



SPECIFICATION

ESD08029880

INV22-4501

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1.0 Application & Notice

This DC to AC inverter is designed for the backlight of LCD Panel with 4 CCFLs (Cold Cathode Fluorescent Lamp). And, it is used in CPT 22" (CLAA220WA01) and other low profile application.

Notice:

- 1.1 For Safety Issue, please keep 4.0mm at least from the metal parts of the system to the inverter. Or, put a high-voltage insulator between the inverter and the metal parts to avoid the situation of Hi-POT failure or arcing---etc.
- 1.2 Don't twist , deform , drop or knock the inverter during assembly.
- 1.3 The inverter is usually designed without the case. Please take care about ESD at anytime.
- 1.4 Due to the characteristic of Panels, the brightness is sensitive about Temperature. You must measure it in the same condition and waiting for power on 10~30 minutes.

2.0 Environment Characteristics

2.1 Temperature:

Storage : 0°C ~ 60°C.
Operating : 0°C ~ 60°C
Transport Temp.: -25°C ~ 60°C

2.2 Humidity:

Storage : 10% ~ 95% RH , non-condensing
Operating : 10% ~ 95% RH , non-condensing

2.3 MTBF: 60'000 Hrs @ 25°C

3.0 General Requirements

3.1 Input characteristics

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK
INPUT VOLTAGE	Vin	10.8	12	13.2	V	DC Input
INPUT CURRENT	Iin	--	2.4	2.8	A	Vin=12V,Von/off=5V Vadj=4.5V LOAD:Panel
INPUT POWER	Pin	--	9.6	10.8	W	Vin=12V,Von/off=5V Vadj=4.5V LOAD: Panel
INPUT VOLTAGE	Von/off	0	--	0.8	V	Off State
		3.0	--	5.0		On State
INPUT VOLTAGE	Vadj	0.5	--	4.5	V	
EFFICIENCY	η	75	--	--	%	Vin=12V,Von/off=5V Vadj=4.5V LOAD:Panel

3.2 Output Characteristics (RL=Panel)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK	
LAMP CURRENT	IL	7.0	7.5	8.0	mA	Vin=12V,Von/off=5V Vadj=4.5V LOAD: Panel	
LAMP CURRENT	IL	3.0	3.6	4.2	mA	Vin=12V,Von/off=5V Vadj=0.5V LOAD: Panel	
LAMP VOLTAGE	VL(REF.)	702	780	858	Vrms	Vin=12V,Von/off=5V Vadj=4.5V LOAD: Panel	
FREQUENCY	FL	40	50	60	KHz	Vin=12V,Von/off=5V Vadj=4.5V LOAD: Panel	
OUTPUT OPEN VOLTAGE	Vs	1600	--	--	Vrms	Vin=12V,Von/off=5V Vadj=4.5V LOAD: ∞ , Ta=0°C	
OUTPUT OPEN	VL	LATCH					Vin=12V,Von/off=5V Vadj=4.5V LOAD = ∞



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3.2.1 Output Characteristics (RL=110KΩ//39P)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK
LAMP CURRENT	IL	6.8	7.4	8.0	mA	Vin=12V,Von/off=5V Vadj=4.5V LOAD: RL
LAMP CURRENT	IL	3.0	3.7	4.4	mA	Vin=12V,Von/off=5V Vadj=0.5V LOAD: RL
LAMP VOLTAGE	VL(REF.)	702	780	858	Vrms	Vin=12V,Von/off=5V Vadj=4.5V LOAD: RL
FREQUENCY	FL	40	50	60	KHz	Vin=12V,Von/off=5V Vadj=4.5V LOAD: RL
OUTPUT OPEN VOLTAGE	Vs	1600	--	--	Vrms	Vin=12V,Von/off=5V Vadj=4.5V LOAD: ∞, Ta=0°C
OUTPUT OPEN	VL	LATCH				Vin=12V,Von/off=5V Vadj=4.5V LOAD = ∞

3.3 Pin Assignments

DC Input : Location: CN1

Connector type: JOWLE CONNECT,2mm6PIN,90°A2001WR2-6P or Equivalent

Pin No.	Symbol	Description
1,2	Vin	12V
3	Von/off	On/off Control
4	Vadj	Brightness
5,6	Gnd	Power return

AC Output: Location: CN2,CN3

Connector type: FCN WH2-085D0-022L or Equivalent

Pin No.	Symbol	Description
1	Vout -H	High Voltage
2	Vout -L	RETURN

3.4 Test Equipment

Oscilloscope : Tektronix TDS3012B ,

High Voltage Probe : Tektronix P6015A

Multi-Meter : FLUKE45

4.0 Mechanical Characteristics

Item	L*W*H (mm)	For use with
Dimension	134 * 46 * 16.9	22" LCD's

Tolerance: ±0.5mm

5.0 The Spec. Change List

Item	Revision	Descriptions	Date
	01	Initial spec. release	2008/04/23
	02	INPUT CURRENT MAX 2.8A	2008/7/14