

FINDER ELECTRONIC S CO., LTD.

Backlight Inverter Board for 6 CCFL Lamps of LCD Panel

1. General Description

This DC-AC Inverter was developed for 6CCFL lamps of LCD back lighting system.

本产品为直流-交流逆变器，适用于各种类型的 6 灯管冷阴极荧光灯的液晶显示模块。

2. Features

High performance, low consumption. / 具有高能低耗特点

Open lamp protection / 灯管开路保护功能

Wide Dimming Range / 宽范围调光

Lamp Current Balance Control / 灯管电流平衡控制

Input current overload protected (fuse protect)./ 输入过流保护（保险丝保护）

3. Application

The DC to AC back-light inverter is special designed on any type LCD display in implement (i.e. LCD monitor) / 本产品专为各种液晶显示部件设计（例：LCD 显示器）

4. Suitable load

20.1" - 22" 6 Lamps TFT LCD Module/20.1 寸 ~ 22 寸六灯 TFT LCD

5. Environmental Condition

Operating temperature / 工作温度: $-5^{\circ}\text{C} \sim 50^{\circ}\text{C}$

Storage temperature / 贮存温度 : $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$

Operating humidity / 工作湿度 : 10% -- 95%RH

Storage humidity / 贮存湿度 : 10% -- 95%RH

The DC to DC back-light inverter suggested working in the condition of upon. It can be work 500thousand hours at least in the below condition.

本产品建议在以上条件下工作，在下列条件下可以工作 5 万小时。

Operating temperature / 工作温度 : $-20 \sim 70^{\circ}\text{C}$

Operating humidity / 工作湿度 : 10% -- 95%RH

6. Input Electrical Characteristics

No.	Item/项目	Symbol	Min	Type	Max	Unit
1	Input Voltage/输入电压	Vin	10.8	12	13.2	V
2	Input Current/输入电流	Iin	1.8	2.5	3.0	A
3	Input Power/输入功率	Pin	---	36	---	W
4	Brightness Voltage/调亮控制电压	Vbri	0	---	5	V
5	Control Voltage/ 开关机控制电压	Enable Von=1.5---5.0V Disable Voff=0---0.5V				

FINDER ELECTRONIC S CO., LTD.

Backlight Inverter Board for 6 CCFL Lamps of LCD Panel

7. Output electrical characteristics

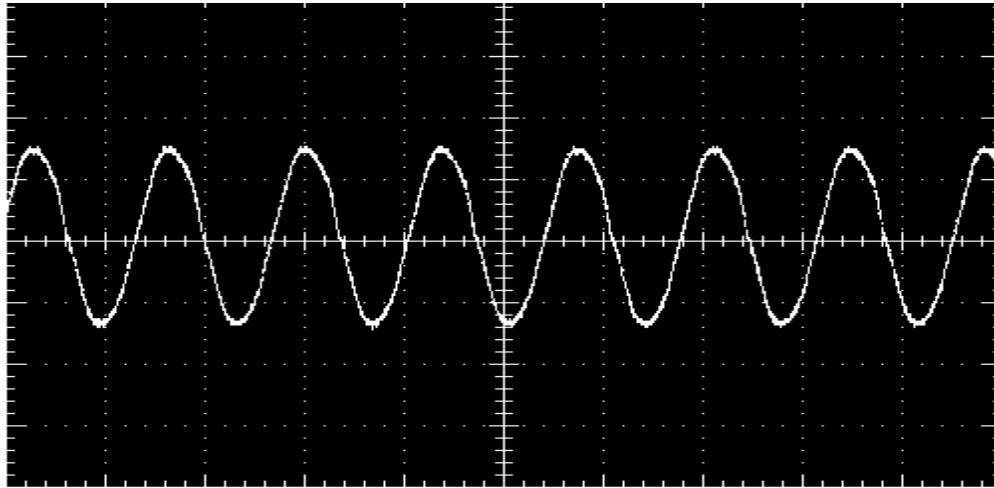
Item 项目	Symbol 符号	Test Conditions 测试条件	Min 最小值	Type 规格值	Max 最大值	Unit 单位
Output Current 输出电流	Iout	Vin=12.0V; Von=5V; Ta=25	2.2	7	9	mA
Output Voltage 输出电压	Vout	Vin=12.0V; Von=5V; Ta=25		720		Vrms
Ignition Voltage 启动电压	Vig1	Vin=12.0V; Von=5V; Ta=25	1100	1500	1700	Vrms
Output Frequency 输出频率	f	Vin=12.0V; Von=5V; load=6m; Ta=0	40	50	70	KHz
Efficiency 效率	η	Vin=12.0V; Von=5V; Load=80K Ω	87	---	---	%
Current balance degree 电流平衡度	Ibd	± 0.2				mA rms

The parameter of upon will change when the LCD module changes/ 以上参数随屏的不同而有所变化。

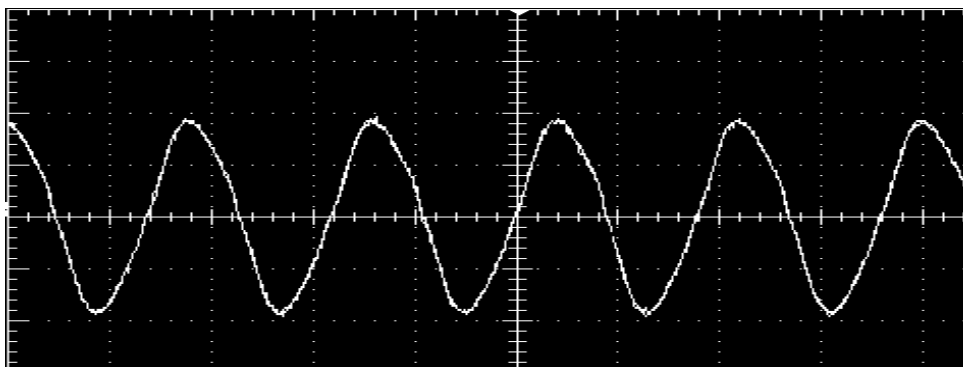
8. Pin assignments

Input connector /输入插座: CN1			
Pin No./引脚	Symbol/符号	Description/描述	Parameter/参数
1、2	+ 12V	Supply voltage/供电	10.8---13.2V
3	N/F	Standby/operation/开关机控制	On =1.5--5.0V Off=0-0.5V
4	ADJ	Dimming control/亮度控制	0V=Brightness Max 亮度最大 5V=Brightness Min 亮度最小
5、6	Gnd	Ground/接地	0V
Output connector/输出插座: CN2、CN3、CN4、CN5、CN6、CN7			
Pin No./引脚	Symbol/符号	Description/描述	Parameter/参数
1	H-V	High voltage/高压端	720Vrms
2	L-V	Low voltage/低压端	0-18Vrms

10. Voltage output waveform (Max Luminance)/ 输出电压波形图(最大亮度)



11. Current output waveform(Max Luminance) / 输出电流波形图(最大亮度)



12. Notice / 注意事项

A. Current of the lamp must use a high frequency current meter/灯线电流要用高频电流表测量; There have a five amperes fuse in the inverter/本高压板上有一个 5A 的保险丝。

B. Do not attach a conducting tape to lamp connecting wire, if the lamp wire attach to conductive tape, TFT-LCD module have a low luminance and the inverter has abnormal action because leakage current occurs between lamp wire and conducting tape. If the display arrangement is less friendly such as the asymmetrical wiring forces unequal losses and the lamps receive imbalanced current. Even with identical lamps, illumination may not be balance.

请勿试图在灯管的连接线上连接导线等物品，这样可能会造成灯管的电流不平衡，TFT-LCD 模組的亮度会变暗，对相同的灯管，亮度也会产生不平衡现象。本产品也可能由于灯管的连接线上连接了类似导线等物品产生漏电流，而造成其它非正常动作。

C. For Safety Issue, please keep 4.0mm at least from the metal parts of the system to the inverter. Or put a suitable insulator between the inverter and the metal parts to avoid the situation of breakdown or arcing etc.

基于安全问题,请在组装本产品时,确保本产品和整机中的金属材料间保持至少 4mm 以上的距离,或者使用足够绝缘等级的绝缘材料进行隔离,避免高压放电而产生危险。

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

请在组装本产品时,避免扭曲,弯折,大力碰撞及跌落产生损害。

E. Guarantee to offer ESD shield bag to protect the product from electrostatic or magnetic interference during delivery. Due to the inverter is usually designed without the enclosure. please take care about ESD at anytime .

在产品交付的整个过程中均保证采用 ESD 屏蔽袋包装处理,因为该产品无外壳保护,请务必随时注意防静电措施。

F. The products are not intended for use in systems in which failures of product could result in personal injury.

请勿将本产品使用在非适用范围的产品上,以免造成意外伤害。