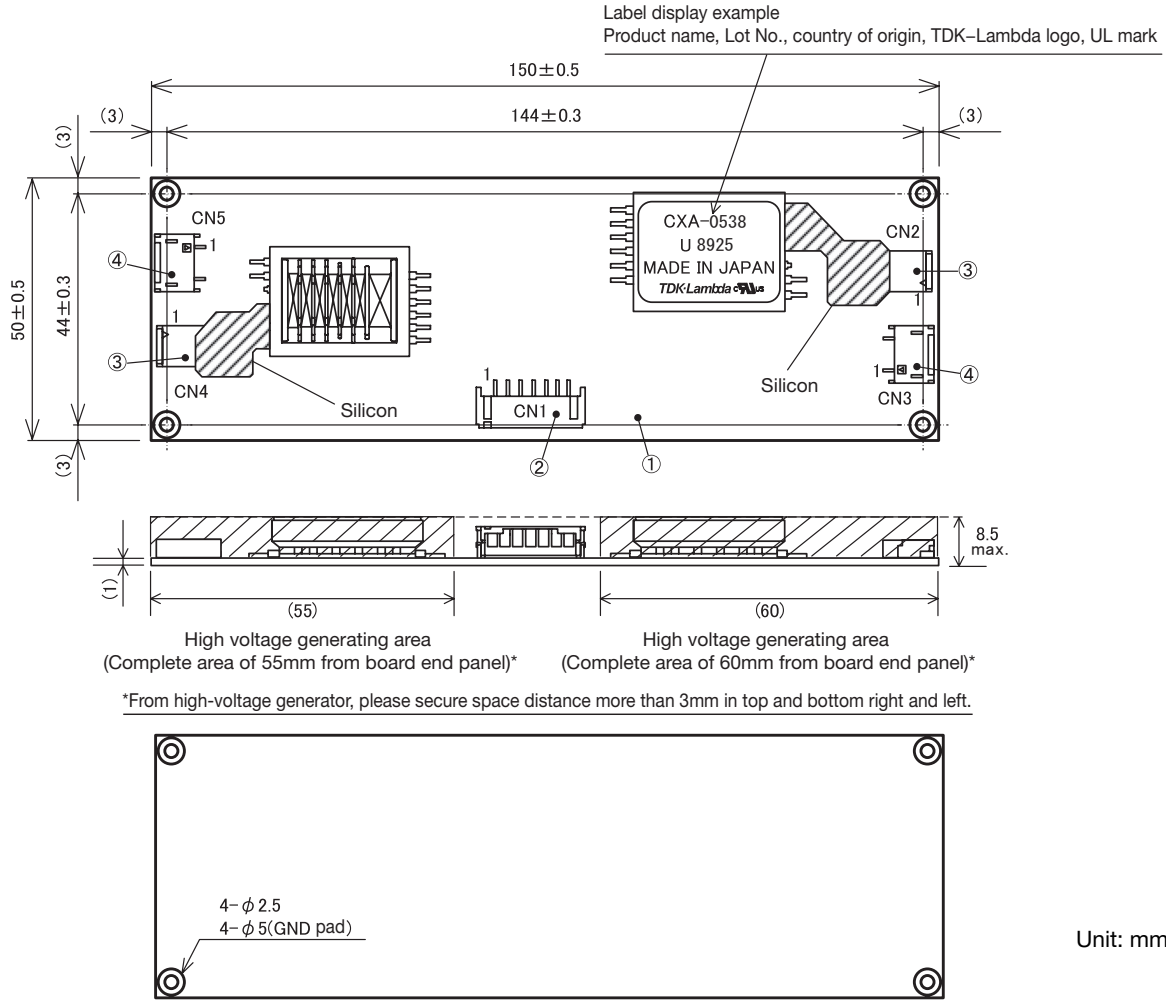
(\*4) These dimensions are indicated the maximum only H. Others are typical values.

## Conformity to RoHs Directive

This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Connector type/Multi-output

Outline Drawing



Unit: mm

Connector

NO.	Component name	Type name	Qty	Remarks	Recommended suitable connector
①	Printed circuit board PCB	Composite (CEM-3)	1	UL94V-0 t = 1.0	—
②	Input connector CN1	S7B-PH-SM4-TB (LF) (SN)	1	J.S.T Mfg., Co., Ltd	PHR-7
③	Output connector CN2,4	SM02B-BHSS-1-TB (LF) (SN)	2	J.S.T Mfg., Co., Ltd	BHSR-02VS-1
④	Output connector CN3,5	SM02 (4.0) B-BHS-1-TB (LF) (SN)	2	J.S.T Mfg., Co., Ltd	BHR-02VS-1

Terminal Number & Function

Input side CN1

Terminal No.	Symbol	Rating	Remarks
CN1-1	Vin	12±1.2V	Power source input
CN1-2			
CN1-3	GND	0V	Ground
CN1-4			
CN1-5	Vbr	0 to 2.5V/0 to 50kΩ	Dimmer terminal
CN1-6	Vst (output)	0V/5V	Alarm output Lamp open : 5V
CN1-7	Vrmt	0V/2.5V to Vin	Remote terminal 0 to 0.4V : OFF 2.5 to Vin : ON

Output side CN2

Terminal No.	Symbol	Rating	Remarks
CN2-1	V <sub>HIGH1</sub>	(585Vrms)	Output 1
CN2-2	V <sub>HIGH2</sub>	(585Vrms)	Output 2

Output side CN3

Terminal No.	Symbol	Rating	Remarks
CN3-1	V <sub>LOW1</sub>	(3.8V)	Output 1 return
CN3-2	V <sub>LOW2</sub>	(3.8V)	Output 2 return

Output side CN4

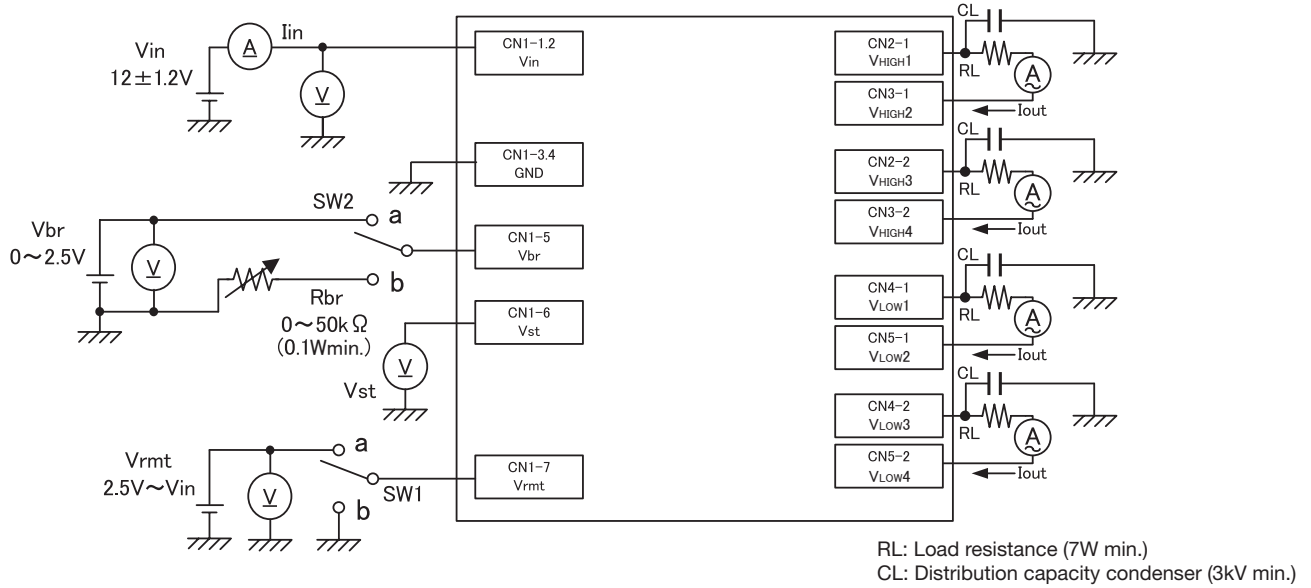
Terminal No.	Symbol	Rating	Remarks
CN4-1	V <sub>HIGH</sub>	(585Vrms)	Output 3
CN4-2	V <sub>HIGH4</sub>	(585Vrms)	Output 4

Output side CN5

Terminal No.	Symbol	Rating	Remarks
CN5-1	V <sub>LOW3</sub>	(3.8V)	Output 3 return
CN5-2	V <sub>LOW4</sub>	(3.8V)	Output 4 return

Connector type/Multi-output

# Connections



Operate as follows by switching a SW1.

SW1	Unit operates
a	Operates
b	Does not operate
Open	Does not operate

Operate as follows by switching a SW2.

SW2	Unit operates
a	Voltage dimmer Vbr=0 to 2.5V (0V: Maximum brightness)
b	Volume dimmer VR=0 to 50kΩ (0Ω: Maximum brightness)

### Protection Circuit Operation

Load condition	Alarm output (CN1-6)*1	Shutdown function*2
When normal	0.5V max.	Does not shut down
When 1 load (lamp) are NG	5±0.5V	Shuts down
When 2 load (lamp) are NG	5±0.5V	Shuts down
When 3 load (lamp) are NG	5±0.5V	Shuts down
When 4 load (lamp) are NG	5±0.5V	Shuts down

\*1 If any one of switches SW3 to 6 becomes open, shutdown will operate, and warning (5V output) will be output.

\*2. The inverter has built in protection function to stop operation after 3 seconds when one or more of the lamps has become open.

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