

# Specification

**FIF1222-31A**

**Version April 2006**

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INVERTER PART NO. : FIF1222-31A

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## 1.Revision History

REV NO.	Revise Date	Reason/Issue	Revised Description

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## 2. General Description

### SCOPE:

This DC-AC inverter was developed for 2 CCFL lamps of LCD back-light system.

## 3. Applications

- 2LAMP LCD MNT/TV.

## 4. Absolute maximum rating

- Input supply voltage : 11.0 ~ 13.0V
- Input current : 1.0A
- Output current : 7.5mArms
- Input signal voltage : -0.3V ~ 6.0V  
(On/Off /I Control)
- Ambient operating temperature : -10°C ~ 65°C
- Storage temperature : -20°C ~ 85°C
- Operating & Storage Humidity : 10% ~ 85%

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## 5. Electrical Characteristics

- ▶ Analog Dimming
- ▶ Input Voltage(Vdc) : 11.0 ~13.0

No.	Items (Unit)	Sign.	Condition		Min.	Typ.	Max.
1	Input Current (A)	I <sub>in</sub>	V <sub>in</sub> =12V	CTRL=0V	0.6	0.8	1.0
				CTRL=2.5V	0.1	0.2	0.3
2	Output Current 1,2(mA)	I <sub>out1,2</sub>	V <sub>in</sub> =12V	CTRL=0V	5.5	6.5	7.5
				CTRL=2.5V	1.0	2.0	3.0
3	Lamp Frequency (kHz)	f	V <sub>in</sub> =12V	CTRL=5V	56	61	66
4	ON/OFF Control	ON	V <sub>in</sub> =12V, ON/OFF=5V		Normal Operation		
		OFF	V <sub>in</sub> =12V, ON/OFF=0V		Shunt-down (Lamp off)		
5	Dim Adjust (Lamp Current Control)	CTRL	CTRL=0V,Max Current		0.0 ~ 5.0 Volt.		
			CTRL=5V,Min Current				
6	Kick-Off Voltage(V <sub>rms</sub> )	V <sub>k-off</sub>	Kick-Off		MORE THAN 1100		

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## 6. Functional Pin Description

### 6.1. Input Connector CN1 : 12505WR-07A00 (JST, Yeon-ho, MOLEX, C/S)

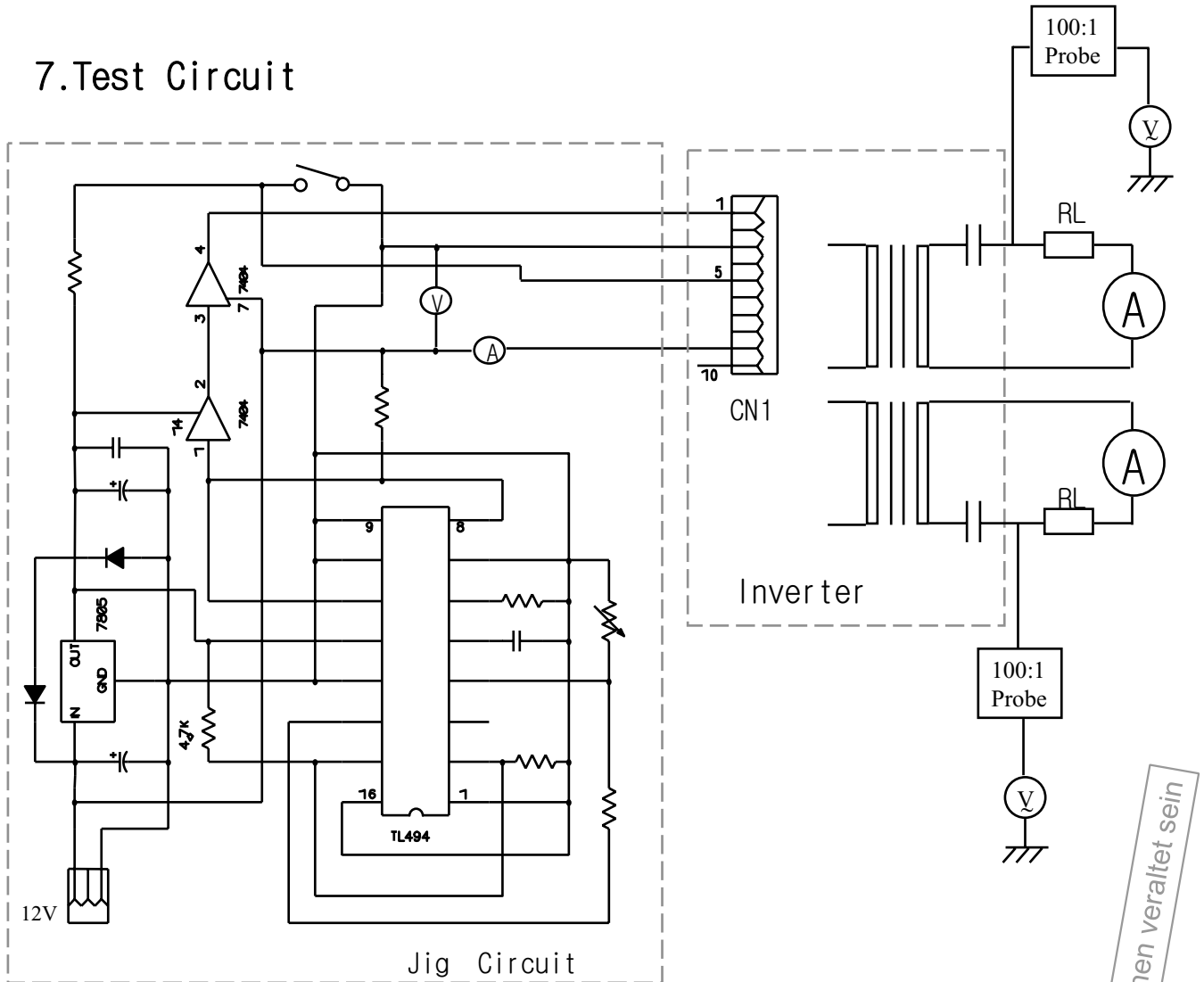
Pin No.	Symbol	Description
1.2	Vin	Input Voltage : 12V ± 1V
3.4	GND	GND
7	CTRL	Dim Adjust, Apply 0V ~ 5Vdc to Control Lamp Current 0 V: 6.5mA, 2.5V :2mA (Each Lamp)
5	ON / OFF	Power System Return ( 5V:ON, 0V:OFF )
6	NC	NO CONNECTION

### 6.2. Output Connector CN2,3 : 20015WR-05A00 (JST, Yeon-ho, MOLEX, C/S)

Pin No.	Symbol	Description
1	Lamp H1	High Voltage connection to low side of lamp.
2	Lamp L1	Low Voltage connection to high side of lamp.

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## 7. Test Circuit



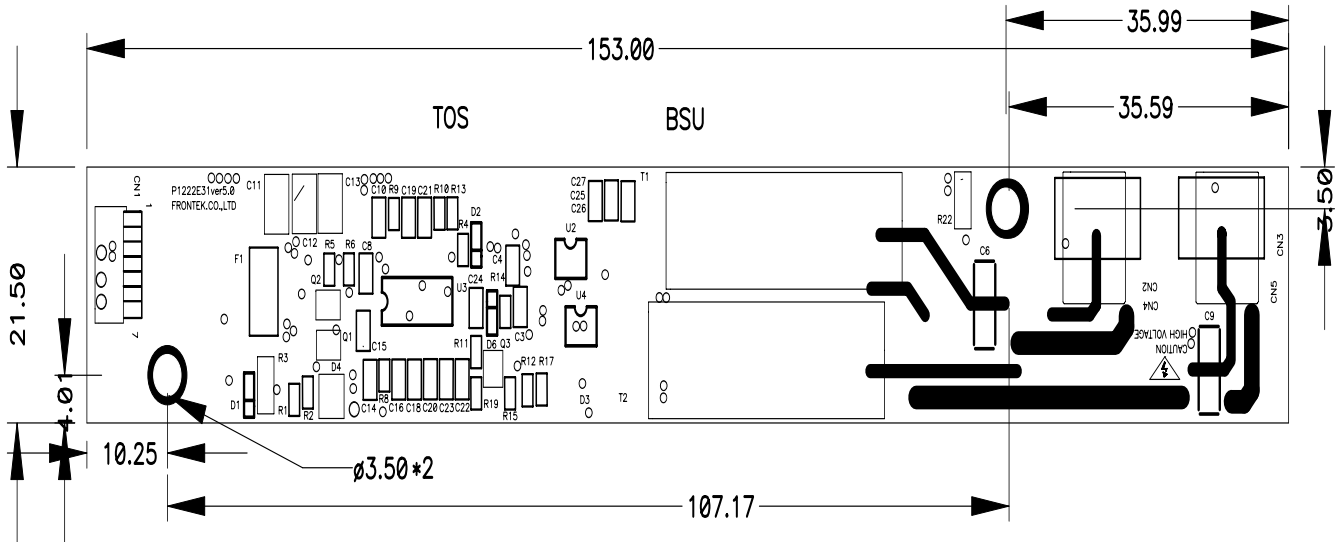
- \* Input Volt Meter : Fluke 45
- \* Input Current Meter : Fluke 45
- \* Output Current Meter : Fluke 45(Yokogawa P2016-1)

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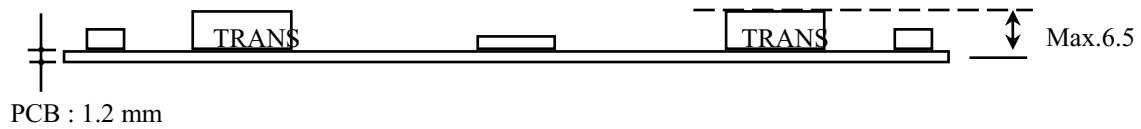
## 8. Mechanical Drawings

### 8-1.P.W.B

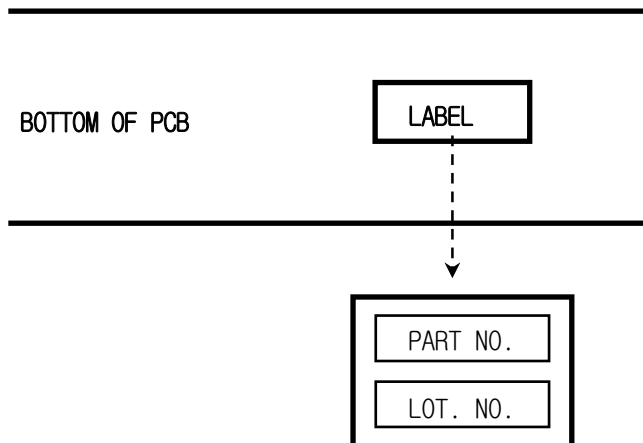
\*. Unit : mm  
\*.Tolerance : ± 0.2mm



### 8-2.Trans & Insulator



### 8-3. Marking



\*.PART NO: FIF1222-31A  
\*.LOT NO.: F○○○○○○○○○○○○○○○○  
                  ↓      ↓      ↓      ↓      ↓  
                  LINE YEAR MONTH DAY MANUFACTURE

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## 9. Quality Assurance Test

NO.	ITEMS	TEST CONDISIONS	Numbers of Samples	NOTE
0	Electrical Characteristics & Appearance test	Electrical Characteristics & Mechanical size on approval sheet	30 EA	
1	High temperature Operation Test	50°C, Vin = 13V, Ctrl = 0V, 500Hr	3 EA	
2	Low temperature Operation Test	0°C, Vin = 13V, Ctrl = 0V, 240Hr	3 EA	
3	High temperature Storage Test	80°C, 240Hr	3 EA	
4	Low temperature Storage Test	-20°C, 240Hr	3 EA	
5	High temperature & High Humidity Storage Test	40°C, 95%RH, 240Hr	3 EA	
6	Heat Shock Test	-20°C(0.5Hr) + 80°C(0.5Hr) 20 Cycle	3 EA	
7	Power On/Off test	Vin = 13V, On/Off = 20,000 Cycle	3 EA	On Time(2 sec ) + Off Time(2 Sec)

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