

CXA-0453

Dimming/Connector Type

Features

- 4-output
- UL60950 approved
- Applicable panel size*: 10 to 12 inches
- With brightness control function (Pulse Wide Modulation mode).
- With shut down function.
- With a sensing function for running out of lamp (alarm output).
- With high voltage generate display (LED on a substrate turns on).
- 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-0453 Specifications (Please refer to each specification before use)

Electrical Characteristics

Item	Unit	Symbol	Specification			Condition							Remark
			min	typ	max	Vin(V)	Vrmt(V)	Vbr(V)	Rbr(kΩ)	Ta(°C)	RL(kΩ)	CL(pF)(*3)	
Output Current	mA	lout	11.6	13.0	14.4	12±1.2	5	0	-	0 to +70	85	4	Voltage dimmer (*1)
		(Maximum dimmer)	11.6	13.0	14.4	12±1.2	5	-	0	0 to +70	85	4	Volume dimmer (*1)
		lout	6.0	7.4	8.8	12±1.2	5	2.5	-	0 to +70	85	4	Voltage dimmer (*1)
		(Minimum dimmer)	6.0	7.4	8.8	12±1.2	5	-	50	0 to +70	85	4	Volume dimmer (*1)
Input Current	A	lin1	-	1.50	2.25	12±1.2	5	0		0 to +70	85	4	Remote ON
	mA	lin2	-		1	12±1.2		0		0 to +70	85	4	Remote OFF
Frequency	kHz	Freq1	48	53	58	12±1.2	5	0		0 to +70	85	4	
	Hz	Freq2(Duty frequency)	240	270	300	12±1.2	5	2.5	50	0 to +70	85	4	
Open Circuit Voltage	Vrms	Vopen	1500	1600	2000	10.8min.	5	0		0 to +70		∞	Open load
Alarm Signal	V	Vst	4.5	5.0	5.5	12±1.2	5	0		0 to +70		∞	In case of lamp anomaly (*2)
			-	0	0.5	12±1.2	5	0		0 to +70	85	4	On a normal operation (*2)

(*1) Please refer to the connection diagram for details of a dimming method. lout is value of 2 lamps in total.

(*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

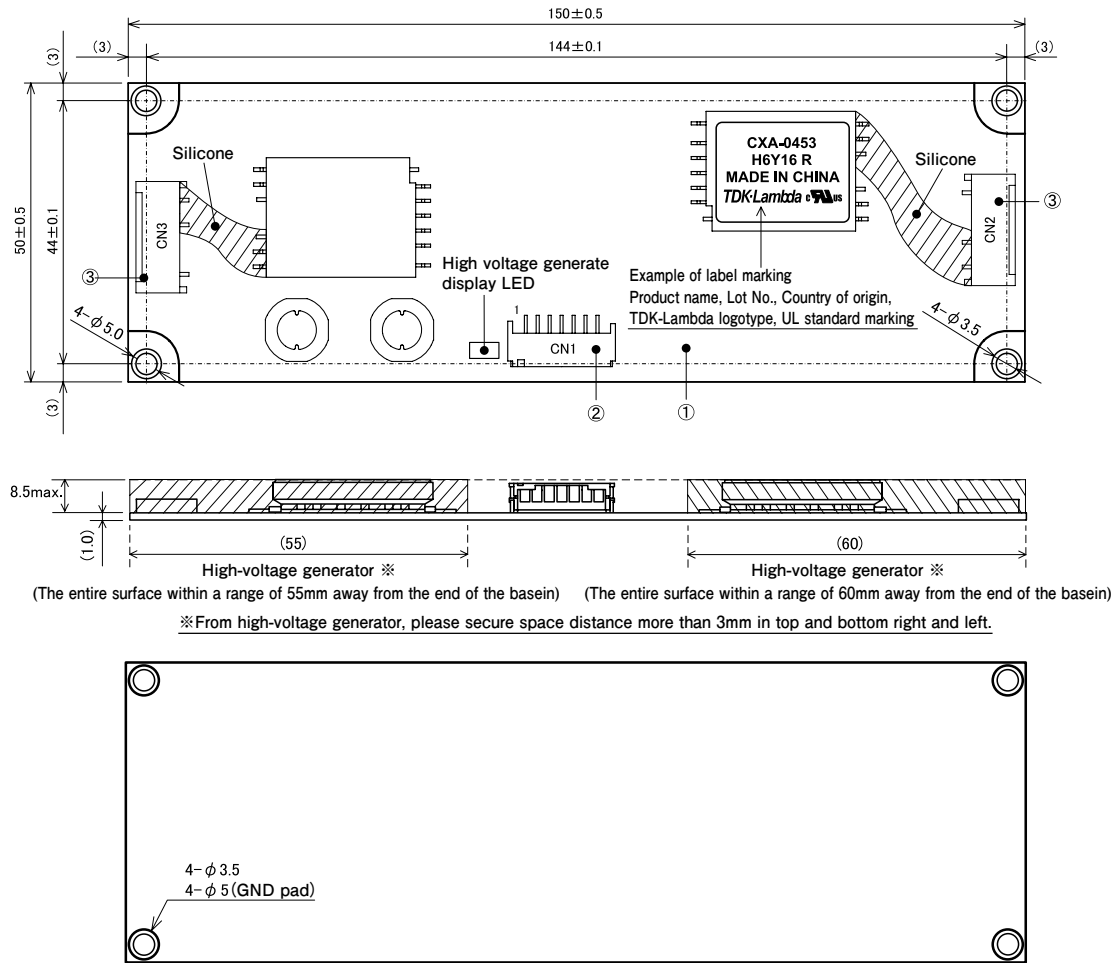
Dimming Function		Yes
Operating Temperature	°C	-20 to +70
Storage Temperature	°C	-30 to +85
Operating Humidity Ratio	RH%	95Max
Safety Standard		UL60950
Weight	g	43
Dimensions(WxDxH)	mm	150x50x8.5 (*4)
Fused Input		Yes
Remote ON / OFF		Yes
Alarm Signal Function		Yes
Shutdown Function		Yes
Silicone Coating on High Voltage Area		Yes

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

Conformity to RoHS Directive

EThis 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



Connector

Connector number	Part number	Model/Material	Quantity	Remarks	Recommended applicable connector
①	Printed circuit board PCB	Composite (CEM-3)	1	UL94V-0 t=1.0	—
②	Input connector CN1	S7B-PH-SM4-TB	1	JST Mfg. Co., Ltd.	PHR-7
③	Output connector CN2,3	SM03 (7-D1) B-BHS-1 (LF) (SN)	2	JST Mfg. Co., Ltd.	BHR-04VS-1

Terminal Numbers And Functions

Input side CN1

Terminal number	Symbol	Rated voltage	Remarks
CN1-1	Vin	12±0.2V	Power input
CN1-2			
CN1-3	GND	0V	Ground
CN1-4			
CN1-5	Vbr/Rbr	0 to 25V/0 to 50kΩ	Dimmer terminal
CN1-6 (Output)	Vst (Output)	0V/5V	Alarm output Lump open : 5V
CN1-7	Vrmt	0V/2.5V to Vin	Remote terminal 0 to 0.4V : OFF 2.5 to Vin V : ON

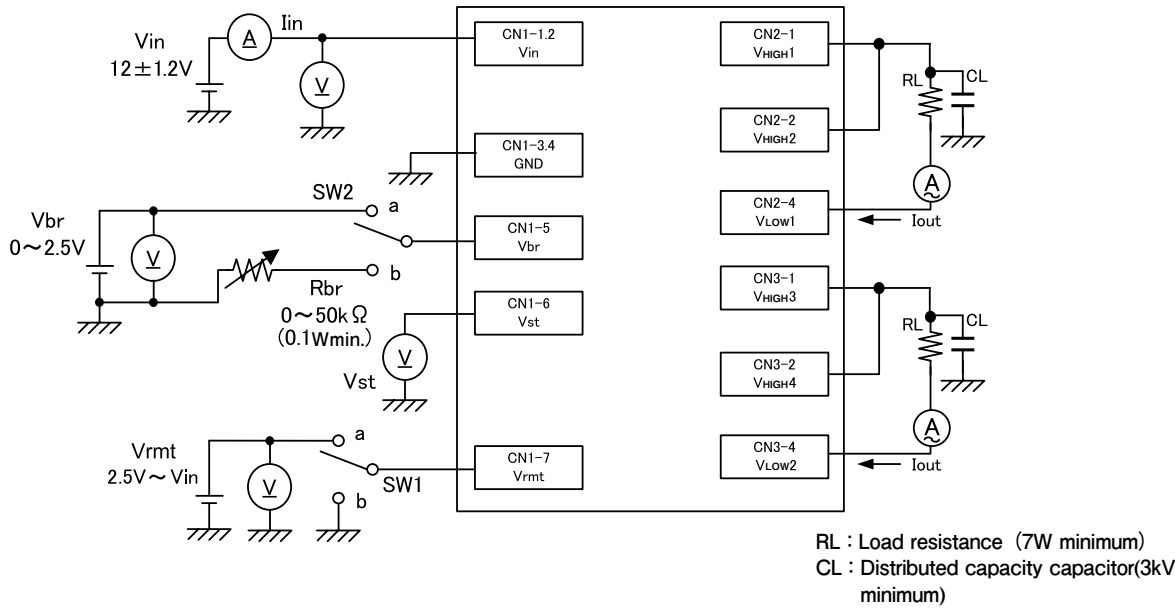
Output side CN2

Terminal number	Symbol	Rated voltage	Remarks
CN2-1	V _{HIGH1}	540Vrms	Output 1
CN2-2	V _{HIGH2}	540Vrms	Output 2
CN2-3	N.C.	—	—
CN2-4	V _{LOW1}	(2V)	Output 1 return

Output side CN3

	Symbol	Rated voltage	Remarks
CN3-1	V _{HIGH3}	540Vrms	Output 3
CN3-2	V _{HIGH4}	540Vrms	Output 4
CN3-3	N.C.	—	—
CN3-4	V _{LOW2}	(2V)	Output 2 return

Connections



Operate as follows by switching SW1.

SW1	Unit operation
a	Operation
b	Does not operate
Open	Does not operate

Operate as follows by switching SW2.

SW2	Unit operation
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}	Shut-down function ^{※2}	LED operation
Normal condition	0.5V max.	Does not shut down	Light on
When 1 load (lamp) is run-out	5±0.5V	Does not shut down	Light on
When 2 loads (lamps) are run-out	5±0.5V	Does not shut down	Light on
When 3 loads (lamps) are run-out	5±0.5V	Does not shut down	Light on
When 4 loads (lamps) are run-out	5±0.5V	Shut down	Lights off (3 seconds later)

※1: When more than one of the load was opened, output alarm signal of 5V.
 ※2: When all lamps were opened, this inverter has included protective function to stop operation in about 3 seconds.