

LCD inverter, TPI-01-0110

Version 05/14

Item no. 1172438

LCD DC/AC INVERTER SPECIFICATION

PART NO	TPI-01-0110
REVISION	VER:A4

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1.0 Revision History

Revision	Customer REV	Modify Item	Date	Prepared	Approved
VER:A4	A0		2010.06.08		

2.0 Application & Notice

This DC to AC inverter is designed for the backlight of 6.4"-15.1"LCD Panel with 1 CCFL Cathode Fluorescent Lamp .

Notice:

- 2.1 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.**
- 2.2 Don't twist , deform , drop or knock the inverter during assembly.**
- 2.3 The inverter is usually designed without the case. Please take care about ESD at anytime.**
- 2.4 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.**

3.0 Environment Characteristics

3.1 Temperature:

Storage : -25°C ~ 85°C.
Operating : -20°C ~ 75°C

3.2 Humidity:

Storage : 10% ~ 95% RH , non-condensing
Operating: 10% ~ 90% RH , non-condensing

3.3 MTBF: 60'000 Hrs @ 25°C

4.0 General Requirements

4.1 Input characteristics

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK
INPUT VOLTAGE	V _{in}	8.0	12	21	V	
INPUT CURRENT	I _{in}	---	0.35	----	A	V _{in} =12V V _{on/off} =5V, V _{adj} =0V Load=70K
INPUT POWER	P _{in}	----	4.2	----	W	V _{in} =12V V _{on/off} =5V, V _{adj} =0V Load=70K
INPUT VOLTAGE	V _{on/off}	2.5	5	15	V	On State
		---	0	0.5		Off State
INPUT VOLTAGE	V _{adj}	0	----	3.0	V	0V(MAX Brightness) 3.0V(MIN Brightness)
EFFICIENCY	η	----	85	----	%	V _{in} =12V V _{on/off} =5V, V _{adj} =0V Load=70K

4.2 Output Characteristics

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK	
LAMP CURRENT	I _L	5.5	6.0	6.5	mA	V _{in} =12V, V _{on/off} =5V V _{adj} =0V Load=70K	
LAMP CURRENT	I _L	2.0	2.5	3.0	mA	V _{in} =12V, V _{on/off} =5V V _{adj} =3.0V Load=70K	
LAMP VOLTAGE	V _L	---	500	---	V _{rms}	V _{in} =12V, V _{on/off} =5V V _{adj} =0V Load=70K	
FREQUENCY	F _L	40	50	60	KHz	V _{in} =12V, V _{on/off} =5V V _{adj} =0V, Load=70K Ta=25°C	
OPEN VOLTAGE (RMS)	V _s	---	1500	---	V _{rms}	V _{in} =12V, V _{on/off} =5V V _{adj} =0V, Load=∞	
OUTPUT OPEN	V _L	LATCH					V _{in} =12V, V _{on/off} =5V V _{adj} =0V, Load=∞
OUTPUT SHORT	V _L	LATCH					V _{in} =12V, V _{on/off} =5V V _{adj} =0V, Load=2KΩ to GND

4.3 Pin Assignments

DC Input :

Location: CN1

Connector type: PH 1.25mm-6Pin or equivalent

Pin No	Symbol	Description
1,2	VIN	12V
5,6	GND	Power return
3	ON/OFF	ON: 5.0V, OFF: 0V
4	ADJ	0V (Max) ~3.0 (Min)

AC Output:

Location: CN2、

Connector type: SMD 3.5mm-2Pin or equivalent

Pin No	Symbol	Description
1	Vout H	High Voltage
2	Vout L	Return

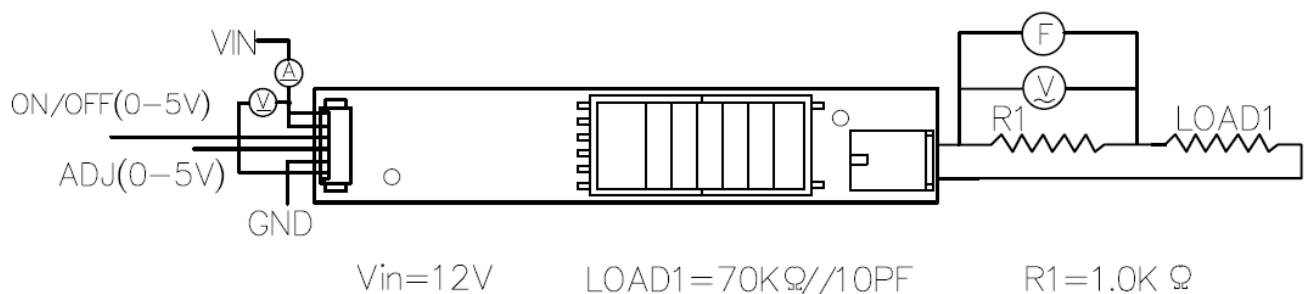
4.4 Test Equipment

Oscilloscope : Tektronix TDS3012B

High Voltage Probe : Tektronix P6015A

Multi-Meter : FLUKE45

5.0 Test Circuit



TESTING INSTRUMENTS:

V_{in} :REGULATED DC POWER SUPPLY:PS-303D

(V):DIGITAL MULTI-METER:FLUKE45

(F):FREQUENCY COUNTER:FLUKE45A

(A):DC AMPERE-METER:FLUKE45

(V):TRUE R.M.S. AC VOLTMETER:FLUKE45

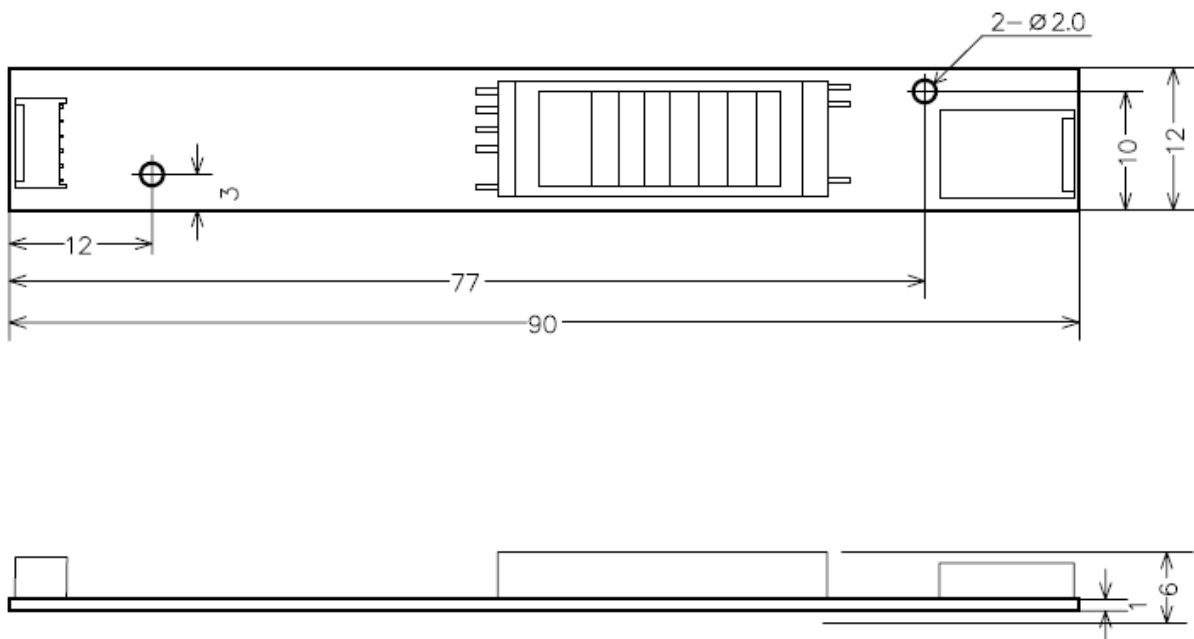
6.0 Mechanical Characteristics

Item	L*W*H (mm)	For use with
Dimension	90*12*6	6.4"-15.1" LCD's

Tolerance: $\pm 0.5\text{mm}$

7.0 Outline Dimension

Unit:mm



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