

# CXA-0492

## Features

- 1 output
- Usable in a wide range of temperatures
- Applicable panel size\*: 3 to 15 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



## CXA-0492 Specifications (Please refer to each specification before use)

### Electrical Characteristics

| Item                  | Unit | Symbol                 | Specification |      |      | Condition |         |        |         |           |        |            | Remarks                      |
|-----------------------|------|------------------------|---------------|------|------|-----------|---------|--------|---------|-----------|--------|------------|------------------------------|
|                       |      |                        | min           | typ  | max  | Vin(V)    | Vrmt(V) | Vbr(V) | Rbr(kΩ) | Ta(°C)    | RL(kΩ) | CL(PF)(*3) |                              |
| Output Current        | mA   | Iout (Maximum dimmer)  | 5.5           | 6.0  | 6.5  | 12±1.2    | 5       | 0      | -       | -30 to 80 | 145    | 15         | Voltage dimmer (*1)          |
|                       |      |                        | 5.5           | 6.0  | 6.5  | 12±1.2    | 5       | -      | 0       | -30 to 80 | 145    | 15         | Volume dimmer (*1)           |
|                       |      | Iout (Minimum dimmer)  | 1.6           | 2.6  | 3.6  | 12±1.2    | 5       | 2.5    | -       | -30 to 80 | 145    | 15         | Voltage dimmer (*1)          |
|                       |      |                        | 1.6           | 2.6  | 3.6  | 12±1.2    | 5       | -      | 50      | -30 to 80 | 145    | 15         | Volume dimmer (*1)           |
| Input Current         | mA   | Iin1                   | -             | 590  | 1250 | 12±1.2    | 5       | 0      | -       | -30 to 80 | 145    | 15         | Remote ON                    |
|                       | mA   | Iin2                   | -             | -    | 1    | 12±1.2    | 0       | 0      | -       | -30 to 80 | 145    | 15         | Remote OFF                   |
| Oscillatory Frequency | kHz  | Freq1                  | 52            | 57   | 62   | 12±1.2    | 5       | 0      | -       | -30 to 80 | 145    | 15         |                              |
|                       | Hz   | Freq2 (Duty frequency) | 230           | 255  | 280  | 12±1.2    | 5       | 2.5    | -       | -30 to 80 | 145    | 15         |                              |
| Open Circuit Voltage  | Vrms | Vopen                  | 2050          | 2200 | -    | 12±1.2    | 5       | 0      | -       | -30 to 80 | ∞      | ∞          | Open load                    |
| Alarm Signal          | V    | Vst                    | 4.5           | 5.1  | 5.5  | 12±1.2    | 5       | 0      | -       | -30 to 80 | ∞      | ∞          | In case of lamp anomaly (*2) |
|                       |      |                        | -             | 0    | 0.5  | 12±1.2    | 5       | 0      | -       | -30 to 80 | 145    | 15         | 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

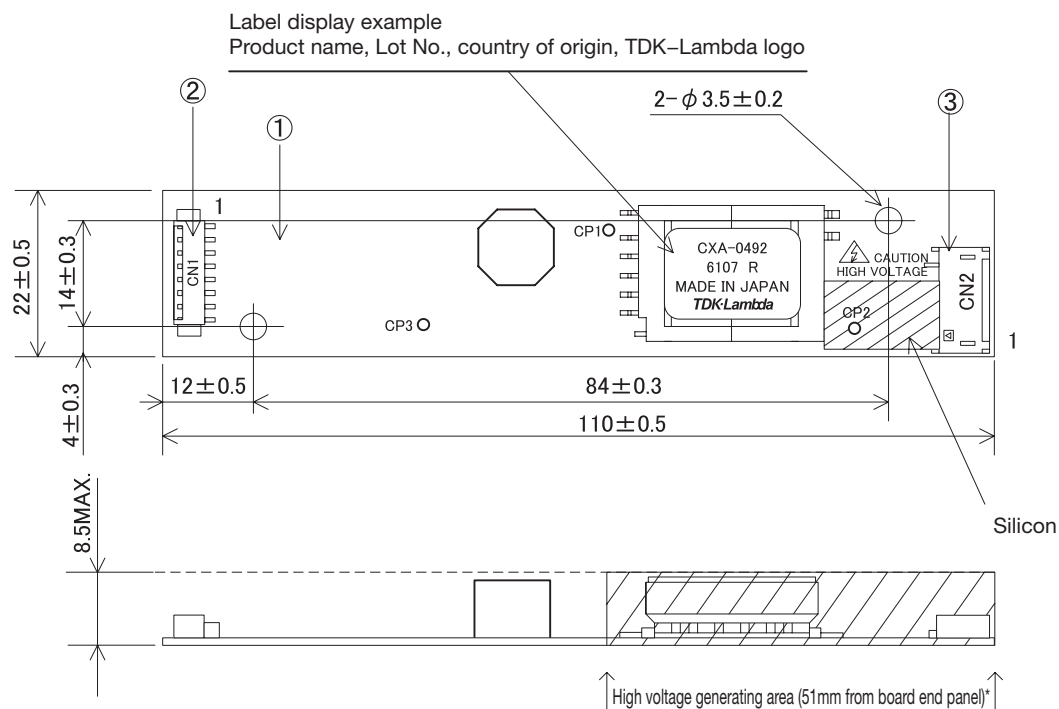
|                                       |     |                 |
|---------------------------------------|-----|-----------------|
| Dimming Function                      |     | Yes             |
| Operating Temperature                 | °C  | -30 to +80      |
| Storage Temperature                   | °C  | -30 to +85      |
| Operating Humidity Ratio              | RH% | 95max.          |
| Safety Standard                       |     | —               |
| Weight                                | g   | 18typ.          |
| Dimensions (WxDxH)                    | mm  | 110x22x8.5 (*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.

## Outline Drawing



\*From high-voltage generator, please secure space distance more than 3mm in top and bottom right and left.

## 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       | 53261-0871                  | 1   | Molex                | 51021-0800                     |
| ③   | Output connector CN2      | SM02(8.0)B-BHS-1-TB(LF)(SN) | 1   | J.S.T Mfg., Co., Ltd | BHR-03VS-1                     |

## Terminal Number &amp; Function

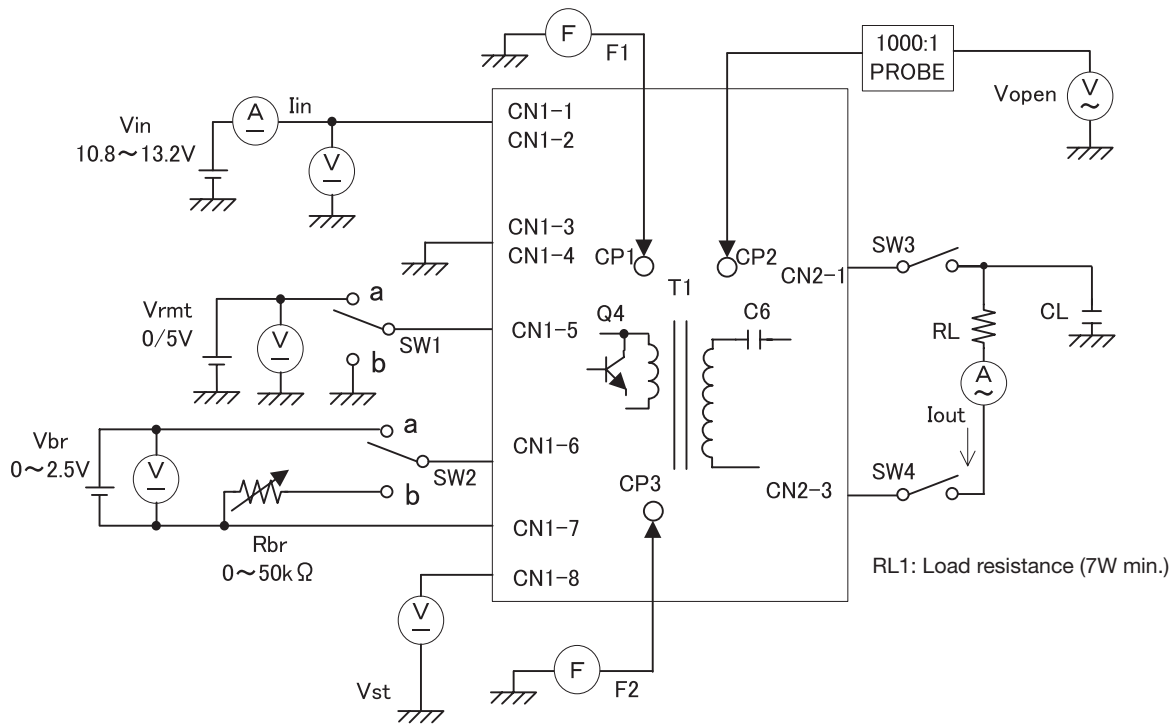
## Input side CN1

| Terminal No. | Symbol      | Rating              | Remarks                                               |
|--------------|-------------|---------------------|-------------------------------------------------------|
| CN1-1        | Vin         | 12±1.2V             | Power source input                                    |
| CN1-2        |             |                     |                                                       |
| CN1-3        |             |                     |                                                       |
| CN1-4        | GND         | 0V                  | Ground                                                |
| CN1-5        | Vrmt        | 0V/2.5V to Vin      | Remote terminal<br>0 to 0.4V : OFF<br>2.5 to Vin : ON |
| CN1-6        | Vbr1/Rbr1   | 0 to 2.5V/0 to 50kΩ | Dimmer terminal 1                                     |
| CN1-7        | Vbr2/Rbr2   | GND/0 to 50kΩ       | Dimmer terminal 2                                     |
| CN1-8        | Vst(output) | 0V/5V               | Alarm output<br>Lamp open : 5V                        |

## Output side CN2

| Terminal No. | Symbol            | Rating  | Remarks       |
|--------------|-------------------|---------|---------------|
| CN2-1        | V <sub>HIGH</sub> | 870Vrms | Output        |
| CN2-2        | —                 | —       | N.C.          |
| CN2-3        | V <sub>LOW</sub>  | (2V)    | Output return |

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<br>$V_{br} = 0$ to 2.5V<br>(0V: Maximum brightness)              |
| b   | Volume dimmer<br>$V_R = 0$ to 50k $\Omega$<br>(0 $\Omega$ : Maximum brightness) |

Protection Circuit Operation

| Load condition            | Alarm output (CN1-8)*1 | Shutdown function*2 |
|---------------------------|------------------------|---------------------|
| When normal               | 0.5V max.              | Does not shut down  |
| When 1 load (lamp) are NG | 4.75 to 5.25V          | Shuts down          |

\*1. Warning output is a situation where 5V is output when one or more switches (SW3 and SW4) of measuring circuit [4] is open.  
\*2. When all lamps were opened, this inverter has included protective function to stop operation in about 3 seconds.

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