Product Specification
产 品 规 格 书

产 品 名 称 /Product Name: 15.6 inch projected capacitive Touch Screen

产品型号/Product Mode: ZCC-6821

产品版本/Product Version: Ver0

客户名称/Customer Name: _____

客户料号/Customer Part No.: _____

制方签核/Signed By Maker:

批准 （Approved by）	审核 （Reviewed by）	编制 （Prepared by）

客户确认/Approved By Customer:

批准 （Approved by）	日期 （Date）

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ZCC-6821

Product Specification

2019

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Specification Revision Record

No	Version	Date	Summary of changes	Page
1	V0	2019.3.25	4611变更:1.FPC缩短至85mm 2.控制卡变更为4805 3.采用SCA工艺	
Remarks:				

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1. 产品说明Introduction

1.1 产品摘要Definition

这是一款采用USB介面并支持WIN7、WIN8作业系统已达到十指触控作业的投射式电容触控面板；

It's a kind of projected touch panel with USB interface. It can support win7, win8 OS and can realize 10 finger point touch,

1.2 产品特性Features and General Specification

Item	Contents	Unit
产品类型Type	投射式电容屏 projected touch panel	
尺寸Size	15.6"	Inch
总厚度Total Thickness	2.45±0.3	mm
面板外形Outline of Cover Lens	237.12*386.81 ±0.3	mm
外形尺寸Outline of ITO Sensor	212.82* 360.72±0.3	mm
可视区Viewing Area	194.54*345.23 ±0.3	mm
有效区Active Area	197.54*348.23 ±0.3	mm
通信接口Interface	USB	----
触点数量 Number of touch point	10点	----
输入电压input voltage	5V	----
响应时间Response time	10	ms
承受压力值 Pressure endurance value	<10g	
输入方式Input	Hand writing or capacitive pen	
透光率Transmittance	>85%	
表面硬度Surface Hardness	≥6H	
范围Usage	此规格用于手写输入式透明电容屏 The specification is applied to transparent and handwriting input capacitive touch panels	
应用Application	此产品用于一般电器和办公自动化设备 It's applied in ordinary electric equipments and automatic office facilities.	

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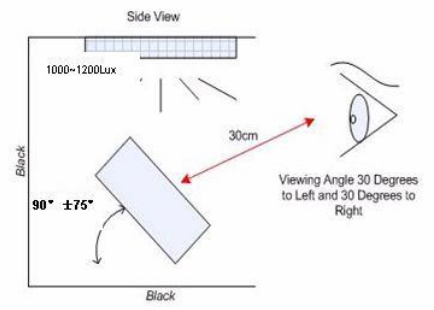
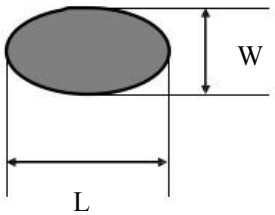
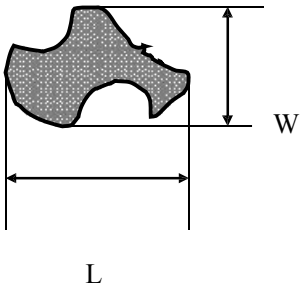
2. 外观检查Appearance Inspection



2.1 检查条件Inspection Condition

1. 环境Environment: 22 ± 3ºC，观察距离Inspection distance：30 ± 2cm.
2. 垂直旋转角度Vertical rotating angle ：±75° 从正常（由上到下from up to down);
   水平旋转角度Horizontal rotating angle：±75°从正常(由左到右from left to right)
3. 照明灯光illuminance：1000~1200Lux。
4. 背面颜色
5. 前后2个面Front and back faces: 45 seconds，每侧Each side: 1-2 seconds.

2.2 外观检验标准Appearance Limit Standard

项目 Items	单位Unit:: mm W=width; L=length; N=number of defectiveness D=diameter; GT=glass thickness DS=defective distance
点状缺陷 **Particle**	1、D＜0.35mm, ignored
	2、0.35mm≤D≤0.5mm; DS>10mm, N≤5.
	3、D>0.5mm, not allowed
	particles  
线状缺陷 **Linear object**	1、W≤0.1mm and L≤10mm, ignored.
	2、0.1mm≤W≤0.3mm, L≤10mm, DS≥10mm, N≤5,allowed.
	3、W＞0.3mm，L＞10mm, not allowed;

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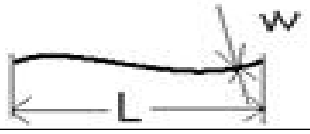
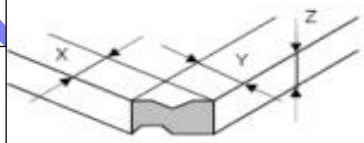
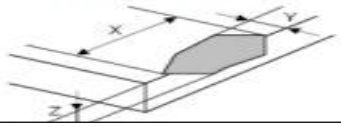
	Linear object 	
凹边/凸边/气泡 Concave/Covex edge/bubbles	1、D＜0.35mm, DS>10mm，N≤5; ignored.	
	2、0.35mm≤D≤0.5mm, DS>10mm , N≤2 ; ignored.	
	3、Others are not allowed.	
崩角 **Corner chip**	X≤3mm,Y≤3mm,Z≤GT; ignored	Corner Defect 
	X: Length; Y: Width; Z: Thickness	
崩边 **Side chip**	X≤8mm, Y≤3mm, Z≤GT; ignored	Edge Defect 
	X: Length; Y: Width; Z: Thickness	
面板颜色 图案 字体及底色的遮 蔽性 **Color of cover lens/logo typeface/shade of background**	颜色与标准样品比较无明显的色差 Color shows no difference from that of the samples.	
	字体和图案清晰 字体无粗细现象. Clear typeface and clear pattern	
	套版准确允许偏差<0.3MM Less than 3mm tolerance is allowed.	
	底色遮蔽性良好. good shade of back color	
备注 **Notes**	1、其他点状/线状不良参照点状、线状标准 For other particles or linear objects, refer to the criterion above	
	2、每片成品最多不良数 N≤10, 不良间距≥10mm Number of defectiveness for each piece: N≤10, DS≥10mm.	

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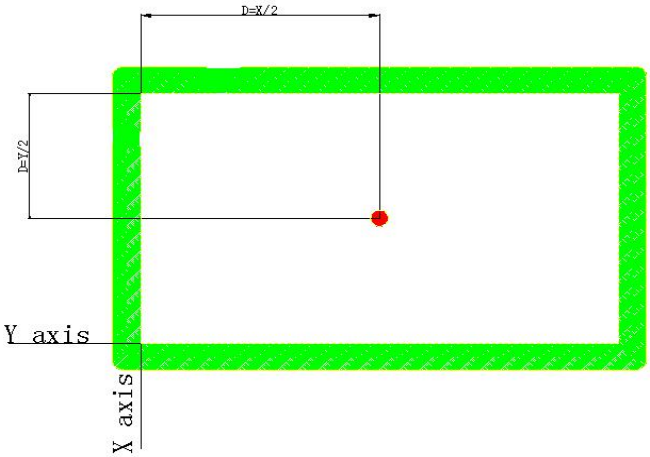
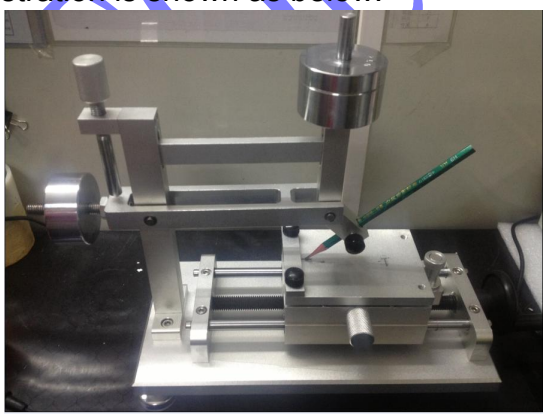
3. 面盖玻璃 Cover Lens

项目Items	内容
应力值**Pressure Value**	400 ~500 mPA above 6u
落球测试 Ball Drop Test	130g±2g，60cm， No damage after the impact at the central area for once.
硬度 **Hardness**	≥6H Pencil: 6H Pressure: 1N/45.

备注1：钢球落下测试示意图如下附图所示：
Note 1 ： The ball drop test illustration is shown as follows.



备注 2：玻璃硬度测试依循 JIS K-5400 系列标准规范手法；相关测试示意图如下附图所示：
Note 2 ： The hardness test follows the JIS K-5400 serials industry standard and the test illustration is shown as below.





4 模型Structure

结构	原料	备注
第 1 层 1st layer	面盖玻璃 cover lens	厚度Thickness: 2.45mm
第 2 层 2nd layer	热熔胶 hot melt glue	厚度Thickness: 0.25mm
第 3 层 3rd layer	ITO 玻璃 ITO Glass	厚度Thickness:1.1mm

5. 电气特性Electronic Characteristics

项目	说明
ESD (机器 Machine)	±300V 200pF, 0 Ω, 3 times
ESD (人体Body)	±1000V, 100pF, 1500Ω, 3 times
ESD 触摸面（接触Touch)	4KV, 100pF, 1500Ω, 3 times
ESD 触摸面 (空气Air)	8KV, 100pF, 1500Ω, 3 times

备注1：为确保触控模组可有效发挥其功能，请务必于作业时将控制器作有效的接地动作；
Note 1: In order to make a touch panel work normally, please make sure that the host device is grounded.

备注2：作业环境设定值须小于1大气压压力；
Note 2: All environmental characteristics listed above should be less than 1 atmospheric pressure.

备注3： 触控面板必须由双面胶或其他具有粘性之材料将其与TFT-LCD模组作组装贴合作业，并将触控面板的控制器反折固定于TFT-LCD模组的下铁框或其他系统机件上并 加以接地；当执行抗静电防护测试时，允许标准为当没有外在静电冲击时，触控面板不可有功能性与外观性的失效或损伤；但是当有静电冲击时，若触控面板有跳动等非规则性之功能性变化时，这种现象是被允许与接收的；
Note3：The touch panel must be assembled with LCD panel by VHB or other materials, the control board should be fixed on LCM bezel or other mechanical parts of the system and then be grounded; In ESD test, the touch panel should work normally and there should be no damage to the appearance, when no static electricity discharges. However, irregular changes like display flickering are acceptable when static electricity discharges.

备注4：假设触控模组没有被有效的执行接地动作时，触控面板可能会有功能性受损或不稳定等现象发生。
Note4: The touch panel may be damaged functionally or work unstably if the panel are not be grounded though your system to earth.

备注5：为确保触控模组可有效发挥其功能，电源供应器必须符合 IEC 62684规范。
Note5: In order to make a touch panel work normally, power supply or power adapter has to conform to IEC 62684.

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6. 可靠性

项	说明	备注
工作温度和湿度 **Working temperature and humidity**	-10~+60℃, 20~85% RH	除凝雾外
存储温度和湿度 **Storage temperature and humidity**	-10~+65℃, 20~85% RH	除凝雾外
防潮性能 **Humidity resistance**	85% RH, 120H	除凝雾外
耐热性能 **Heat resistance**	65℃, 120H	除凝雾外
耐寒性能 **Cold resistance**	-10℃, 120H	除凝雾外
冷热冲击 **Thermal shock**	-10℃(0.5hour)-60℃(0.5hour) by 50 cycles	除凝雾外
防潮 **Humidity resistance**	The requirement shall be satisfied after being exposed at 85% RH for 120 hours and normal temperature and humidity for 24 hours.	除凝雾外
耐热 **Heat resistance**	The requirement shall be satisfied after being exposed at 65℃ for 120 hours and at normal temperature and humidity for 24 hours.	除凝雾外
耐寒 **Cold resistance**	The requirement shall be satisfied after being exposed at -10℃ for 120 hours and at normal temperature and humidity for 24 hours.	除凝雾外
冷热冲击 **Thermal shock**	The requirement shall be satisfied after being exposed at -10℃ (0.5 hour)—60℃（0.5hour）by 50 cycles and at normal temperature for 24 hours	除凝雾外

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7. 耐久力Durability

项目		说明	条件
Panel	**Slide Test**	250g, 20mm, 100,000 times	Durability test may cause surface slight scratch, yet the function stays intact.
Hitting life		35,000,000 times	Durability test may cause surface slight Scratch, yet the function stays intact

8. 应用说明

8.1 环境

项目	说明	备注
温度**Temperature**	-10~60ºC	
湿度**Humidity**	20~85% RH	

8.2 引脚说明Pin Configuration

Refer to engineering drawing

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9. 包装Packaging

9.1 包装流程图Packaging flow Diagram

- Put 5pcs inside a box, each piece is separated by a piece of expandable polyethylene(EPE). Make sure FPC is not twisted and protective film remains smooth(picture1).
- Put two boxes into a large carton, fill the empty space with expandable polyethylene (EPE) (picture2).
- Pack the paper cartons in wooden carton for long-distance transportation. Blanket expandable polyethylene inside the wooden carton, keep the expandable polyethylene size the same as that of the wooden carton. Put the big carton containing two boxes, total 10pcs inside the wooden carton, separate each paper carton with expandable polyethylene(picture3).



Picture1



picture 2



Picture 3

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9.2 注意事项Cautions

动作注意事项	
1.	Put on finger sheaths before handling, don't touch the viewing area and change the finger sheaths for every two hours in order not to dirt the touch panels
2.	Be careful to take the edges of the touch panel, never pile them, don't let sleeve touch the panel.
3.	Keep yourself and working surface of the table clear.
4.	Cover transparent protective film over touch panels. Too much wrinkle is not allowed.
5.	Make sure the number of products is the same as that on the marks outside each box. Short package is not allowed.
6.	In order not to break the products for collision and extrusion, make sure no much empty space is left inside the box and between products.
7.	Pack boxes with transparent adhensive tape.
8.	Shipping marks should be pasted at the same direction on the boxes, make sure each item on the marks refer to the products correctly.

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10. 操作规范Operation Instruction

Storage	Store panels under the temperature and humidity range pre-specified. Direct sunlight exposure or piling should be avoided.
Unloading	Unpack the box with the printed red arrow pointing up.
Handling	(1) Use clean finger sheaths or gloves to prevent fingerprints and/or stains on the panel. Extra attention and carefulness should be taken while handling the glass edge. (2) Avoid touching the viewing area before installation /integration. (3) Holding the panel instead of the tail（FPC）all the time.
Cleaning	(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.
Installation	(1) Excessive force or strain to the panel or tail is prohibited. (2) Retain at least 0.5 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	(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	(1) Keep the panel surface clean. Prevent any kind of adhesive being sticked on the surface. (2) Avoid high voltage and/or static charge.

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11. 结构图 Engineering Drawing

