

**SPECIFICATION FOR APPROVAL**

(FOR LCD MNT 15.1" APPLICATION PURPOSE)

TFT LCD BACKLIGHTING INVERTERPART NO. : FIF1542-02ABUYER'S PART NO.:

APPROVED	REFERENCE

( PLEASE RETURN ONE OF THESE TO US IMMEDIATELY WITH YOUR SIGNATURE FOR APPROVAL )

FRONTEK CO.,LTD

TESTED BY	CHECKED BY	APPROVED BY

**CONTENTS OF SPECIFICATION**

INVERTER PART NO. : FIF1542-02A

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## 1.Revision History

DATE	PURPOSE	PAGE	CONTENTS OF ALTERATION	CONFIRMATION	
				Tested By	Checked By

## 2.General Description

### SCOPE:

This DC-AC inverter was developed for 4 CCFL lamps of LCD back-light system.

## 3.Applications

15.1" LCD Monitor

## 4.Absolute maximum rating

Input supply voltage : 10 ~ 13V

Input current : 2.2A

Input power : 22W

Output current : 9mAmps

Output voltage :660V

Input signal voltage : -0.3V ~ 6.0V

(On/Off /I Control)

Ambient operating temperature : 0 ~ 60

Storage temperature : -30 ~ 80

Operating & Storage Humidity : 10% ~ 85%

## 5. Electrical Characteristics

No.	Items (Unit)	Sign.	Condition	Min.	Typ.	Max.	
1	Input Voltage (Vdc)	Vin		10.0	12	13.0	
2	Input Current (A)	Iin	Vin=12V	CTRL=5V	1.5	1.8	2.2
				CTRL=0V	0.3	0.6	0.9
3	Output Current 1,2(mA)	Iout1,2	Vin=12V	CTRL=5V	6.8	7.8	8.8
				CTRL=0V	2.5	3.5	4.5
4	Output Current 3,4(mA)	Iout3,4	Vin=12V	CTRL=5V	6.8	7.8	8.8
				CTRL=0V	2.5	3.5	4.5
5	Lamp Frequency (kHz)	f	Vin=12V	CTRL=5V	50	55	60
6	ON/OFF Control	ON	Vin=12V, ON/OFF=5V		Normal Operation		
		OFF	Vin=12V, ON/OFF=0V		Shunt-down (Lamp off)		
7	Dim Adjust (Lamp Current Control)	CTRL	CTRL=5V,Max Current		5~0 Volt.		
			CTRL=0V,Min Current				
8	Kick-Off Voltage(Vrms)	Vk-off	Kick-Off	1100	-	1800	
9	Output Voltage Voltage(Vrms)			520	540	660	

## 6. Functional Pin Description

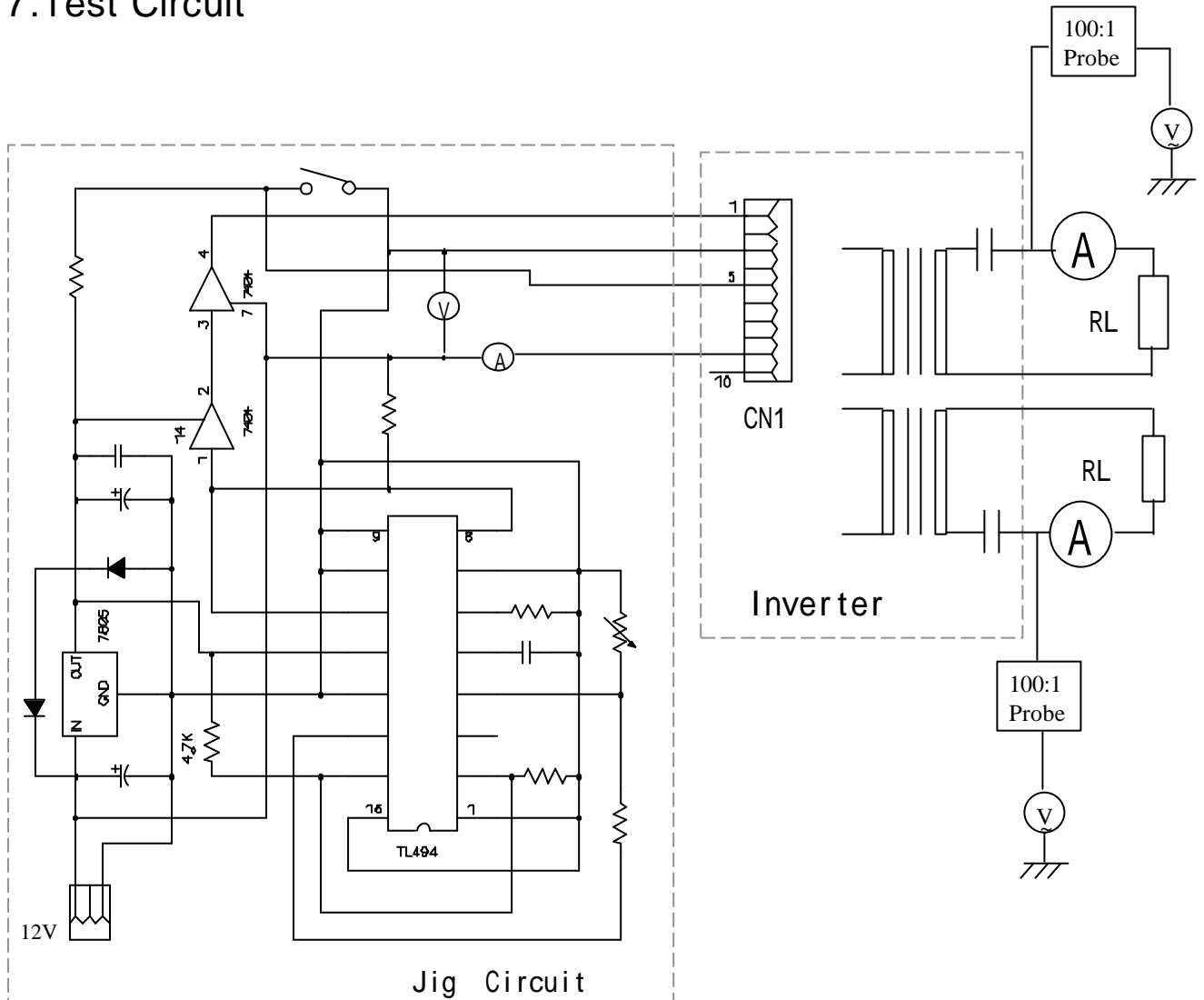
### 6.1. Input Connector CN1 : 12505WR-10P(YEON-HO,MOLEX,JST)

Pin No.	Symbol	Description
1	CTRL	Dim Adjust, Apply 0V ~ 5Vdc to Control Lamp Current 5V : 8.1mA, 0V : 3.3mA (Each Lamp)
2	NC	
3,4	GND	GND
5	ON / OFF	Power System Return ( 5V:ON, 0V:OFF )
6	NC	
7,8	GND	
9,10	Vin	Input Voltage : 12V

### 6.2. Output Connector CN2,CN3,CN4,CN5 : SM02B-BHS-1-TB (Yeon Ho,MOLEX,JST)

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

### 7.Test Circuit



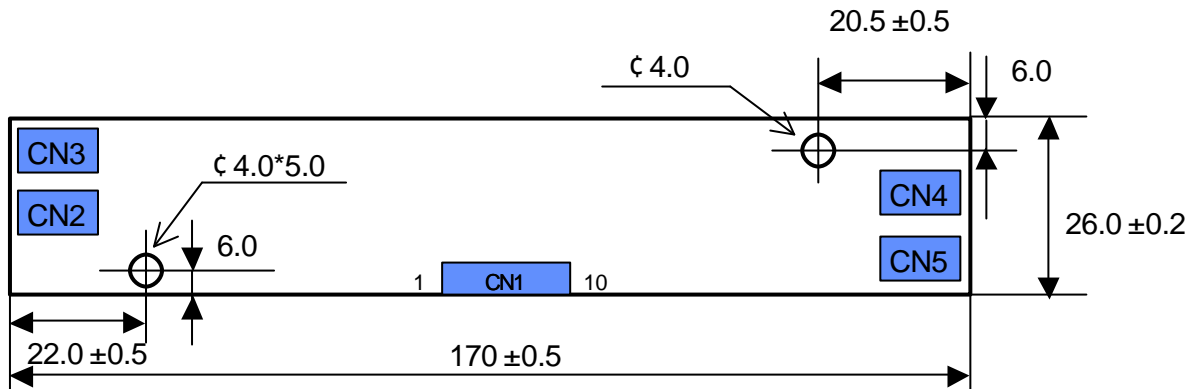
- \* Input Volt Meter : Fluke 45
- \* Input Current Meter : Fluke 45
- \* Output Current Meter : Fluke 45(Yokogawa P2016-1)  
AC Current Probe(Tecktronics)

### 8.Mechanical Drawings

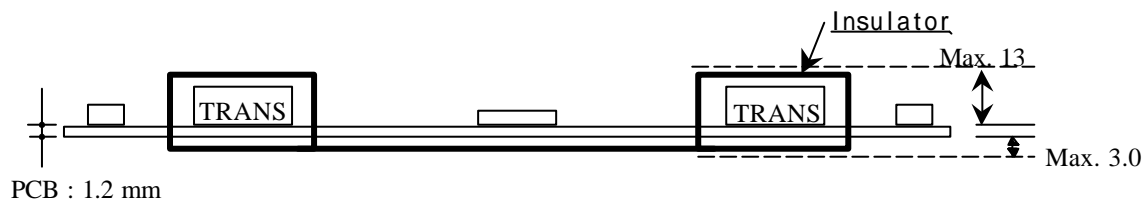
#### 8-1.P.W.B

\*. Unit : mm

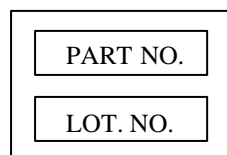
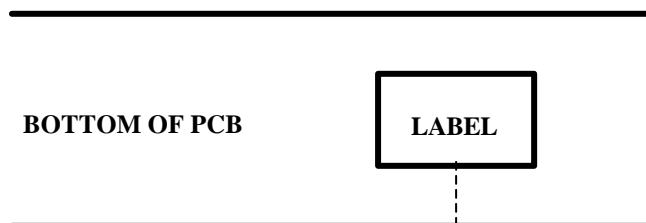
\*.Tolerance : ± 0.2mm



#### 8-2.Trans & Insulator



#### 8-3.Marking



\*. PART NO. : FIF1542-02A

\*. LOT NO. : ○○○○○○

YEAR MONTH DAY



## 9. Quality Assurance Test

NO.	ITEMS	TEST CONDISIONS	Numbers of Samples	NOTE
0	Electrical Characteristics & Appearance test	Electrical Characteristics & Mechanical size on approval sheet	21 EA	
1	High temperature Operation Test	50 , Vin = 13V, Ctrl = 0V, 72Hr	3 EA	
2	Low temperature Operation Test	0 , Vin = 13V, Ctrl = 0V, 72Hr	3 EA	
3	High temperature Storage Test	85 , 500Hr	3 EA	
4	Low temperature Storage Test	-40 , 500Hr	3 EA	
5	High temperature & High Humidity Storage Test	40 , 95%RH, 500Hr	3 EA	
6	Heat Shock Test	-40 (0.5Hr) + 85 (0.5Hr) 100 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)
8	High temperature & High Humidity Operation Test	50 , 95%RH, 1000Hr	3 EA	