IXC-402

DC-AC BACKLIGHT INVERTER

FUNCTIONAL DRAFT SPECIFICATION

(This document is meant for customers' approval)

Release Date
22nd Dec 2020

1. Application

This inverter is designed for the backlight of the LCD panel with 4 CCFL (Cold Cathode Fluorescent Lamp), and it's used in the LCD TV Set or Monitor.

1.1 Applicable load: From 14 inch to 19 inch LCD Panel

1.2 Notice:

1.2.1 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 high Failure or Arcing (ETC)

1.2.2 Don't twist, deform, drop or knock the inverter during assembly.

1.2.3 The inverter is usually designed without the case. Please take care about ESD at anytime.

1.2.4 Due to the characteristic of panels, the brightness is sensitive about temperature; you must Measure it in the same condition and be waiting for 10to30 minutes after the power on.

LCD SIZE	Lcm Model	Brand	Remark

2. Environment characteristics

2.1 Temperature

Storage: 0°C ~70°C .

Operating: 0°C~50°C.

2.2 Humidity

Storage: 5%~95%RH, non-condensing

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

3. Features

3.1 Open lamp or short circuit protection

3.2 Soft start or soft on/off control

3.3 Constant operating frequency.

4. General characteristics

4.1 Input characteristics

Parameter	Symbol	MIN	TYPE	MAX	Unit	Remark
Input Voltage	Vin	10.8	12	13.2	V	
Input Current	Iin	-	2	-	A	Vin=12V,ENA=5V,DIM=0V RL= 100k Ω //10nF
Input Power	Pin	-	24	-	W	Vin=12V,ENA=5V,DIM=0V RL= 100k Ω //10nF
Input Enable Voltage	ENA	2.0		5.0	V	Enable
			0	1.5	0	Disable
Input Dimming Voltage	DIM	0		5.0	V	0V:Max brightness/5V:Min brightness

4.2 Output characteristics

Parameter	Symbol	MIN	TYPE	MAX	Unit	Remark
Lamp current (Max Br)	IL	14	15	16	mA	Vin=12V,ENA=5V,DIM=0V RL= 100kΩ//10nF
Lamp current (Min Br)	IL	5	6	7	mA	Vin=12V,ENA=5V,DIM=5V RL= 100kΩ//10nF
Lamp voltage	VL	-	700	3.3	Vrms	Vin=12V,ENA=5V,DIM=0V RL= 100kΩ//10nF
Frequency	Pin	-45	50	-55	kHz	Vin=12V,ENA=5V,DIM=0V RL= 100kΩ//10nF
Open voltage	ENA	1450	-	-	Vrms	Vin=12V,ENA=5V,DIM=0V/ RL= No load

4.3 PIN Assignments

4.3.1 DC Input (CN1)

Description: 6PIN Space between 2.0 mm horizontal SMD

Pin No.	Symbol	Description
1, 2	VIN	Power Supply
5,6	GND	Power Ground
3	ENA	Enable Control
4	DIM	Dimming Control

4.3.2 AC Output (CN2, CN3)
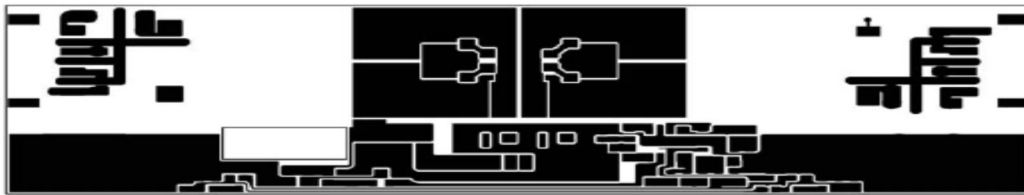
Description: 2PIN Space between 3.0 horizontal SMD

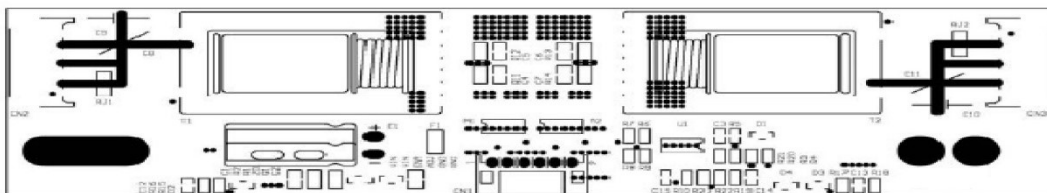| Pin No.	Symbol	Description
1	HV1	High Voltage high side
2	HV2	High Voltage high side
3	NC	
4	LV	High Voltage low side

5 Weights

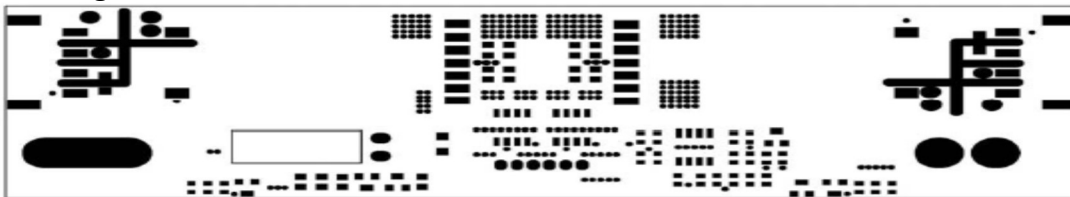Approximately=160g

6 PCB Layout drawing

6.1 Toplayer Drawing

6.2 Top Overlay Drawing

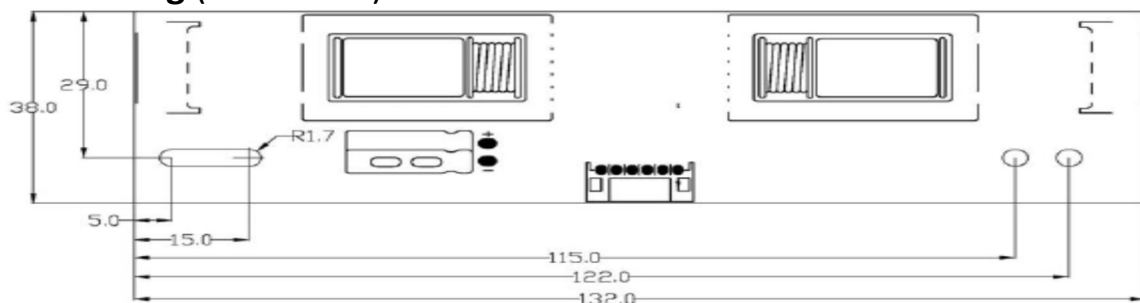### 6.3 Top paste Drawing

7 Inverter Mounting (UNIT: mm)

Note : We advised it better the dimensions of the fixed poles is 112mm