



SINOTELECTRONICS  
Touch the World

# 承认书

## SPECIFICATION FOR APPROVAL

|                                    |                                   |
|------------------------------------|-----------------------------------|
| <b>PRODUCT/产品名称</b>                | LED BACKLIGHT INVERTER<br>LED 背光源 |
| <b>MY P/N 型号</b>                   | BTP-1L2568                        |
| <b>VERSION P/N 版本</b>              | V 1.0                             |
| <b>CUSTOMER/客户</b>                 |                                   |
| <b>CUSTOMER P/N</b><br>客户物料编号      |                                   |
| <b>CUSTOMER APPROVE</b><br><br>承 认 | 请承认后签章回传<br>202 / /               |

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## 1. General Description/概述

This DC-DC LED Inverter was developed for LCD back lighting system with lighting use LED.

本产品为直流-直流逆变器，适用于 LED 背光的液晶显示模块。

## 2. Features /特性

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

LED short protection / LED 灯短路保护功能

Wide Dimming Range / 宽范围调光

LED constant current drive/ LED 恒流驱动

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

## 3. Application /适用范围

The DC to AC back-light inverter is special designed on any type LCD display in implement (i.e. LCD monitor, notebook、laptop computers etc.) / 本产品专为各种液晶显示部件设计（例：LED 背光显示器，笔记本电脑，掌上电脑等）。

## 4. Suitable load /适用负载

18.5" to 27(LED backlight)display/ 18.5寸到 27 寸(LED 背光)显示器

## 5. Environmental Condition /适用环境条件

Operating temperature /工作温度 : -20°C -- 70°C

Storage temperature / 贮存温度 : -20°C-- 70°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 50thousand 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——70°C

Operating humidity /工作湿度: 10%——95%RH

## 6. Input Electrical Characteristics /输入参数

| NO | Item/项目                   | Symbol | Min            | Type    | Max           | Unit       |
|----|---------------------------|--------|----------------|---------|---------------|------------|
| 1  | Input Voltage/输入电压        | Vin    | 10.8           | 12      | 14            | V          |
| 2  | Input Current/输入电流        | Iin    | 0.4            | 0.65    | 0.84          | A          |
| 3  | Input Power/输入功率          | Pin    | ---            | 7.8     | 10            | W          |
| 4  | Brightness Voltage/调亮控制电压 | Vadj   | 0 (bright)     | ---     | 5(dark)       | V          |
| 5  | PWM 调光信号电平                | Duty   | 10% (bright)   | ---     | 100% (dark)   | Duty Cycle |
| 6  | Control Voltage/ 开关机控制电压  | Enable | Von=1.5---5.0V | Disable | Voff=0---0.5V |            |



## 7. Output electrical characteristics / 输出电气参数

| Item<br>项目                           | Symbol<br>符号       | Test Conditions 测试条件       | Min<br>最小值 | Type<br>规格值 | Max<br>最大值 | Unit<br>单位 |
|--------------------------------------|--------------------|----------------------------|------------|-------------|------------|------------|
| Output Current (per group)<br>每组输出电流 | Iout <sub>pg</sub> | Vin=12.0V; Von=5V; Vadj=0V |            | 120         |            | mA         |
| Output Voltage<br>输出电压               | Vout               | Vin=12.0V; Von=5V; Vadj=0V | 18         | 19          | 50         | V          |
| Efficiency 效率                        | η                  | Vin=12.0V; Von=5V; Vadj=0V |            | 93          | ---        | %          |
| Output total group<br>输出总组数          | Ggp                | 1                          |            | 1           |            |            |
| The Total Output Current<br>输出总电流    | R                  | 1.6                        |            | 120         |            | mA         |

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 / 插座引脚定义

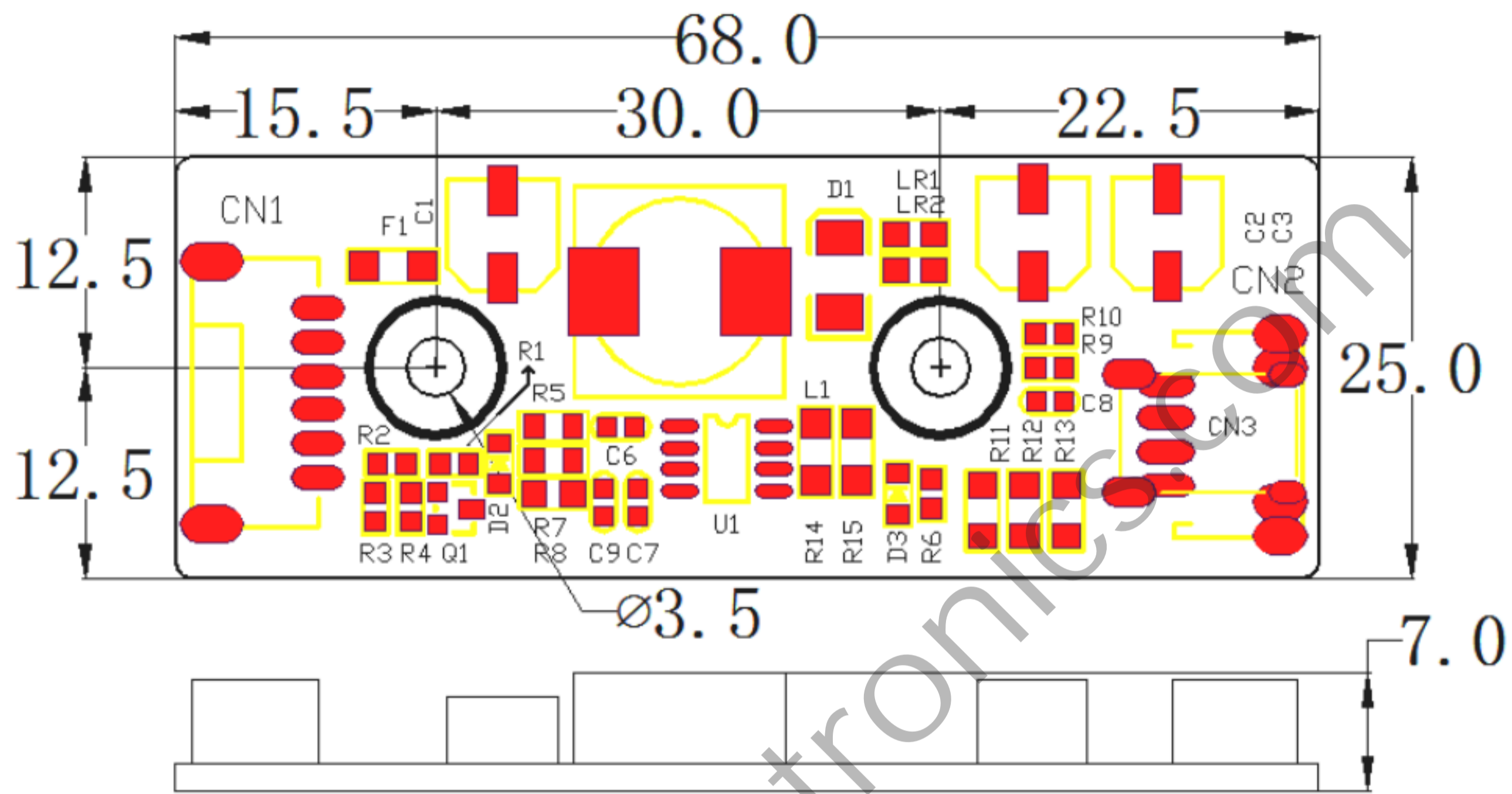
| Input connector /输入插座: CN1 |           |                        |   |
|----------------------------|-----------|------------------------|---|
| Pin No./引脚                 | Symbol/符号 | Description/ 描述        | Parameter /参数                                       |
| 1、2                        | VCC       | Supply voltage/供电      | 10.8~13.2V  |
| 5、6                        | GND       | Ground/接地              | 0V  |
| 4                          | ADJ       | Dimming control/亮度控制   | 0V=Brightness Max 亮度最大<br>5V=Brightness Min 亮度最小    |
|                            |           | PWM 调光控制 150-2000Hz    | 100%=Brightness Max 亮度最大<br>10%=Brightness Min 亮度最小 |
| 3                          | N/F       | Standby/Operation/开关控制 | On =2--5.0V Off=0-0.5V                              |



## 9. Mechanical Dimension / 结构示意图

Dimension of P.C.B. / PCB 机械尺寸: 长 68mm、宽 25mm、高 7mm

Unit/单位: mm Tolerance/公差:  $\pm 0.5\text{mm}$



## 10. Notice / 注意事项

- A. If some one group is not use, Please float the terminal; 如果某一组输出不用悬空此路的连接端,
- B. 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.

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。

- C. 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。

- D. 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。

- E. 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。



11 SAMPLE TEST REPORT/ 样品测试报告

|                 |             |                   |  |
|-----------------|-------------|-------------------|--|
| CUSTOMER/客户:    |             | PRODUCT NO./产品编号: |  |
| MOOEL NO./产品型号: | TLMY-1L2568 | PART NO./物料号:     |  |

1. Input Characteristics/输入特性

| Parameter/参数                       | Symbol/符号 | Min   | Typ   | Max   | Unit/单位 | Remark/备注 | Spec. Limit / 参考标准 | Pass/Fail /判定结果 |
|------------------------------------|-----------|-------|-------|-------|---------|-----------|--------------------|-----------------|
| Input Voltage/输入电压                 | Vin       | 10.8  | 12    | 14    | V       | Input DC  | 10.8~14V           | Pass            |
| Input Current/输入电流                 | Iin       | 0.4   | 0.65  | 0.84  | A       | Vadj=0V   | 0.5~1A             | Pass            |
| Input Power/输入功率                   | Pin       | 5     | 7.8   | 10    | W       |           |                    |                 |
| Input Voltage ON/off control /开关电压 | Von/Off   | 1.5~5 | 1.5~5 | 1.5~5 | V       | On        | 1.5~5              | Pass            |
|                                    |           | 0~0.5 | 0~0.5 | 0~0.5 |         | Off       | 0~0.5              | Pass            |
| Input Current/输入电流                 | Ion/of f  |       |       |       | uA      | On STATE  |                    |                 |
|                                    |           |       |       |       |         | Off STATE |                    |                 |
| Brightness contro currenr/调光电流     | Iadj      |       |       |       | uA      | Vadj=0V   |                    |                 |
|                                    |           |       |       |       |         | Vadj=5V   |                    |                 |

2. Output Characteristics/输出特性

| Parameter/参数         | Symbol/符号 | Min | Typ | Max | Unit/单位 | Remark/备注 | Spec. Limit / 参考标准 | Pass/Fail /判定结果 |
|----------------------|-----------|-----|-----|-----|---------|-----------|--------------------|-----------------|
| Output Voltage /输出电压 | +         | 18  | 19  | 50  | V       |           | 18~50              | Pass            |
|                      |           |     |     |     | V       |           |                    | Pass            |
| Output Current/输出电流  | +         |     | 120 | -   | mA      |           | 200~360            | Pass            |
|                      |           |     |     |     | mA      |           |                    | Pass            |

|                             |  |  |  |  |  |  |  |  |
|-----------------------------|--|--|--|--|--|--|--|--|
| Low temperature test/低温启动试验 | 0°C,(12VDC±10%) The sample OK                                  |  |  |  |  |  |  |  |
| Burn-in/老化测试                | Burn-in test with full load at 60°C ±5°C(12VDC), The sample OK |  |  |  |  |  |  |  |
| Appearance/外观目测             | OK   |  |  |  |  |  |  |  |

3. Major Measure Equipment/主要测试仪器

|   |   |
|---|---|
| A. OSCILLOSCOPE/示波器:Tektronix SDS1102CN | B. DIGITAL MULTIMETER/数量式万用表:ESCORT 3136A |
| C. DC POWER/直流输入电源: TPR-6405D           | D. HI-POT TESTER/耐压测试仪:GOODEILL GPT-605   |
| E. HYBRID RECORDER/混合记录仪:YOKOGAWA DR130 | F. CONS.T/H SIMULATOR/恒温恒湿仪:TH-A4H 1-150  |

|         |  |            |  |         |  |
|---------|--|------------|--|---------|--|
| DATE/日期 |  | EDITION/版本 |  | PAGE/页码 |  |
| TEST/测试 |  | CHECK/审核   |  | APPR/批准 |  |

