Power Supplies

DC to AC Inverters
For 1 Bulb, 8W Diming

CXA Series CXA-P1212A-WJL

This flat-bottomed DC to AC inverter is the one-connector, two-output type that is excellent for cold cathode lamps. This CXA series inverter is suitable for back lighting of 6 to 12 inch class LCD panels.

FEATURES

- Optimum one-connector, two-output design for thin liquid crystal panel displays.
- Two 4W lamp outputs(8W total output) give sufficient power margin for use with 12 inch liquid crystal displays. 15 inch displays can also be designed using an inverter of the same size.
- This inverter carries a PMW(pulse modulation width) circuit, TDK's unique circuit design. This allows dimming of lighting over a much wider range than is possible using conventional types of dimmer circuits. The type of dimmer control can be selected as desired, either voltage control(Vbr=0.45 to 1.6V) or resistance control(VR:0 to 10kΩ).
- Built-in overcurrent protection circuit increases safety.
- Monitor brightness is always kept stable since the built-in current feedback illumination stabilization circuit compensates for inverter input voltage variation(±10%).
- The board backside is free of wiring pattern. Cost reduction and simplified mounting are made possible by a design that only uses one side of the board.
- Operational safety is increased by the use of two types of insulation for high voltage components.

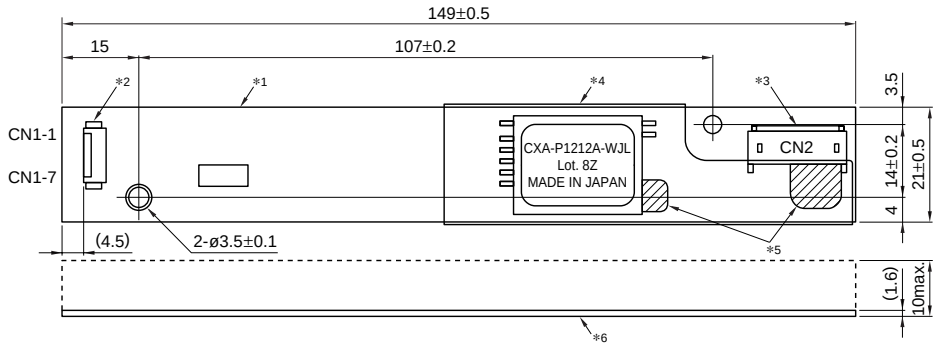
APPLICATIONS

Various types of color liquid crystal displays, computer touch panels, controllers, medical devices, ATMs, POS terminals, telecommunication terminals, microscope monitors, fishdetectors, ticket sales machines, amusement arcade machines.

TEMPERATURE AND HUMIDITY RANGES

Temperature range	Operating	–10 to +70°C
	Storage	–30 to +85°C
Humidity range		95(%)RH max. [Maximum wet-bulb temperature:38°C]

SHAPES AND DIMENSIONS



*1Substrate(PWB: Printed wiring board): Inflammable material UL 94V-0(FR-4 or CEM-3)
*2CN1: Molex Japan Co., Ltd. 53261-0790
*3CN2: Japan Solderless Terminal Co., Ltd. SM03(7-D1)B-BHS-1
*4Voltage protection insulating cover t=0.38mm
*5Silicon plastic(for insulation and voltage protection)
*6Highly insulating design featuring a wiring pattern-free board back surface.

Weight: 20g typ.

Dimensions in mm

TERMINAL NUMBERS AND FUNCTIONS

CN1

Terminal No.		Functions
CN1-1, -2	Vin	Input voltage Edc:10.8 to 13.2V
CN1-3, -4	GND	0V
CN1-5	Vrmt	Remote voltage:0/2.5V to Vin[2.5V to Vin operating]
CN1-6	Vbr/VR1	(0.45 to 1.6)V/0 to 10kΩ*
CN1-7	VR2	Open/0 to 10kΩ*

* Connection determines choice between voltage dimmer control or resistance dimmer control.

CN2

Terminal No.		Functions
CN2-1	VHIGH1	Output 1[High voltage]
CN2-2	VHIGH2	Output 2[High voltage]
CN2-3	NC	
CN2-4	VLOW	Output[Low voltage]

TDK

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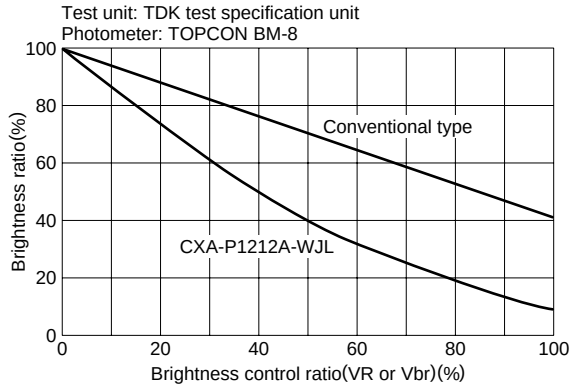
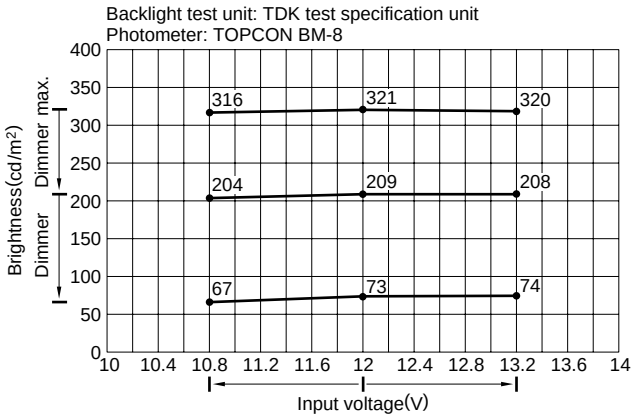
EXAMPLE OF MODULATED LIGHT RANGE COMPARISON



Conventional type	100 to 40% light intensity
CXA-P1212A-WJL	100 to 10% light intensity

EXAMPLE OF INPUT VOLTAGE FLUCTUATION AND BRIGHTNESS CHANGE MEASUREMENT

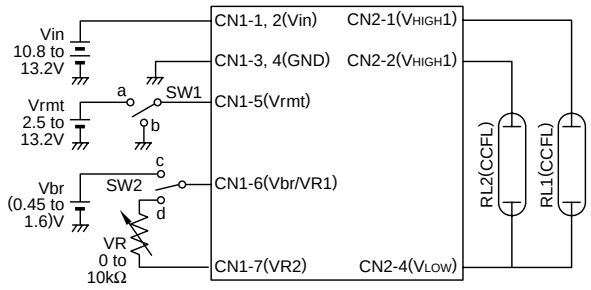


ELECTRICAL CHARACTERISTICS

Item			Specifications	Conditions				Brightness
				Vin(V)	RL(kΩ)	Vbr(V)*1	VR(kΩ)*2	
Output current	Irms(mA)	Iout1, 2	6typ.	10.8 to 13.2	80 to 120	(0.45)	0	Maximum
			6typ.	12	100	(0.45)	0	Maximum
			1.5typ.	12	(100)	(1.6)	10	Minimum
Oscillation frequency	(kHz)	FL	(40)	10.8 to 13.2	120	0	0	
Open circuit output voltage	Erms(V)	Vopen	1600min.	10.8 to 13.2	∞	(0.45 to 1.6)	0 to 10	
Output power	(W)	Pout	8max.	10.8 to 13.2	80 to 120	(0.45 to 1.6)	0 to 10	

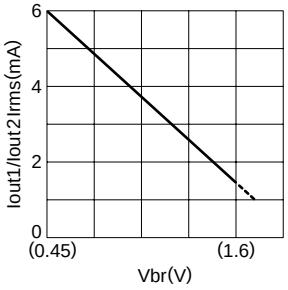
*1 Using voltage dimmer control.
*2 Using resistance dimmer control.

TYPICAL CONNECTIONS

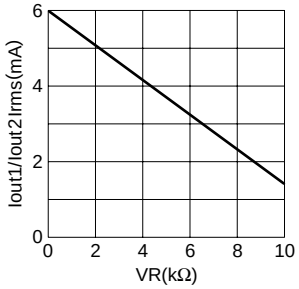


SW1 Remote function a: on b: off
SW2 Dimmer control method c: voltage dimmer control, d: resistance dimmer control

Vbr vs. Iout CHARACTERISTICS



VR vs. Iout CHARACTERISTICS



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