

DC-AC INVERTER UNIT

CXA-0271 (6W DOUBLE OUTPUT WITH DIMMING FUNCTION)**(PRELIMINARY INFORMATION)****DESCRIPTION :**

This DC to AC Inverter was developed for many other low LCD Backlight power supply as low profile applications, either for LCD Monitor or Industrial PC.

APPLICABLE LCD:

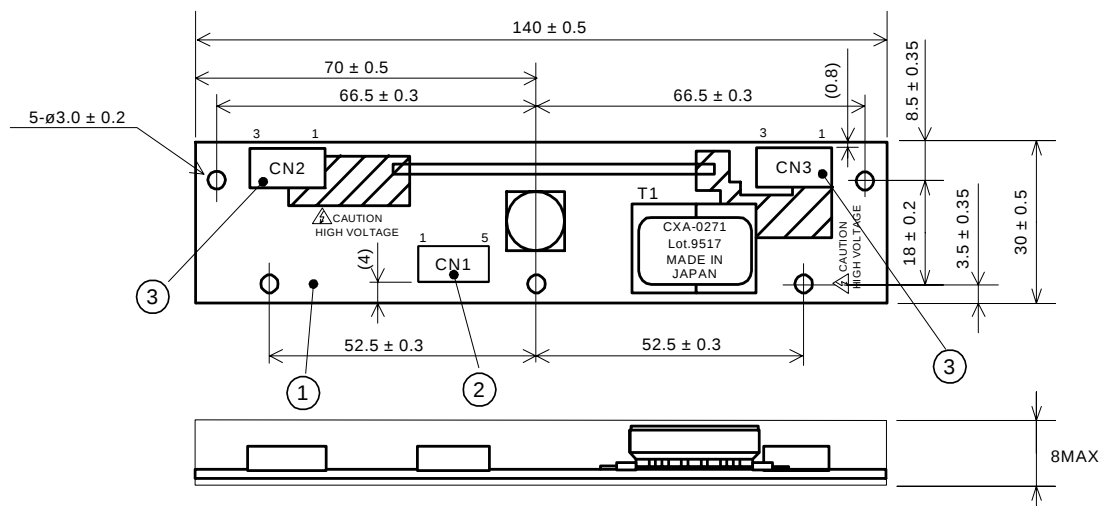
10 to 15 inches double lamp type
Lamp Voltage 460V
Lamp Current 6mA
Lamp Start Up Voltage 1500Vrms (Vin : 12V)

**FEATURES :**

- PWM dimming circuit
- Current Feedback Circuit
- High Efficiency
- Low noise with voltage resonant circuit
- Regulated output current

TEMPERATURE & HUMIDITY :

Operating Temperature Range 0 °C ~ +60°C
Storage Temperature Range -30 °C ~ +85°C
Humidity 95 %RH max

DIMENSIONS :

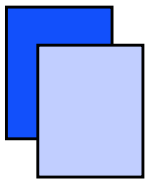
Unit : mm
Weight : 21.0 (g) typ.

No.	Part Discription	Qty.	Material	Note
1	PCB	1	UL94V-0 (CEM-3)	t=1mm
2	Connector CN1	1	S5B-PH-SM3	JST
3	Connector CN2	2	SM02(8.0)B-BHS-1	JST

Power Systems – The Power Solution

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Input Side CN1:

Pin No.	Symbols	Ratings
CN 1-1	Vin	10.8~13.2V
CN 1-2	GND	0V
CN 1-3	Vbr	0~2.5V
CN 1-4	Vst	0/5V
CN 1-5	Vrmt	0~13.2V: 0~0.4V OFF / 2~13.2V ON

Output Side CN2:

Pin No.	Symbols	Ratings
CN 2-1	VHIGH1	460 Vrms
CN 2-2	N.C.	-
CN 2-3	VLOW1	(5V)

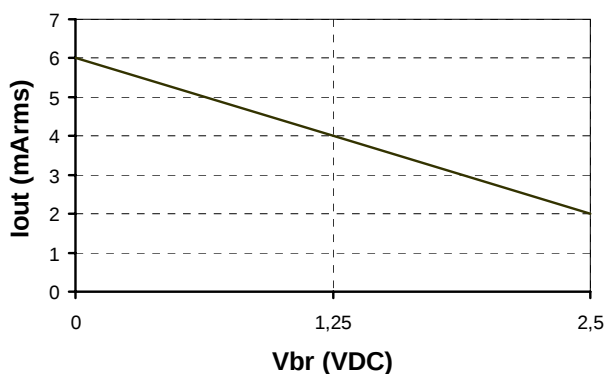
Output Side CN3:

Pin No.	Symbols	Ratings
CN 3-1	VHIGH2	460 Vrms
CN 3-2	N.C.	-
CN 3-3	VLOW2	(5V)

ELECTRICAL CHARACTERISTICS :

Items	Symbols	Conditions					Specification			Unit
		Vin (V)	Vrmt (V)	Vbr (V)	Ta (°C)	RL1 / RL2 (KΩ)	Min.	Typ.	Max.	
Output Current	Iout1/2	12±0.1	5±0.25	0	23±5	74±0.5	5.7	6	6.7	mA rms
		12±1.2					5	6	7	
Input Current	Iin1	12±1.2	5±0.25	0~1.5	23±5	74±0.5	-	550	700	mA DC
	Iin2		0~0.4				-	-	1	
Frequency	F1	12±1.2	5±0.25	0	23±5	74±0.5	38	43	48	kHz
	F2 (Duty)			1.0±0.05			254	305	356	
Open Circuit Voltage	Vopen	12±1.2	5±0.25	0	23±5	∞	1250	1500	-	V rms
Dimming Function	Iout1/2	12±0.1	5±0.25	2.5±0.05	23±5	74±0.5	1.2	2	2.8	mA rms
Warning Signal	Vst	12±0.1	5±0.25	0~2.5	23±5	RL1=74, RL2=∞	4.5	5	5.5	VDC
						RL1=∞, RL2=74				
						RL1=∞, RL2=∞				
						RL1=74, RL2=74	-	-	0.5	

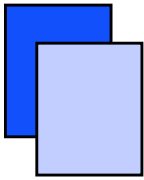
DIMMING CHARACTERISTICS (Reference):



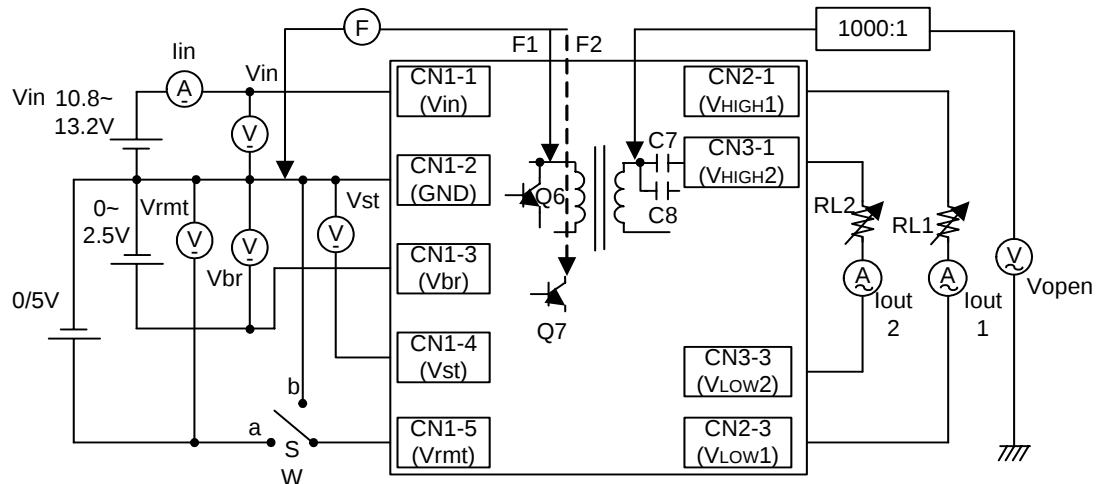
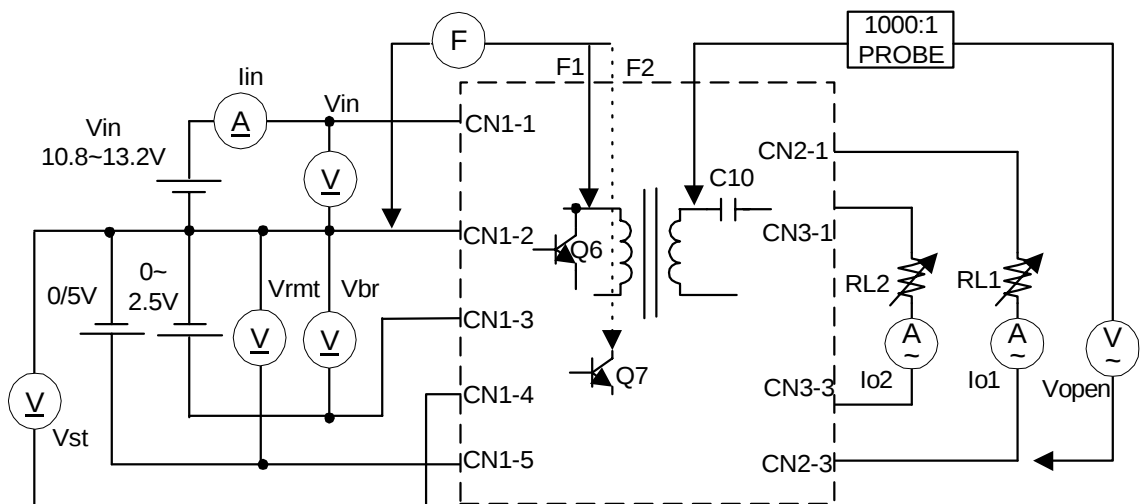
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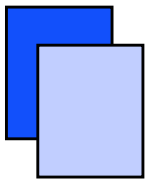
**APPLICATION (for example)**

Voltage Dimming Type

**TEST CIRCUIT:****Power Systems – The Power Solution**

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- Note 1. For circuit connection, please refer to test circuit diagram.
- Note 2. 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.
- Note 3. 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.
- Note 4. If the start 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/leakage capacitance of inverter high voltage area to any surrounding conductor.
- Note 5. Please check your lamp characteristic for minimum operational current and set the limit point in your design to avoid flickering and/or abnormal operation.
- Note 6. For proper operation of circuit protection (FUSE or IC PROTECTOR), please use minimum of 2A capacity for input power supply.
- Note 7. The warning signal: 5V in abnormal circumstances.
- Note 8. The brightness of the lamp changes at the change and this level, too, when the direction changes the input voltage lower than 12V of the standard.
- Note 10. In test circuit, if one of the switches CN2 or CN3 opens, then the warning signal will be activated (+5V).

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