



SPECIFICATION

ESD08065852

INV24-C005

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1.0 Application & Notice

This DC to AC inverter is designed for the backlight of LCD Panel with 6U CCFLs (Cold Cathode Fluorescent Lamp). And, it is used in AUO 24" (M240UW01) 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 ~ 70°C.
Operating : 0°C ~ 60°C
Transport Temp.: -20°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	17.1	19	20.9	V	DC Input
INPUT CURRENT	Iin	--	3.4	4.0	A	Vin=19V,Von/off=5V Vadj=0V LOAD:Panel
INPUT POWER	Pin	--	64.6	76.0	W	Vin=12V,Von/off=5V Vadj=0V LOAD: Panel
INPUT VOLTAGE	Von/off	0	--	0.8	V	Off State
		2.5	--	5.0		On State
INPUT VOLTAGE	Vadj	3.3	--	0	V	
EFFICIENCY	η	75	--	--	%	Vin=12V,Von/off=5V Vadj=3.3V LOAD:Panel

3.2 Output Characteristics (RL=Panel)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK	
LAMP CURRENT	IL	5.5	6.0	6.5	mA	Vin=12V,Von/off=5V Vadj=0V LOAD: Panel	
LAMP CURRENT	IL	1.5	2.0	2.5	mA	Vin=12V,Von/off=5V Vadj=3.3V LOAD: Panel	
LAMP VOLTAGE	VL(REF.)	--	1800	--	Vrms	Vin=12V,Von/off=5V Vadj=0V LOAD: Panel	
FREQUENCY	FL	40	50	60	KHz	Vin=12V,Von/off=5V Vadj=0V LOAD: Panel	
OUTPUT OPEN VOLTAGE	Vs	--	3000	--	Vrms	Vin=12V,Von/off=5V Vadj=0V LOAD: ∞ , Ta=0°C	
OUTPUT OPEN	VL	LATCH					Vin=12V,Von/off=5V Vadj=0V LOAD = ∞

3.2 Output Characteristics (RL=120K ohm)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK
LAMP CURRENT	IL	5.2	6.3	6.5	mA	Vin=12V,Von/off=5V Vadj=0V LOAD: RL
LAMP CURRENT	IL	1.2	2.0	2.8	mA	Vin=12V,Von/off=5V Vadj=3.3V LOAD: RL
LAMP VOLTAGE	VL(REF.)	--	1800	--	Vrms	Vin=12V,Von/off=5V Vadj=0V LOAD: RL
FREQUENCY	FL	40	50	60	KHz	Vin=12V,Von/off=5V Vadj=0V LOAD: RL
OUTPUT OPEN VOLTAGE	Vs	--	3000	--	Vrms	Vin=12V,Von/off=5V Vadj=0V LOAD: ∞, Ta=0°C
OUTPUT OPEN	VL	LATCH				Vin=12V,Von/off=5V Vadj=0V LOAD = ∞

3.3 Pin Assignments

DC Input : Location: CN1

Connector type: CONNECT,2mm 7PIN,90°,P110L-7PIN,TKP or Equivalent

Pin No.	Symbol	Description
3,4,5	Vin	19V
1	Von/off	On/off Control
2	Vadj	Brightness
6,7	Gnd	Power return

AC Output: Location: CN2~CN7

Connector type: CONNECT,2mm,7PIN,LIGHT YELLOW,SMD,C/O 2,3,4,5,6,P210L-07-SMT,TRP or Equivalent

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

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	310 * 65 * 13	24" LCD's

Tolerance: ±0.5mm

5.0 The Spec. Change List

Item	Revision	Descriptions	Date
	01	Initial spec. release	2008/11/20
	02		2009/10/27