

PRODUCT SPECIFICATION

Customer (客户名称) : _____

Customer No. (客户编码): _____

Product (产品类型) : Capacitive Touch Panel

Product No. (产品编号) : BET-CT016001V1

Date (日期) : 2014-1-01

| BET Optronics Technology Co.,Ltd | | |
|----------------------------------|--------------|---------------|
| APPROVED (批准) | CHECKED (审核) | PREPARED (编写) |
| | | JT.LEE |

| | |
|---------------------------------------|---|
| Customer Approval: 客户批准 | <input type="checkbox"/> Accept 接收 <input type="checkbox"/> Reject 拒绝 Comment 意见: <p style="text-align: right;">Approved by 确认人: _____</p> |
|---------------------------------------|---|

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History of version 变更记录

| Date 日期 | Ver. 版次 | Description 描述 | Page 页码 | Design by 变更人 |
|--------------|---------|----------------------|---------|---------------|
| 2014/1/01 | A0 | Initial Release 首次发行 | - | JT.LEE |
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| Remarks 备注 : | | | | |

Contents 目录

1. General Specification 产品规格
 2. Electrical Characteristics 电气参数
 3. Optical Characteristics 光学参数
 4. Reliability 信赖性
 5. Durability 寿命
 6. Touch panel description 触摸屏功能描述
 - 6.1 touch panel drawing 外形图
 - 6.2 Block diagram 功能结构图
 - 6.3 Touch panel pin assignment 引脚定义
 7. Appearance Inspection 外观检验
 - 7.1 Inspection Conditions 检验条件
 - 7.2 Criteria 判定标准
 8. Precautions 注意事项
- Appendix 附件
- -

1. General Specification 产品规格

| Item 项目 | CONTENTS 内容 | Unit 单位 |
|----------------------------|-----------------------------|---------|
| Outline Dimension 外形尺寸 | 38.1(L) * 37.8(W) * 0.8 (H) | mm |
| Active Area(W*L)动作区 | -- | mm |
| View Area 可视区 | 29.4 (L)*29.4(W) | mm |
| TP size (inch) 英寸尺寸 | 1.6 | inch |
| Interface Type 接口种类 | IIC | - |
| Operation Temperature 工作温度 | TOPL = -10, TOPH =60 | °C |
| Storage Temperature 储存温度 | TSTL = -20, TSTH =70 | °C |
| OGS thickness 厚度 | 0.7 | mm |
| Resolution 解析度 | 240*240 | |
| Input force 输入外力 | <10g | |
| Surface hardness 表面硬度 | >6H | |

2. Electrical Characteristics (Ta = 25°C) 电气参数

| Item 项目 | Symbol 标识 | Condition 条件 | Min. 最小值 | Type 典型值 | Max. 最大值 | Unit 单位 |
|----------------------|--------------|-----------------------------------|-------------|-------------|-------------|------------|
| Power Supply 电压 | VDD | -- | 2.6 | 2.8 | 3.3 | Volt |
| Supply Current 电流 | IDD | V _{DD} =2.8V Free mode | -- | -- | -- | mA |
| | | V _{DD} =2.8V watch mode | - | - | -- | mA |
| | | V _{DD} =2.8V Active mode | - | - | -- | mA |
| | | V _{DD} =2.8V Fast mode | - | - | - | mA |

3. Optical Characteristics 光学参数

| Item 项目 | CONTENTS 内容 | Remark 备注 |
|------------------|-------------|-----------|
| Transparency 透过率 | >86% | |

4. Reliability 信赖性

| Item 项目 | Specifications 规格 | Remark 备注 |
|--|---|-----------------------|
| High Temperature Storage 高温存储 | 70°C, 240hrs, Normalized for 2 hrs | |
| Low Temperature Storage 低温存储 | -20°C, 240hrs, Normalized for 2 hrs | Non-condensing 无结露 |
| Temperature/ Humidity Storage 储存温度/湿度 | -20-70 °C/85% 240hrs and normalized for 2 hrs | Non-condensing 无结露 |
| High Temperature Operation 高温工作 | 60°C, 24hrs, Perform well | |
| Low Temperature Operation 低温工作 | -10 °C, 24hrs, Perform well | Non-condensing 无结露 |
| Temperature/ Humidity Operation 工作温度/湿度 | -10-60°C/85%RH, 240hrs, Normalized for 2 hrs | Non-condensing 无结露 |

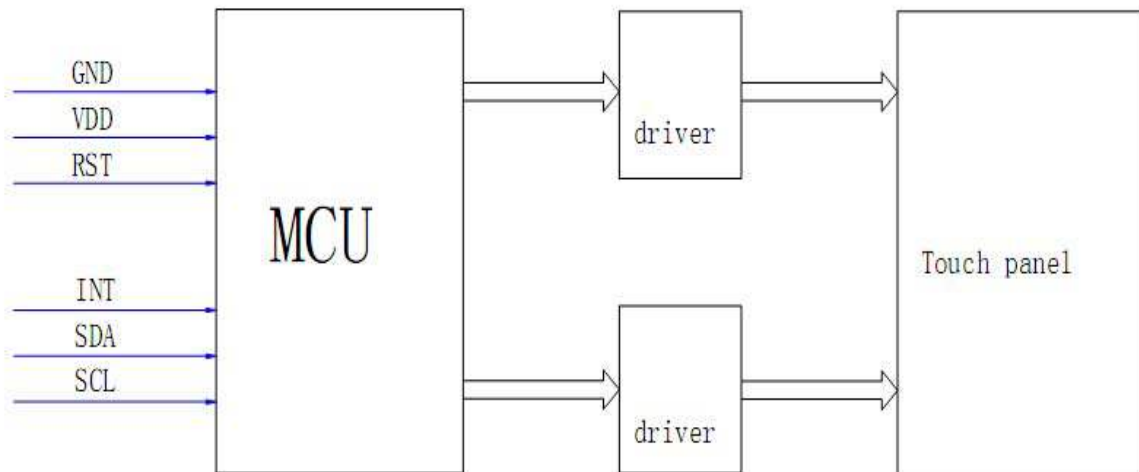
5. Durability 寿命

| Item 项目 | Specifications 规格 | Condition 条件 |
|--------------------------|---------------------------|--|
| Hitting life 撞击寿命 | 35,000,000 times | Hitting test may cause surface slight scratch yet the function stays intact 功能OK, 外观轻微刮伤判OK. |
| Panel Slide Test 滑动测试 | 250g, 20mm, 100,000 times | Slide test may cause surface slight scratch yet the function stays intact 功能OK, 外观轻微刮伤判OK. |

6. Touch panel description 触摸屏功能描述

6.1 touch panel drawing 外形图: See appendix

6.2 Block diagram 功能结构图



6.3 Touch panel pin assignment 引脚定义

| Pin | Symbol | Description |
|------|-----------|---------------------------|
| 1 | VDD(2.8V) | Power supply. |
| 2 | SCL | Clock for the data input. |
| 3 | SDA | Data input. |
| 4 | INT(1.8V) | Interrupt output Pin. |
| 5 | RST | Reset pin for the TP. |
| 6-7 | GND | Power ground. |
| 8 | NC | No conected. |
| 9-10 | GND | Power ground. |

7. Appearance Inspection 外观检验

7.1 Inspection Conditions 检验条件

1. Environment: $22 \pm 3^{\circ}\text{C}$, Inspection distance: $30 \pm 10\text{cm}$.
2. Angle of Vision: $30^{\circ} \sim 90^{\circ}$
3. Lighting illumination: 17W fluorescent luminant lamp is used for appearance inspection. Detail of settings is shown in **figure 13.1 & 13.2**.
4. Minor impurities outside viewing area are acceptable unless their existence affect electrical functions.

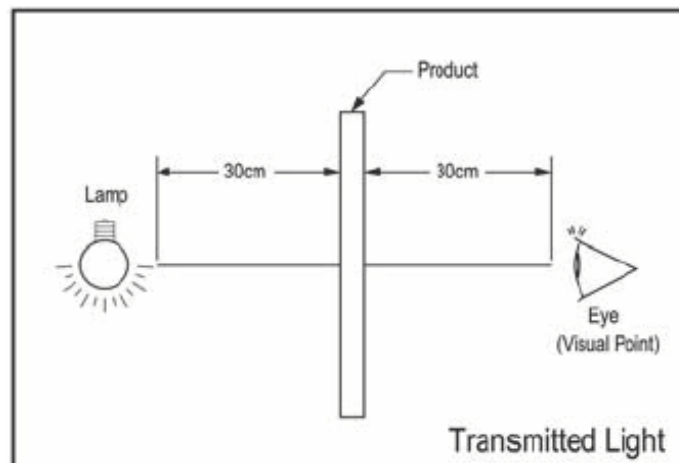


figure 13.1

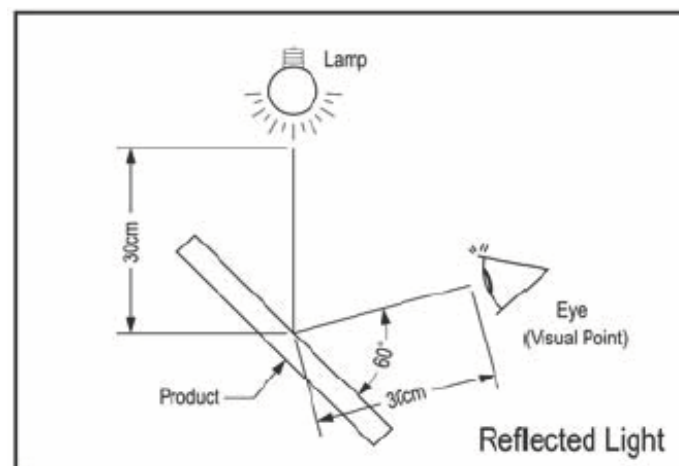


figure 13.2

7.2 Criteria 判定标准

| Item 项目 | Specification 规格 |
|------------------------------|---|
| Particle 灰尘 | (1) $D \leq 0.25$ OK (2) $0.25 < D \leq 0.4$ (each area contains ≤ 3 , total ≤ 5) OK (3) $D > 0.4$ NG |
| Linear Object 线状异物 | (1) $W \leq 0.05$ OK (2) $0.05 < W \leq 0.1$ and $L \leq 5.0$, total ≤ 3 OK (3) $W > 0.1$ NG Remark: the particle will be ignored when it is removable by cleaning |
| Scratch 刮伤 | (1) $W \leq 0.025$ OK (2) $0.025 < W \leq 0.05$ and $L \leq 12.0$, total ≤ 5 OK (3) $0.05 < W \leq 0.1$ and $L \leq 6$, total ≤ 5 OK (4) $W > 0.1$ NG |
| Remark 备注 | 1. D=Diameter 2. W=Width 3. L=Length 4. Each area contains=20 μ s |

8. Precautions 注意事项

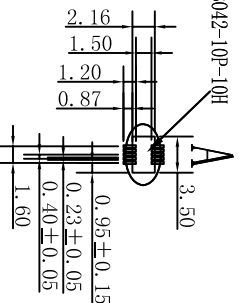
| | |
|-------------------------|---|
| Storage 存储 | Store panel under the temperature and humidity range pre-specified. Direct sunlight exposure or piling should be avoided. |
| Unpack 拆包 | Unpack the box with the printed red arrow pointing up. |
| Handling 使用中 | (1) Use clean sacks or glove to prevent fingerprints and/or stains left on the panel. Extra attention and carefulness should be taken while handling the glass edge. (2) Avoid high voltage and/or static charge (3) Holding the panel instead of the tail at all time. |
| Cleaning 清洁 | (1) Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface (2) Prevent using any kind of chemical solvent, acidic or alkali solution. |
| Installing 安装 | (1) Excessive force or strain to the panel or tail is prohibited. (2) Retain at least 0.3 mm clearance between panel and display module. (3) Gasket or cushion pads around the edge of the panel may segregate water and/or dust contamination. |
| Operating 操作 | (1) Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited. (2) Operate the panel in a steady environment. Abrupt variation on temperature and humidity may cause malfunction of the panel. |
| Others 其他 | (1) Keep the panel surface clean. Prevent any kind of adhesive applied on the surface. (2) Avoid high voltage and/or static charge. |

客户签名:

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连接器参考: GB042-10P-10H



LCD PIN脚定义:

| PIN | NAME |
|-----|-------|
| 1 | GND |
| 2 | LEDK |
| 3 | LEDA |
| 4 | GND |
| 5 | FMARK |
| 6 | SDA |
| 7 | WR |
| 8 | RS |
| 9 | CS |
| 10 | RESET |
| 11 | IOVCC |
| 12 | VCC |
| 13 | GND |

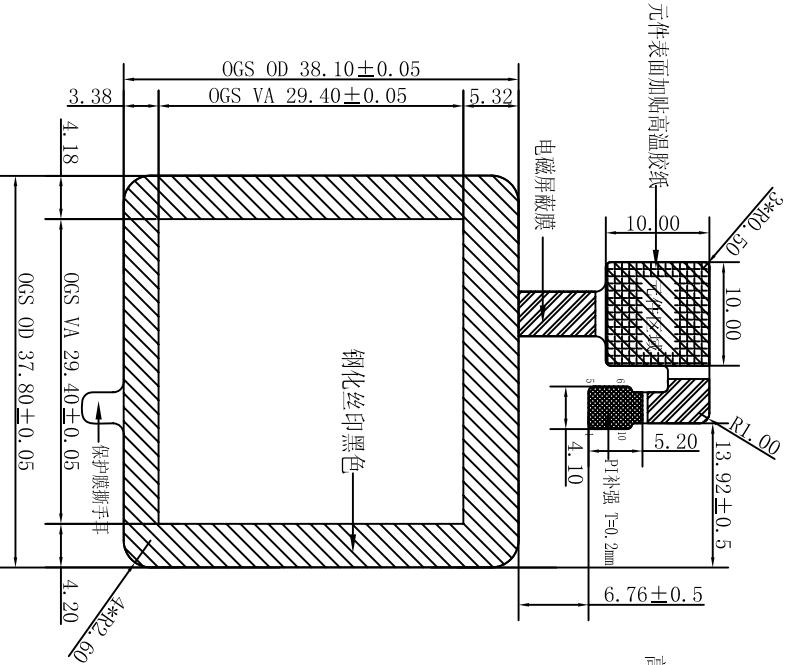
CTP PIN脚定义:

| PIN | DEFINE |
|-----|----------|
| 1 | VDI-2.8V |
| 2 | SCI |
| 3 | SDA |
| 4 | EINT |
| 5 | RESFET |
| 6 | GND |
| 7 | GND |
| 8 | NC |
| 9 | GND |
| 10 | GND |

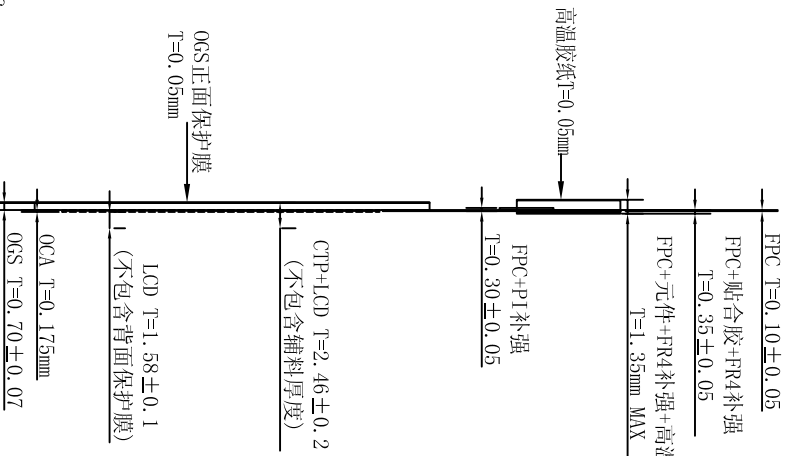
技术要求:

- 1、IC方案: GT9137
- 2、产品透过率为86%以上
- 3、表面处理:正表面硬度7H以上;
- 4、产品符合RoHS标准;

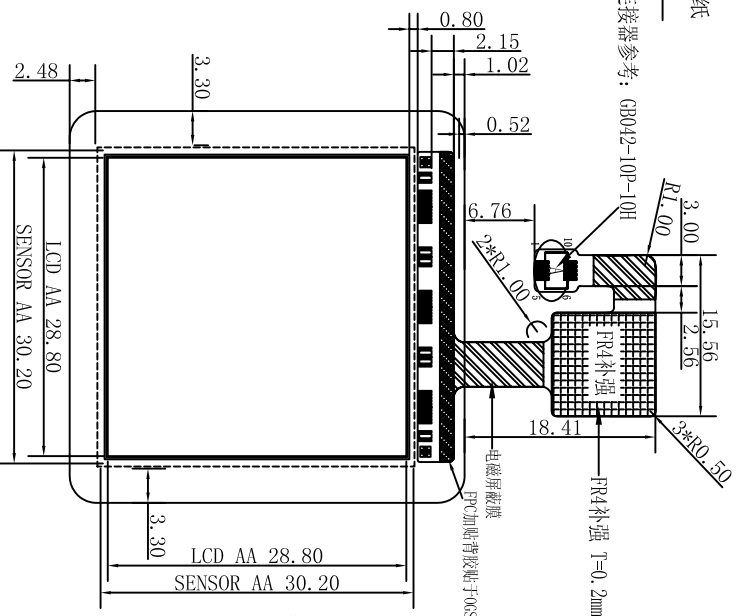
正面



侧面



背面



钢化丝印黑色

| VER. | REVISED RECORD | DRAWN BY | DATE | CTP SPECIFICATION |
|------|---------------------------|----------|----------|--------------------------------------|
| A0 | 在016001基础上贴总成;IC改为GT9137. | LY | 14-02-19 | 1. VDD |
| A1 | | | | 2. OPERATION TEMP. -20 ° C TO 60 ° C |
| A2 | | | | 3. STORAGE TEMP. -30 ° C TO 80 ° C |
| A3 | | | | |

| CTP SPECIFICATION | APPROVED BY | CHECKED BY | DRAWN BY |
|-------------------|-------------|------------|----------|
| V | | | LY |



深圳市佰得威光电科技有限公司
BET Optronics Technology Co., Ltd.

| CUSTOM NO. | VERSION | MODEL NO. | SHEET |
|------------|---------|---------------------|--------|
| A0 | | BET-C0016001V1 (总成) | 1 OF 1 |

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