Request information

PRODUCT SPECIFICATION

TFT-LCD MODULE

Module No: 100290-01

☑ Preliminary Specification

☐ Approval Specification

Designed by	Checked by	Approved by

Final Approval by Customer

Approved by	Comment

For more information, contact us:

WWW.DCLTEK.COM | 1-800-407-8917 | SALES@DCLTEK.COM

※The specification of “TBD” should refer to the measured value of sample . If there is difference between the design specification and measured value, we naturally shall negotiate and agree to solution with customer.

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1.Document Revision History

Version	Contents	Date	Note
V1	DESCRIPTION	2021-10-20	
V2	LCM backlight adds iron frame	2021-12-10	
V3	Change LCD	2022-01-31	
V4	Modify the content and location of the code, and add a QR code attachment to remove the FPC double-sided tape	2023-08-16	

2. General Description

NO	Item	Specification	Unit
1	LCD Size	TFT"3.51	
2	Panel Type	IPS	
3	Resolution	340xRGBx800	pixel
4	Display Mode	Normally Black	-
5	Number of Colors	16.7M	
6	Viewing Direction	ALL	-
7	CG+LCM Module Outline	40.217 (W) x194.20(L) x2.90(H)	mm
8	Panel Active Area	33.97 (H) x 81.00 (V)	mm
9	Pixel Pitch	0.099 x 0.1012	mm
10	LCM Driver IC	ST7701S	
11	Light Source	White LED	
12	LCM Interface	MIPI	bit

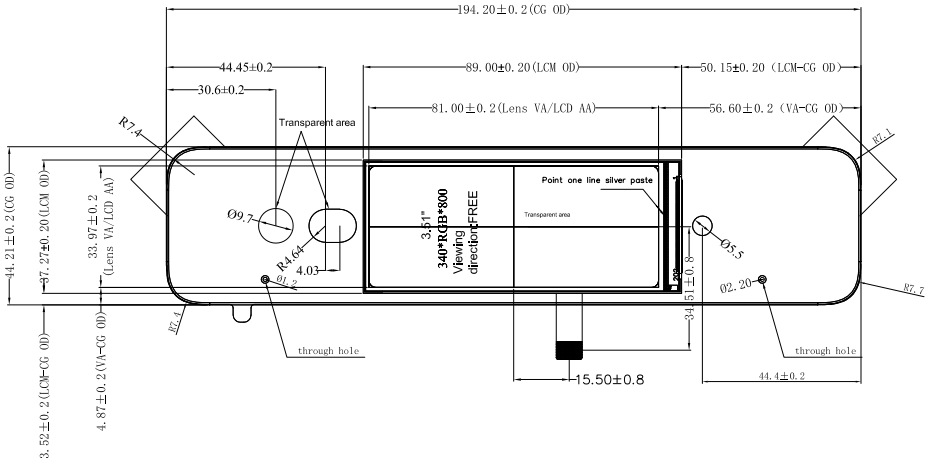
Note : Please refer to the mechanical drawing;

3. Mechanical Drawings

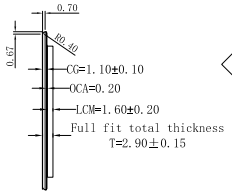
MIPI -INTERFACE

NO.	PIN ASSIGNMENT
1	NC
2	VCC 2.8v
3	IOVCC 1.8v
4	GND
5	GND
6	GND
7	TE
8	RST
9	LEDA+
10	LEDK-
11	NC
12	NC
13	GND
14	D1P
15	D1N
16	GND
17	CLKP
18	CLKN
19	GND
20	D0P
21	D0N
22	GND
23	NC
24	NC

Front view

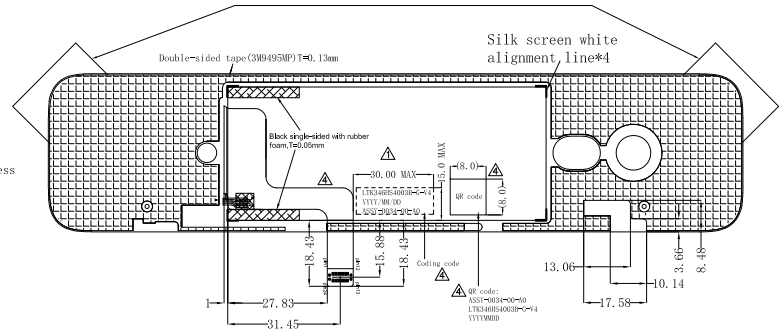


Side view



Back view

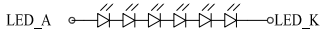
PEEL OFF TAB NEAR SIDE



Cover screen black

LCM Notes:

1. Display : 3.51" ips-TFT Transmissive/Normally Black;
   UP-Polarizer with Anti-glare
2. Resolution: 340xRGBx800
3. View Direction: ALL
4. LCD Driver:ST7701S
5. LCM lumiance: 330CD/M2(TYP)
   LCM+CG lumiance: 300CD/M2(TYP)
6. Unmarked tolerance±0.2,( ): Reference dimension;
7. OPERATING TEMP: -20° C~ +70° C
8. STORAGE TEMP: -30° C~ +80° C
9. Requirements on Environmental Protection: ROHS



If=20mA, Vf=19.2V(TYP)

REV	DESCRIPTION	DATE	NAME
4			
3	Modify the content and location of the code, and add a QR code attachment to remove the FPC double-sided tape	2023.08.16	JACK
2	Change LCD	2022.01.31	IAN
1	LCM backlight adds iron frame	2021.12.10	IAN

LEADTEK DISPLAY

LEADTEK COMPANY LIMITED

SCALE:1/1	UNIT:mm	PAGE:1/1		Approve	Check	Drawn
Part No:	LTK346HS4003B-G		VER:V4	IAN	JONA	JACK
Customer No:						

4.Module Interface

NO	SYMBOL	FUNCTION
1	NC	No Connection
2	VCC(3.3V)	Power Supply for analog, (3.3v)
3	IOVCC(1.8V)	Power Supply for analog, (1.8v)
4	GND	Power Ground
5	GND	Power Ground
6	GND	Power Ground
7	TE	Tearing Effective output Pin.
8	RESET	Reset signal input terminal, active at 'L'.
9	LEDA	Power supply for backlight anode input terminal
10	LEDK	Power supply for backlight cathode input terminal
11	NC	No Connection
12	NC	No Connection
13	GND	Power Ground
14	D1P	MIPI-DSI Data differential signal input pins. (Data lane D1P)
15	D1N	MIPI-DSI Data differential signal input pins. (Data lane D1N)
16	GND	Power Ground
17	CKLP	MIPI-DSI Data differential signal input pins. (Clock lane CKLP)
18	CLKN	MIPI-DSI Data differential signal input pins. (Clock lane CLKN)
19	GND	Power Ground
20	D0P	MIPI-DSI Data differential signal input pins. (Data lane D0P)
21	D0N	MIPI-DSI Data differential signal input pins. (Data lane D0N)
22	GND	Power Ground
23	NC	No Connection
24	NC	No Connection

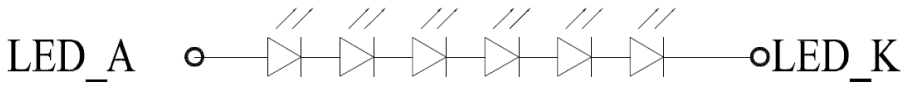
5. ABSOLUTE MAXIMUM RATING

Item	Symbol	Min.	Max.	Unit	Remark
Power Supply Voltage	VCC	-0.3	3.3	V	
	IOVCC	-0.3	1.8	V	
Storage Temperature	Tstg	-30	+80	℃	
Operating Temperature	Topr	-20	+70	℃	

6. Back-light Unit:

PARAMETER	Sym.	Min.	Typ.	Max.	Unit	Test Condition	Note
LED Current	IF	–	20	–	mA	–	–
LED Voltage	VF	–	19.2	–	V	–	–
CG+LCM_Brightness	Lv	–	300	–	Nits	@CA310	
Life Time		–	30000		Hr.	I≦20mA	–
Color	White						

Note (1) Permanent damage may occur to the LCD module if beyond this specification. Functional operationshould be restricted to the conditions described under normal operating conditions.



If=20mA，Vf=19. 2V(TYP)

7.AC Characteristics

Reset timing and interface timing:
Please refer to IC datasheet.

8.Command Table

Please refer to IC datasheet.

9.Recommended Setting and Initialization Flow for Reference

Please refer to attached file.

10.Optical Specifications

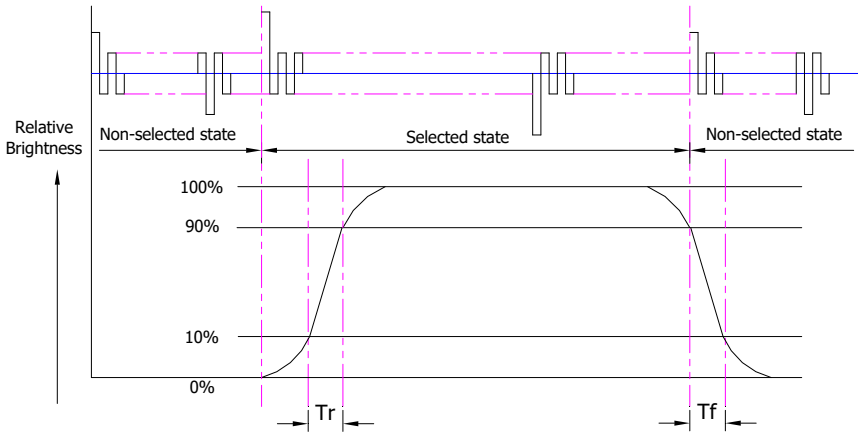
10.1 Optical Specifications

Ta=25ºC, VDD=2.8V, TN LC+ Polarizer

	Item		Symbol	Condition	Specification			Unit
					Min.	Typ.	Max.	
Backlight On (Transmissive Mode)	CG+LCM Luminance on surface(I_f =20mA)		Lv	Normally viewing angle $\theta_X=\theta_Y$ =0º	-	300	-	cd/m²
	Contrast ratio		CR		-	600	-	-
	Response time		T_R		-	10	20	ms
			T_F	-	-	20	30	
	Chromaticity Transmissive	Red	X_R	-	0.602	0.632	0.662	-
			Y_R		0.309	0.339	0.369	-
		Green	X_G		0.297	0.327	0.357	-
			Y_G		0.525	0.575	0.605	-
		Blue	X_B		0.121	0.151	0.181	-
			Y_B		0.060	0.090	0.120	-
		White	X_W		0.258	0.288	0.318	-
			Y_W		0.291	0.321	0.351	-
	Viewing Angle	Horizontal	θ_{X+}	Center CR≥10	-	80	-	Deg.
			θ_{X-}		-	80	-	
		Vertical	θ_{Y+}		-	80	-	
			θ_{Y-}		-	80	-	
	NTSC Ratio(Gamut)		-	-	-	65	-	%

11.0 Definition of Response Time

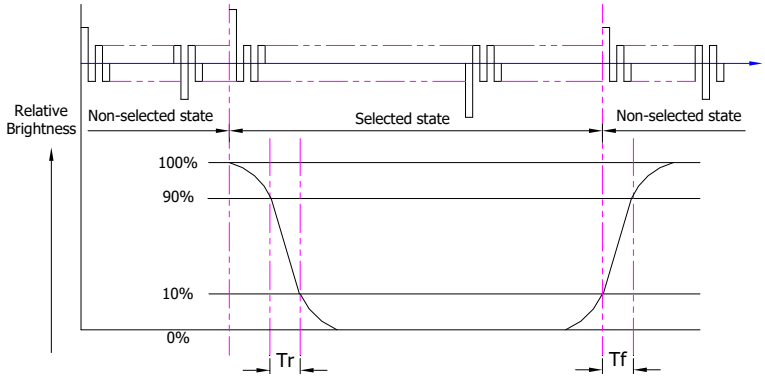
11.1.1 Normally Black Type (Negative)



Tr is the time it takes to change form non-selected state with relative luminance 10% to selected state with relative luminance 90%;

Tf is the time it takes to change from selected state with relative luminance 90% to non-selected state with relative luminance 10%.

11.1.2 Normally White Type (Positive)



Tr is the time it takes to change form non-selected state with relative luminance 90% to selected state with relative luminance 10%;

Tf is the time it takes to change from selected state with relative luminance 10% to non-selected state with relative luminance 90%;

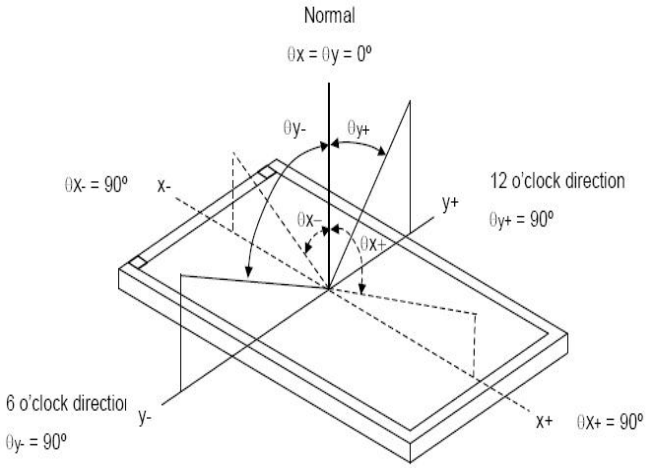
11.3 Definition of Contrast Ratio

Contrast is measured perpendicular to display surface in reflective and transmissive mode. The measurement condition is:

Measuring Equipment	BM-7 or EQUI
Measuring Point Diameter	3mm//1mm
Measuring Point Location	Active Area centre point
Test pattern	A: All Pixels white
	B: All Pixel black
Contrast setting	Maximum

Definitions: CR (Contrast) = Luminance of White Pixel / Luminance of Black Pixel

11.4 Definition of Viewing Angles



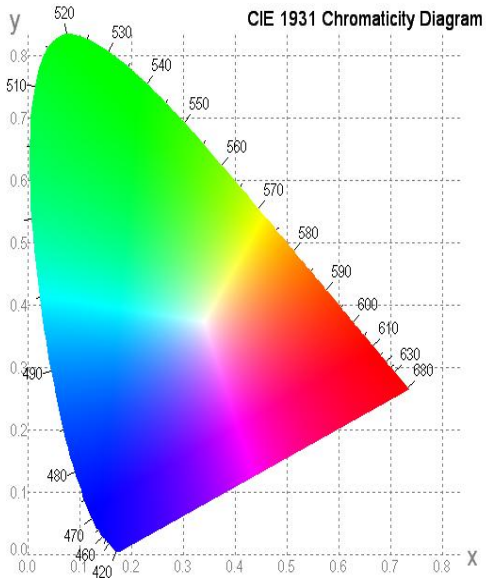
Measuring machine: LCD-5100 or EQUI

11.5 Definition of Color Appearance

R,G,B and W are defined by (x, y) on the IE chromaticity diagram

NTSC=area of RGB triangle/area of NTSC triangleX100%

Measuring picture: Red, Green, Blue and White (Measuring machine: BM-7)



11.6 Definition of Surface Luminance, Uniformity and Transmittance

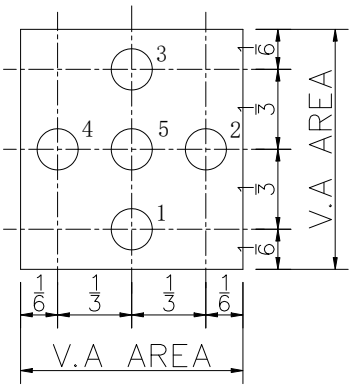
Using the transmissive mode measurement approach, measure the white screen luminance of the display panel and backlight.

11.6.1 Surface Luminance: LV = average (LP1:LP5)

11.6.2 Uniformity = Minimal (LP1:LP5) / Maximal (LP1:LP5) * 100%

11.6.3 Transmittance = LV on LCD / LV on Backlight *

100%Note :Measuring machine:CA310



12.Quality Assurance

12.1 Purpose

This standard for Quality Assurance assures the quality of LCD module products supplied to customer by display.

12.2 Agreement Items

and customer shall negotiate if the following situation occurs:

12.2.1 Discrepancies between QA standards and customer's QA standards. 12.2.2 Additional requirement to be added in product specification.

12.2.3 Any other special problem.

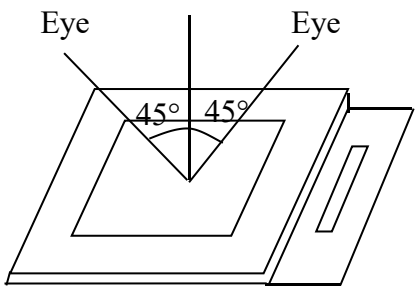
12.3 Standard of the Product Visual Inspection

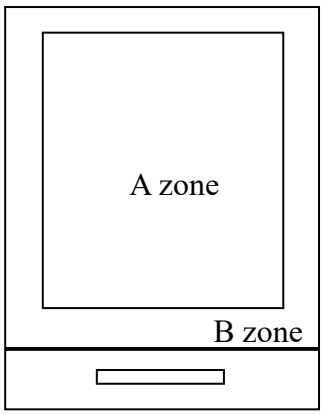
12.3.1 Appearance inspection:

12.3.1.1 The inspection must be under illumination about 1000 – 1500 lx, and the distance of view must be at 30cm ± 2cm.

12.3.1.2 The viewing angle should be 45° from the vertical line without reflection light or follows customer's viewing angle specifications.

12.3.1.3 Definition of area: A Zone: Active Area, B Zone: Viewing Area.





13.Reliability Specification

Item	Condition	Cycle Time	Quantity	Remark
Constant Temp. and Constant Humidity Operation Test	+20 ± 3ºC,90 ± 3%RH	96hrs	--	*1
High Temp. Operation Test	+70 ± 3ºC	96hrs	--	
Low Temp. Operation Test	-20 ± 3ºC	96hrs	--	
Thermal Shock Test	-20 ± 3ºC (30min) +70 ± 3ºC (30min)	10cycles	--	
ESD Test(end product)	150pF, 330Ω, ±2KV, Contact	10times	--	*2, *3
	150pF, 330Ω, ±6KV, Air			
Vibration Test (for packaging)	Frequency: 10Hz to 55Hz to10Hz,Swing:1.5mm,time: X,Y,Z each 2H.	6hrs	One inner carton	*4

Note 1. For humidity test, DI water should be used.

Inspection Standard: Inspect after 1-2hrs storage at room temperature, the sample shall be free from the following defects:

- Air bubble in the LCD
- Seal Leakage
- Non-display
- Missing Segment
- Glass Crack
- IDD is greater than twice initial value.
- Others as per QA Inspection Criteria

Note 2. No defect is allowed after testing

The End Product ESD value is only indicative and depends on customer ESD protection design for the whole system.

Note 3. ESD should be applied to LCD glass panel, not other areas (such as on IC and so on) IDD should be within twice initial value.

In case of malfunction defect caused by ESD damage, if it would be recovered to normal state after resetting, it would be judged as a good part.

Note 4. Only upon request.

14.Precautions and Warranty

14.1 Safety

14.1.1 The liquid crystal in the LCD is poisonous. Do not put it in your mouth. If the liquid crystal touches your skin or clothes, wash it off immediately using soap and water.

14.1.2 Since the liquid crystal cells are made of glass, do not apply strong impact on them. Handle with care.

14.2 Handling

14.2.1 Reverse and use within ratings in order to keep performance and prevent damage.

14.2.2 Do not wipe the polarizer with dry cloth, as it might cause scratch. If the surface of the LCD needs to be cleaned, wipe it swiftly with cotton or other soft cloth soaked with petroleum IPA, do not use other chemicals.

14.3 Operation

14.3.1 Do not drive LCD with DC voltage

14.3.2 Response time will increase below lower temperature

14.3.3 Display may change color with different temperature

14.3.4 Mechanical disturbance during operation, such as pressing on the display area, may cause the segments to appear “fractured”.

14.4 Static Electricity

14.4.1 CMOS LSIs are equipped in this unit, so care must be taken to avoid the electro-static charge, by ground human body, etc.

14.4.2 The normal static prevention measures should be observed for work clothes and benches.

14.4.3 The module should be kept into anti-static bags or other containers resistant to static for storage.

14.5 Limited Warranty

14.5.1 Unless otherwise agreed between and customer, will replace or repair any of its LCD and LCM which found to be defective electrically and visually when inspected in accordance with Quality Standards, for a period of one year from date of shipment.

14.5.2 The warranty liability of is to repair and/or replacement. will not be responsible for any consequential loss.

14.5.3 If possible, we suggest you use up all modules in six months. If the module storage time over twelve months, we suggest that recheck it before the module be used.

15.Packaging

TBD

16.Prior Consult Matter

1. For standard products, we keep the right to change material, process for improving the product property without prior notice to our customer.

2. For OEM products, if any changes are needed which may affect the product property, we will consult with our customer in advance.

3. If you have special requirement about reliability condition, please let us know before you start the test on our samples.

DCLTEK

深圳市丽台电子有限公司

Quality Inspection Standards

品质允收标准

Model No. / 产品型号: **Applies 0.95~5.0 Inch Touch Display Screen**
Updated Date /生效日期: **2022-05-20**
Version / 版 本: **A0**
Customer confirmation : _____

Record of Revision /修订履历

Version /版本	Revision Record /修订内容	Reviser /修订人	Revision Date /修订日期
V0	首发 / Starting		2022.05.20

1.Scope of application /适用范围.

This document shall be applied to 0.95~5.0 inch touch display screen.

本文件适用于0.95~5.0 寸触摸显示屏.

2.Inspection conditions and environment /检验条件与环境.

2. 1 Inspection Conditions /检验条件:

(1) Inspection Distance /检测距离: 35cm ±5cm.

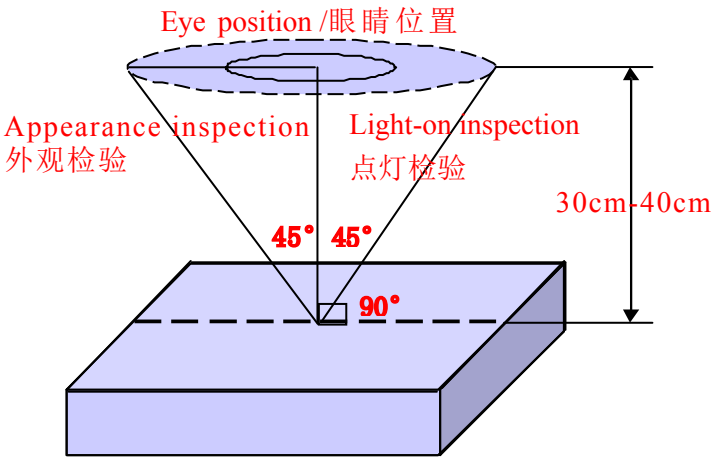
(2) Check time /检验时间：

Displays performance test /功能测试：2~3S /Image，Cosmetic Inspection /外观检验:10~12S.

(3) Check the viewing angle /检验视角:

Light-on Inspection Angle /点灯检验角度： ±45°.

Cosmetic Inspection Angle /外观检验角度：±45°.



(Perpendicular to LCD panel surface /垂直于LCD表面)

2.2 Inspection environment /检验环境:

Ambient Temperature 温度		25℃±5℃
Ambient Humidity 湿度		55±5%RH
Ambient Illumination 亮度	Cosmetic Inspection 外观检验	800-1000 Lux
	Functional Inspection 点灯检验	200~300Lux

2.3 Sampling Conditions /抽样条件:

（1）Quantity to be inspected /批量：Quantity of shipment lot per model /单次运送单一型号数量.

（2）Sampling method /抽样方法：

Sampling Plan /抽样计划		GB/T 2828.1- 2003
		Normal Inspection ， Single Sampling 正常检验、单次抽样
		General inspection level： Ⅱ 一般检验水平：二级
AQL	Major Defect /主要缺陷	0.65
	Minor Defect /次要缺陷	1.0

（3）The classification of Major(MA) and Minor(MI) defects is shown as “3.1 Classification of defects”.

主缺（MA）及次缺（MI）定义于”3.1缺陷分类”.

3.Terms And Definitions /术语和定义

3.1 Classification of defects / 缺陷分类 :

（1）Major defects /主要缺陷:

A major defect is a defect that is likely to result in failure, or to reduce materially the usability of the product for its intended purpose .

可导致产品功能失效或减少产品可用性的缺陷.

（2）Minor defects /次要缺陷:

It will not cause the product to fail and reduce the defects in the effective use and operation of the product.

不会导致产品功能失效和减少产品的有效使用与操作的缺陷.

3.2 Point defects /点状缺陷：

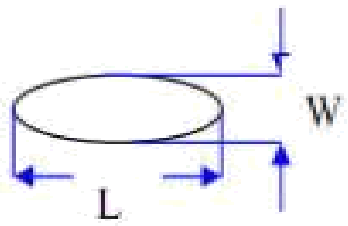
The size of the point defect is defined by the diameter D, and the average diameter of the defect is D=1/2（W+L）.

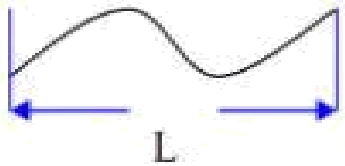
点状缺陷的大小是由直径 D 定义的，缺陷的平均直径 D=1/2(W+L).

3.3 Linear defects /线状缺陷：

When defect size L≥2W,the defect count as liner type defect.Size of linear defect is defined by length (L) and the maximum width (W).

当缺陷尺寸 L≥2W 时，被视为线状缺陷，线状缺陷是由长度 (L) 和最大宽度 (W) 定义的.





3.4 LCD sub-pixel dot /LCD子像素点

（1）Definition /定义：The point defect area is greater than 50% of the LCD sub-pixel area, and is visible through ND5% filter masking .

子像素点缺陷面积大于 50% LCD子像素面积, 且透过 ND5%遮盖是可见的.

（2）The drawing of 1/2 area sub-pixel definition / 1/2 面积的子像素定义绘图:

The 1/2 area sub-pixel can be defined as below one or more of specific shapes

1/2 面积的子像素可以定义为如下一个或多个特定形状图：

3.5 Small bright dot /细碎亮点：

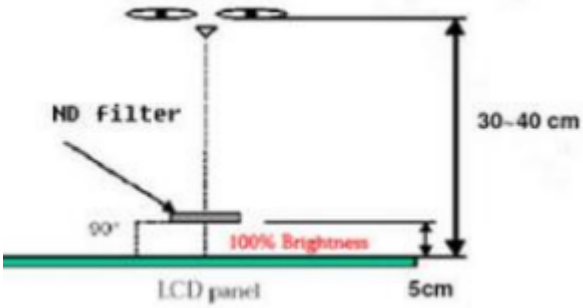
Point defects smaller than "LCD sub-pixels" /小于“LCD子像素点”的点缺陷.

（Ratio of Zone I to Zone O /I 区与 O 区比例：1：2：1）

3.6 ND filter inspection method /ND卡的检验方法：

Hold the ND filter about 5cm above the display area, with your eyes 30-40cm away from the panel, and observe for 2~3 seconds.

在显示区域上方大约 5cm 处握住 ND 卡，眼睛距离面板 30-40cm，观察2~3 秒.



3.7 Any FPC surface problems that do not leak copper on the surface and do not cause functional failure are acceptable.
任何 FPC 表面问题，表面未露铜和不造成功能失效是可以接受的.

3.8 Extraneous substances that can be wiped out，like Finger point,Particles are not considered as a defect .
可以被擦拭干净的表面物质不视为缺陷 (如手指印，尘粒) .

3.9 Defects that are covered by the material and are not visible to the eye and do not affect the function and use are not considered defects.

会被物料覆盖目视不可见，且不影响功能与使用的缺陷不视为缺陷.

3.10 Panel damage /面板损伤：

Glass damage outside the AA display area that does not affect the effective wiring is acceptable.

AA 显示区域以外的玻璃损伤，不影响有效线路是可以接受的.

3.11 Issues not specified or defined in this acceptance standard shall be handled through friendly negotiation between the two parties.

本允收标准中未规定或定义的问题，双方友好协商处理.

4. Inspection standards /检验标准

4.1 Structural Dimensions /结构尺寸规格

Serial Number 序号	Measurement items /测量项目		Specification /规格	Remark /备注
	名称 /Name	Unit /单位	Tolerance /公差	
1	Outside dimension：Length 尺寸：长	mm /毫米	0.10mm~0.20mm	Please refer to the product specification for detailed dimensions and tolerances 详细的尺寸规格和公差请参考产品规格书
2	Outside dimension：Width 尺寸：宽	mm /毫米	0.10mm~0.2mm	
3	Outside dimension：Thickness 尺寸：厚	mm /毫米	0.20mm~0.30mm	

4.2 Appearance Inspection Specification /外观检验规格

(D： diameter, W： width, L： length, N： quantity, DS： spacing)

Inspection area 检验区域	Inspection items 检验项目	Inspection specifications 检验规格	Defect category 缺陷类别	
Glass 玻璃	Wire(on Array) 线路	Can't be damaged 不能损伤	MA	
	Chipping/corner breaking 崩边/破角	Can't affect the effective lines and functions 不能影响有效线路和功能	MA	
	Edge 边缘	There must be no extensional cracks 不可有延伸性裂纹	MA	
Silicone 硅胶	Silicone coating 硅胶涂布	The height must not exceed the LCD CF surface 高度不能超过LCD CF面		MI
	Glue overflow 溢胶	Can't cover FPC, POL, etc 不能覆盖到FPC、POL等		MI

Inspection area 检验区域	Inspection items 检验项目	Inspection specifications 检验规格	Defect category 缺陷类别	
PCBA FPC Connector 连接器	Appearance 外观	Scratches or injuries are not allowed to cause copper exposure 划伤或损伤不允许表面出现露铜		MI
	Component 元器件	Can't be damaged and lack 不能损伤和缺少	MA	
	Gold finger oxidation 金手指氧化	Not allowed 不允许		MI
	Connection status 连接状况	The connection must be accurate and stable 必须准确稳定连接	MA	
	Break 破裂	Not allowed 不允许	MA	
	Soldering,: false soldering/tinning/tin beads 假焊/连锡/锡珠	Not allowed 不允许	MA	
POL 偏光片	Scratches 划伤	1. W≤0.05mm；L≤5mm，Ignore（忽略） 2. 0.05mm＜W≤0.10mm ; L≤5mm ; N≤3 ; DS≥10mm 3. 0.10mm＜W；5mm＜ L， Not allowable（不允许）		MI
	Dent 凹凸印	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
	Bubbles 气泡	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
	Point defects 点状不良	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
	Edge bubbles 边缘气泡	1. Within 1/2BM of the display area, it is not allowed 显示区往外 1/2BM 区域内，不允许 2. The display area is 1/2 outside the BM area, and it is not controlled 显示区往外1/2BM区域以外，不管控		MI
	Dirty/watermarked 脏污/水印	No dirt/water lines/finger marks are allowed, and must be wiped clean 不允许有脏污/水印/手指印，须擦拭干净方可		MI
	Warping 起翘	Not allowed 不允许		MI
	Attaching offset 贴偏	It is necessary to completely cover the display area outward, within the 1/2BM area, or without leaking POL edges after TP is attached 需完整覆盖显示区往外、1/2BM区以内或贴合TP后不会出现漏偏光片边缘		MI
	Mixture 混料	Mixing different types of POL or not using POL as required by the BOM，not allowed 不允许混贴不同型号的POL或未按BOM要求使用POL	MA	

Inspection area 检验区域	Inspection items 检验项目	Inspection specifications 检验规格	Defect category 缺陷类别	
TP&CG	Point defects 点状不良	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
	Scratches 划伤	1. W≤0.05mm；L≤5mm，Ignore（忽略） 2. 0.05mm＜W≤0.10mm ; L≤5mm ; N≤3 ; DS≥10mm 3. 0.10mm＜W；5mm＜ L， Not allowable（不允许） 4. There is a feeling scratch，Not allowable 有感划伤，不允许		MI
	Edges and corners cracked 崩角/崩边	1. Product front /产品正面： Edge and corner chipping is not allowed 崩角、崩边不允许 2. Product back /产品背面: X≤ 0.5 , Y≤0.5，Z≤1/2T；N≤3；DS≥10mm		MI
	Silk screen 丝印	The silk screen is clear, complete and correct 丝印清晰、完整、内容正确		MI
	Dirty 脏污	Non-wipeable dirt, not allowed 不可擦拭的脏污，不允许		MI
	Broken 破损	Not allowable 不允许	MA	
	Ink color aberration 油墨色差	ΔE>1，Not allowable（不允许）		MI
	Cover pinholes 针孔	1. D≤0.10mm , N≤3 , DS≥10mm，allowable 2. D＞0.10mm，intensive pinholes（密集型针孔），Not allowable（不允许）		MI
	IR holes IR孔	Dirt, deviation, color difference, etc. are not allowed 不允许脏污、偏位、色差等		MI
BL 背光	Backlight separation 背光分离	Not allowable 不允许		MI
	Deformation of rubber iron and rubber frame 胶铁、胶框变形	Use the plug gauge 0.3mm on the flat surface and can snap in and judge NG 在平面上使用塞规0.3mm卡翘曲位置，能卡进判定NG		MI
	The iron frame is oxidized and not tightened 铁框氧化、卡不紧	Not allowable 不允许		MI
	Backlight sticky solder beads, glue, etc 背面粘锡珠、残胶等	Not allowable 不允许		MI
	Lnkjet coding，Barcode， QR code 喷码/条码/二维码	The lnkjet coding is clear and complete, the barcode and QR code can be scanned normally, and the content and format match 喷码清晰完整、条码和二维码可正常扫描，内容和格式相符		MI
	Accessories (protective film, double-sided tape, insulating adhesive, etc.) 辅料（保护膜、双面胶、绝缘胶等）	Defects such as missing pastes, sticking deviations, defects, and fractures are not allowed 不允许有漏贴、贴偏、残缺、断裂等缺陷		MI

4.3 Electrical test specifications /电性检查规格
(D： diameter, W： width, L： length, N： quantity, DS： spacing)

Inspection items 检验项目	Inspection specifications 检验规格	Defect category 缺陷类别	
Glass bright spots/dark spots 玻璃亮点/暗点	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
Mura	Use ND5% filter masking, visual invisibility is OK, 200~300Lux 使用ND5%遮盖，目视不可见即为OK，200~300Lux		MI
Small bright dot 细碎亮点	Use ND5% filter masking, visual invisibility is OK 使用ND5%遮盖，目视不可见即为OK		MI
Light leakage 漏光	1. Use ND5% filter masking, visual invisibility is OK 使用ND5%遮盖，目视不可见即为OK 2. If necessary, sign off on the sample 必要时，签限定样		MI
Backlight black/white dots 背光黑点/白点	1. D≤0.15mm，Ignore（忽略） 2. 0.15mm＜D≤0.30mm；N≤3；DS≥10mm 3. 0.30mm＜D，Not allowable（不允许）		MI
Linear foreign bodies 线状异物（异物毛丝等）	1. W≤0.05mm；L≤5mm，Ignore（忽略） 2. 0.05mm＜W≤0.10mm ; L≤5mm ; N≤3 ; DS≥10mm 3. 0.10mm＜W；5mm＜ L， Not allowable（不允许）		MI
Black/White Print 黑印/白印	Use ND5% filter masking, visual invisibility is OK 使用ND5%遮盖，目视不可见即为OK		MI
The display is uneven 显示不均匀	Use ND5% filter masking, visual invisibility is OK 使用ND5%遮盖，目视不可见即为OK		MI
The brightness is uneven 亮度不均匀	Brightness uniformity＜85.0%，Not allowable 亮度均匀性＜85.0%，不允许		MI
Displacement of the membrane 膜材移位	Not allowable 不允许		MI
Interference pattern/Newtonian pattern 干涉纹/牛顿纹	Not allowable 不允许		MI
Display abnormal 显示异常	Not allowable 不允许	MA	
No display 无显示	Not allowable 不允许	MA	
Line/Missing Drawing 线条/缺画	Not allowable 不允许	MA	
Splash screen 闪屏	Not allowable 不允许	MA	
LCD grid LCD网格	Not allowable 不允许	MA	
Afterimage 残影	Not allowable 不允许	MA	
Wrong viewing angle 视角错误	Not allowable 不允许	MA	
No touch 无触摸	Not allowable 不允许	MA	
Touch the jump point 触摸跳点	Not allowable 不允许	MA	
Not sensitive 触摸不灵敏	Not allowable 不允许	MA	