

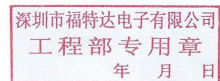


APPROVAL SHEET
承 认 书

Customer 客户名称	
Part NO. 产品型号	FSD080H9002-A+CTP
Product type 产品内容	Mode: Transmissive type .NormallyBLACK. TFT LCD Module LCD Module: Graphic800RGB*1280Dot-matrix
Remarks 备注栏	☐ APPROVAL FOR SEPCIFICATIONS ONLY ☒ APPROVAL FOR SEPCIFICATIONS AND SAMPLE
Signature by Customer: 客户确认签章	

LEAGEND LCM R&D CENTER:

Technical Department: 研发部门	Quality Assurance Department 质量保证部门	Approved by:核准
Iijian	LaiYong	Kevin





REVISION STATUS

Version	Revise Date	Page	Content	Modified by
V1.0	2025-07-09	-	First Issued.	



福建福盛达电子有限公司

Fujian Fushengda Electric Co.,LTD

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1. General Description

* DESCRIPTION

FSD080H9002-A is a color active matrix TFT (Thin Film Transistor) LCD (liquid crystal display) that uses amorphous silicon TFT as a switching device. This model is composed of a Transmissive type TFT-LCD Panel, driver circuit, back-light unit. The resolution of a 8.0" TFT-LCD contains 800 x 1280 pixels, and can display up to 16.7M colors.

* Features

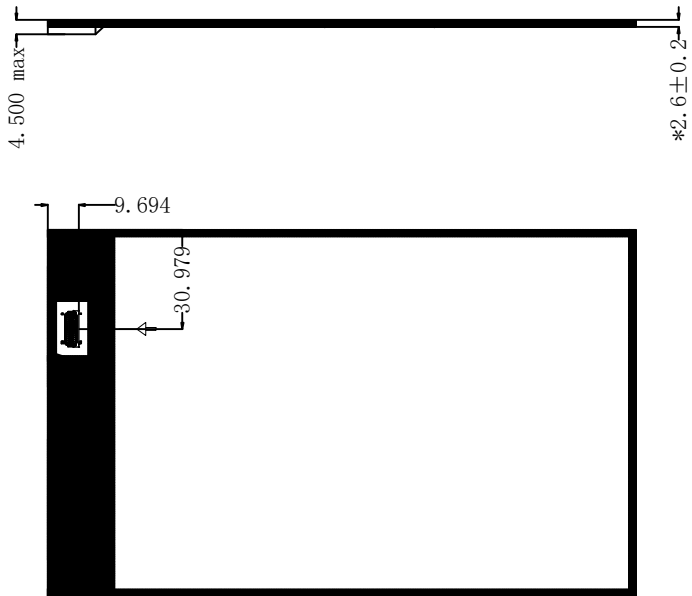
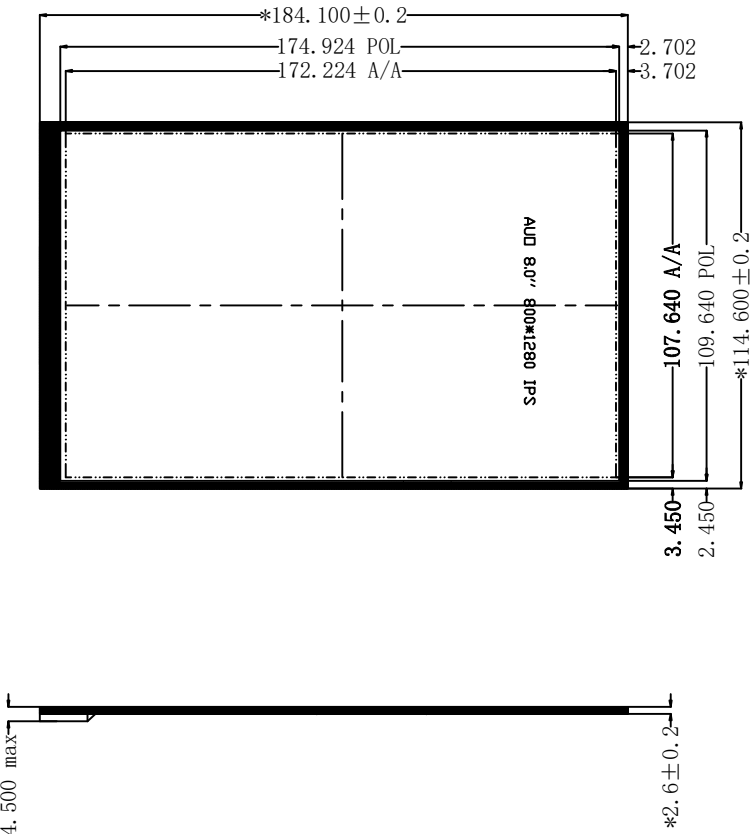
- Low Input Voltage: IOVCC: 1.65~3.3V;VCC: 2.5~3.3V
- Display Colors of TFT LCD: 16.7M colors
- Interface: MIPI
- Internal Power Supply Circuit.

General Information Items	Specification	Unit	Note
	Main Panel		
Display area(AA)	107.64(H) x 172.22(V)	mm	-
Driver element	a-Si TFT active matrix	-	-
Display colors	16.7M	colors	-
Number of pixels	800(RGB) *1280	dots	-
Pixel arrangement	RGB vertical stripe	-	-
Pixel pitch	0.1506(H) ×0.1432(V)	mm	-
Viewing angle	FREE	o'clock	-
Drive IC	JD9365DA-H3	-	-
Display mode	Normally Black	-	-
Operating temperature	-10 ~ +60	°C	-
Storage temperature	-20 ~ +70	°C	-

Mechanical Information

Item		Min.	Typ.	Max.	Unit	Note
Module size	Horizontal(H)	-	114.6	-	mm	±0.2
	Vertical(V)	-	184.1	-	mm	±0.2
	Depth(D)	-	2.6	-	mm	±0.2
Weight		-	TBD	-	g	-

2. MECHANICAL SPECIFICATION



PIN	SYMBLE	PIN	SYMBLE
1	LED A	18	MIP1_CLK-
2	LED A	19	GND
3	LED A	20	MIP1_DO+
4	NC	21	MIP1_DO-
5	LED B	22	GND
6	LED B	23	MIP1_D3+
7	LED B	24	MIP1_D3-
8	LED B	25	GND
9	GND	26	NC
10	GND	27	RESET
11	MIP1_D2+	28	LCD_ID
12	MIP1_D2-	29	VDD10
13	GND	30	VDD
14	MIP1_D1+	31	VDD
15	MIP1_D1-		
16	GND		
17	MIP1_CLK+		

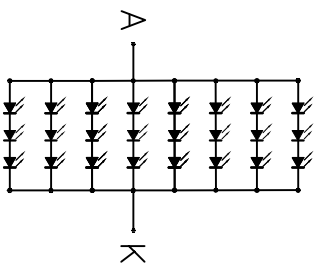
Notes:

1. Unit:mm
2. Do not scale drawing.
3. Δ Modification rev. number.
4. General Tolerance: ± 0.2
5. "****" For important dimension; () for reference dimation
6. RoHs must be compiled.(Use Lead-free process)

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Luminous (Without PET)	IV	-	1000		cd/m ²
Chromaticity Coordinates Without PET	X	(0.260)		(0.360)	
Uniformity	Y	(0.280)		(0.380)	
		75	80		%
Backlight voltage	VF	8.4	9.0	9.9	V
Backlight current	IF		160	180	mA

T=25℃
所有测试
误差为:5%

LED电路图



REV. : Δ

80 8.0° 800*1280 IPS

TYPE	模组成品图	MATERIAL		PAGE	1/1	APPROVED
MODEL NO.	FSD080H9002-A	EDITION	01	修改		First Review
PART NO.		版本号		日期		修改内容
						修改者
						设计者



版本	日期	修订记录	发行者
V01	2025-06-16	初版	ZHQ
V02	2025-06-18		
V03	2025-07-04	图中红色标注位置，线的形状、长度、PIN定义修改	

技术参数:

1. G-6+PPC
- 170 Glass, 0.55mm
- SCA=0.2mm
- Cover:2mm
- 总厚=2.50mm±0.2mm (不包含辅料)
- IC:GT911
- 工作电压: 3.3V; 12V电压: 3.3 V
2. 透光率: ≥88%;
3. 表面硬度: ≥6H;
4. 工作环境: -10℃~+60℃, ≤90%RH;
5. 储存环境: -20℃~+70℃, ≤90%RH;
6. 未注尺寸公差按±0.2mm。

PIN	NOTE
1	SDA 3.3V
2	SCL 3.3V
3	RST
4	INT
5	VCC 3.3V
6	GND

Pin	Note
1	RST
2	VDI 3.3V
3	GND
4	INT
5	SDA 3.3V
6	SCL 3.3V

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DRAWN BY:	ZHQ	TITLE ID:	UNITS:	MM
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客户确认:	确认此型号所有图纸: 签字确认:			赵志明2025-7-4

[illegible]



4. ELECTRICAL CHARACTERISTICS

4.1 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Values		Unit	Remark
		Min	Max.		
Supply Voltage for Logic circuit	VDDIO	1.7	3.0	V	
Supply Voltage for analog circuit	Vcc	3.0	3.6	V	

4.2 DC ELECTRICAL CHARACTERISTICS

4.2.1 POWER SPECIFICATION

INPUT POWER SPECIFICATIONS ARE AS FOLLOWS:

THE POWER SPECIFICATION ARE MEASURED UNDER 25°C AND FRAME FREQUENCY UNDER 60HZ

Typical Operating Conditions (Ta=25°C)

Item	Parameter	Values			Unit	Remark
		Min	Typ	Max.		
VCI	Vcc	3.0	3.3	3.6	V	
VDD3	Iovcc	1.7	1.8	3.0	V	
TFT Gate ON Voltage	Pixel turn on voltage	14	15	16	V	
TFT Gate OFF Voltage	Pixel turn off voltage	-14	-13	-12	V	
VSP	Negative AVEE voltage	4.8	5	6	V	
VSN	Postive AVDD voltage	-6	-5	-4.8	V	

4.2.2 BACKLIGHT UNIT (GND=0V)

Item	Symbol	Values			Unit	Remark
		Min	Typ	Max.		
Forward supply Voltage	Vf	8.4	9.6	9.9	V	
Forward supply Current	If	-	160	-	mA	
LCM Luminance	LV		1000	-	cd/m2	Ib=160mA
Uniformity	/	75	80		%	-



5. OPTICAL CHARACTERISTICS

The optical characteristics are measured under stable conditions at 25°C (Room Temperature) :

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit	Note
Viewing Angle		θ_R	Horizontal (Right) CR = 10 (Left)	80	85	-	degree	1, 4
		θ_L		80	85	-		
		ϕ_H	Vertical (Upper) CR = 10 (Lower)	80	85	-		
		ϕ_L		80	85	-		
Transmittance		%		4.63%	5.45%	NA		C-light
Response Time		T _{RT}	Rising + Falling	-	30	35	msec	1, 3
Color / Chromaticity Coordinates	Red	R _x	CIE 1931		0.630		-	C-light
		R _y			0.335			
	Green	G _x			0.288			
		G _y			0.584			
	Blue	B _x			0.132			
		B _y			0.175			
	White	W _x			0.316			
		W _y			0.369			
NTSC		%		-	56.5	-		
Color gamut (clight)					72		%	

*Note (1) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.

Contrast Ratio (CR) = L₆₃ / L₀

L₆₃: Luminance of gray level 63

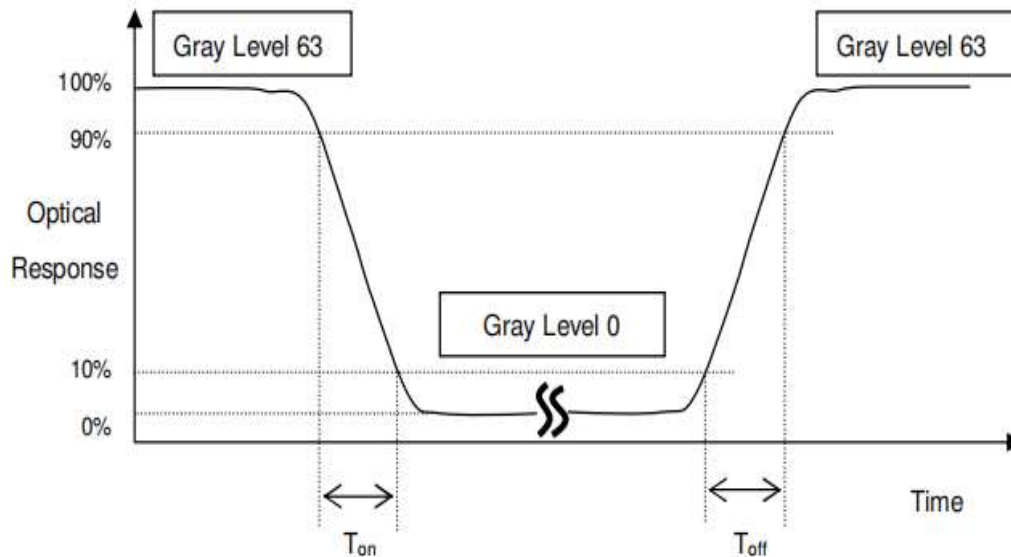
L₀: Luminance of gray level 0

CR = CR (5)

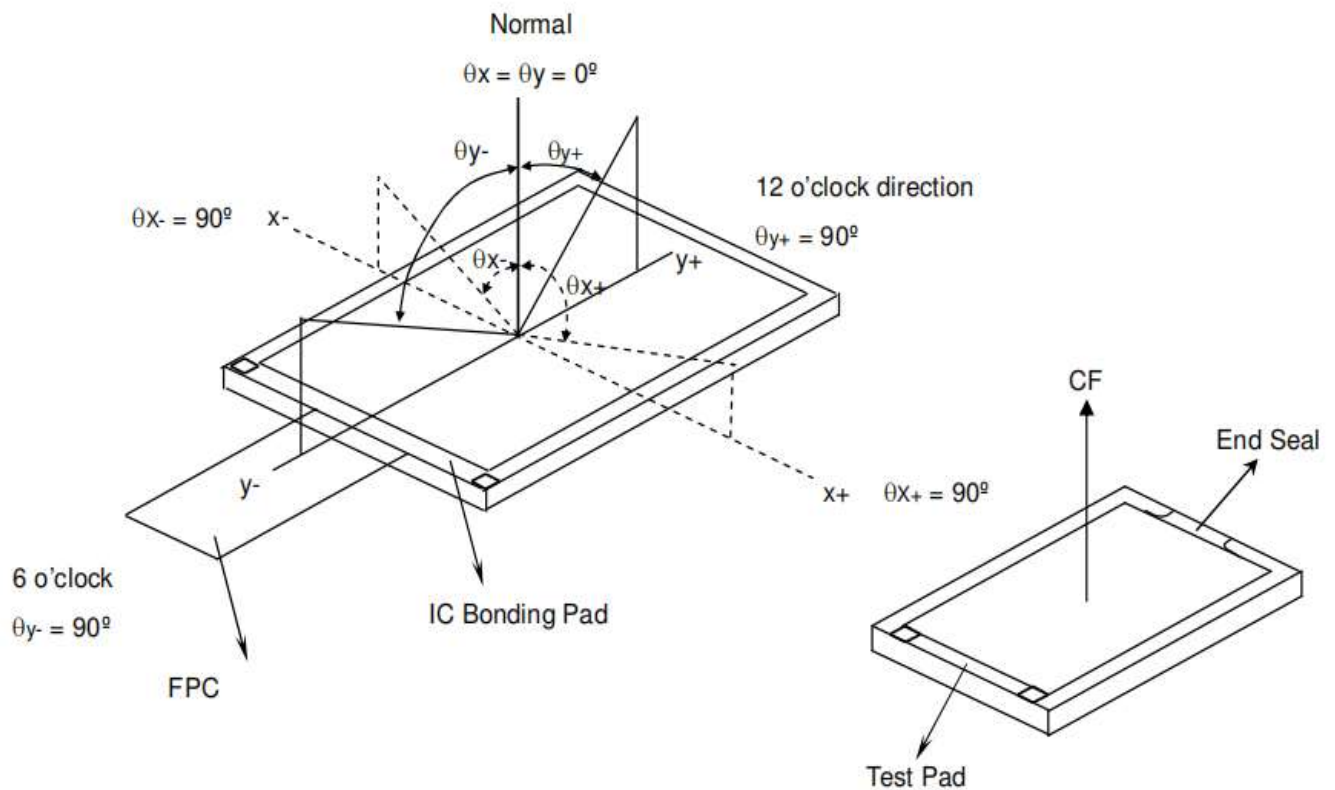
CR (X) is corresponding to the Contrast Ratio of the point X at Figure in Note (5).



*Note (2) Definition of Response Time (T_{on} , T_{off}):



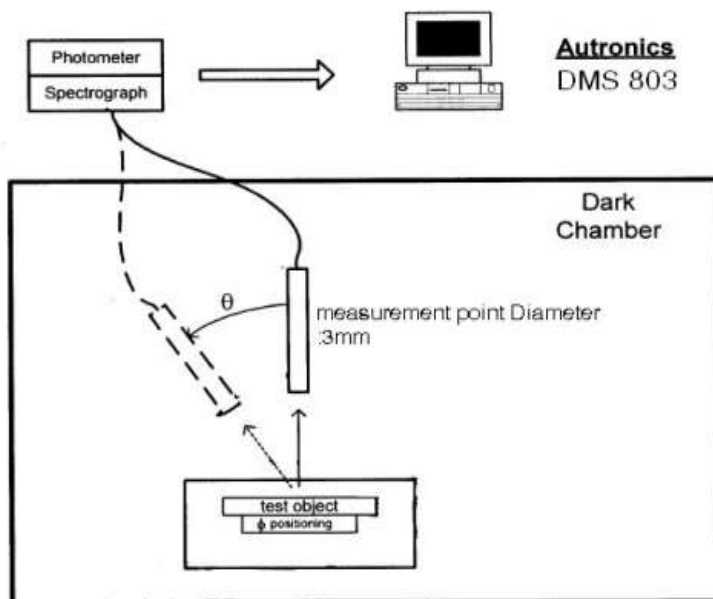
*Note (3) Definition of Viewing Angle



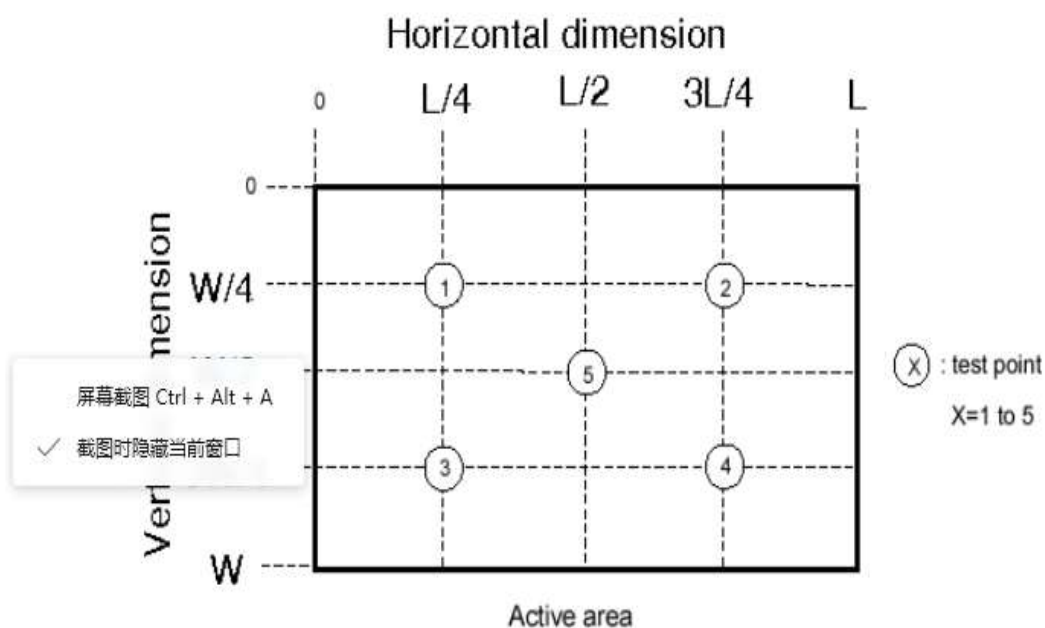


*Note (4) Measurement Set-Up:

The LCD module should be stabilized at a given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.



*Note (5)

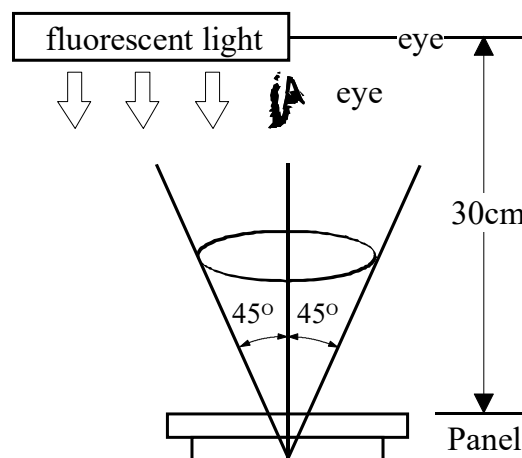




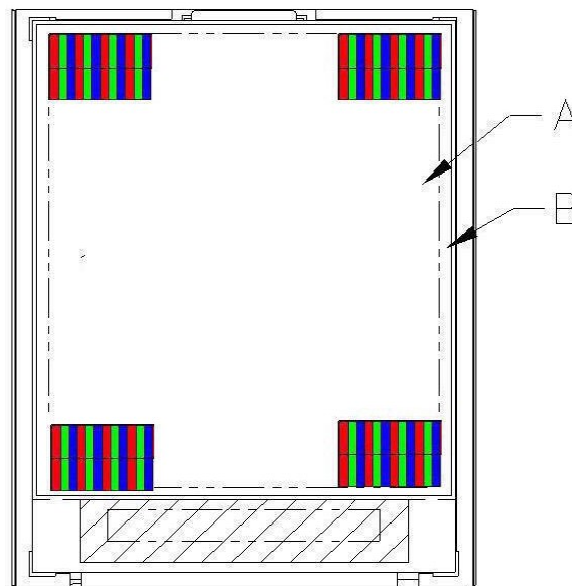
6. QUALITY SPECIFICATIONS

6.1 INSPECTION CONDITION

- (1) Inspect under 300~500Lux fluorescent light, leaving 30~35cm between panels and eyes, and between panels and lights.
- (2) Inspection condition is $23\pm 5^{\circ}\text{C}$, 50 $\pm$ 20%RH maximum.



6.2 DEFINITION OF AREA

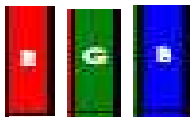
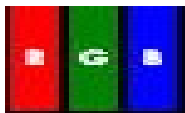


A Area : Viewing area.

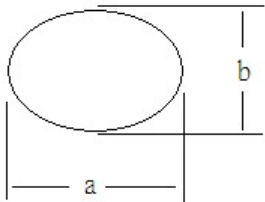
B Area : Out of viewing.(outside viewing area)



6.3 INSPECTION SPECIFICATION

NO	Item	Acceptable specification	Judgment Criterion
1	Electrical Testing	1-1 sub pixel classification - Sub Pixel: Number of sub pixel doesn't exceed one dot.  Sub Pixel (Dot) a> Dark dot ----one Allowed b> Bright dot ---- one Allowed - Pixel : Three dots link together doesn't exceed ones  Pixel 1-2 Leakage to light - Leakage to light be not allowed. 1-3 Picture to shake - Picture had shake, twinkle and noise etc. instable of defect that be not allowed. 1-4 Function - No display or No function. - Source Line, Gate Line. - Contrast Ratio - Current consumption exceeds product specifications. - Display malfunction.	$N \leq 1$ $N \leq 0$ $N=0$ $N=0$ $N=0$
2	Mechanical Dimension	2-1 Mechanical Dimension exceeds product specifications. 2-2 Out of frame and boss of plastic changed shape that be not allowed.	$N=0$



NO	Item	Acceptable specification	Judgment Criterion																	
3	Cosmetic Inspection	3-1 Blemish: Line shapes of defect																		
		<table><tr><th>Length</th><th>Width</th><th>Acceptable number</th><th>Mini. space</th></tr><tr><td>---</td><td>$W \leq 0.03$</td><td>Ignore</td><td rowspan="3">5 m m</td></tr><tr><td>$L \leq 2.5$</td><td>$0.03 < W \leq 0.05$</td><td>3</td></tr><tr><td>$L \leq 2.5$</td><td>$0.05 < W \leq 0.1$</td><td>2</td></tr><tr><td>--</td><td>$W > 0.1$</td><td>Not allowed</td><td>---</td></tr></table>	Length	Width	Acceptable number	Mini. space	---	$W \leq 0.03$	Ignore	5 m m	$L \leq 2.5$	$0.03 < W \leq 0.05$	3	$L \leq 2.5$	$0.05 < W \leq 0.1$	2	--	$W > 0.1$	Not allowed	---
		Length	Width	Acceptable number	Mini. space															
		---	$W \leq 0.03$	Ignore	5 m m															
		$L \leq 2.5$	$0.03 < W \leq 0.05$	3																
		$L \leq 2.5$	$0.05 < W \leq 0.1$	2																
		--	$W > 0.1$	Not allowed	---															
		L: length(mm) W: width(mm)																		
																				
		3-2 Blemish: dot shapes of defect.																		
<table><tr><th>Dimension</th><th>Acceptable number</th><th>Mini. Space</th></tr><tr><td>$\Phi \leq 0.10$</td><td>Ignore</td><td>---</td></tr><tr><td>$0.10 < \Phi \leq 0.25$</td><td>2</td><td rowspan="2">10 m m</td></tr><tr><td>$0.25 < \Phi \leq 0.3$</td><td>1</td></tr><tr><td>$\Phi > 0.3$</td><td>0</td><td>---</td></tr></table>	Dimension	Acceptable number	Mini. Space	$\Phi \leq 0.10$	Ignore	---	$0.10 < \Phi \leq 0.25$	2	10 m m	$0.25 < \Phi \leq 0.3$	1	$\Phi > 0.3$	0	---						
Dimension	Acceptable number	Mini. Space																		
$\Phi \leq 0.10$	Ignore	---																		
$0.10 < \Phi \leq 0.25$	2	10 m m																		
$0.25 < \Phi \leq 0.3$	1																			
$\Phi > 0.3$	0	---																		
3-3 Polarizer Bubble																				
<table><tr><th>Dimension</th><th>Acceptable number</th><th>Mini. Space</th></tr><tr><td>$\Phi \leq 0.20$</td><td>Ignore</td><td>---</td></tr><tr><td>$0.20 < \Phi \leq 0.30$</td><td>2</td><td>15 m m</td></tr><tr><td>$\Phi > 0.30$</td><td>0</td><td>---</td></tr></table>	Dimension	Acceptable number	Mini. Space	$\Phi \leq 0.20$	Ignore	---	$0.20 < \Phi \leq 0.30$	2	15 m m	$\Phi > 0.30$	0	---								
Dimension	Acceptable number	Mini. Space																		
$\Phi \leq 0.20$	Ignore	---																		
$0.20 < \Phi \leq 0.30$	2	15 m m																		
$\Phi > 0.30$	0	---																		
Foreign Substances																				
																				
$\Phi = (a+b)/2$																				



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NO	Item	Acceptable specification				Judgment Criterion
3	Cosmetic Inspection	3-4 Scratch				
		● Sensate scratch not allowed.				
		● Impassive scratch as below.				
		Unit:mm				
		Length	Width	Acceptable number	Mini. space	
		-----	$W \leq 0.03$	Ignore	5 m m	
		$L \leq 2.5$	$0.03 < W \leq 0.05$	3		
		$L \leq 2.5$	$0.05 < W \leq 0.1$	2		
----	$0.1 < W$	Not allowed	---			
$L > 2.5$	----	Not allowed				
4	Package	4-1 Mixed product types 4-2 Shipping q'ty should be the same as “shipping notice form” q'ty. 4-3 Outer box can't broken.				N=0



7. RELIABILITY

Test Item	Test Condition
High Temperature Operation	60℃ for 24 hours
Low Temperature Operation	-10℃ for 24 hours
High Temperature Storage	70℃ for 24 hours
Low Temperature Storage	-20℃ for 24 hours
High Temperature Operation Humidity Operation	50℃, 90%RH for 48 hours
Thermal Shock	-10° storage one hour, rise to 60° within 15s, high temperature one hour, drop to 30° within 15s, circulate 10 repeatedly
Vibration Test (No Operation)	Frequency: 10~55Hz Amplitude:1.0mm Sweep Time: 11min Test Period: 6 Cycles for each direction of X, Y, Z
Static electricity test	Touch 6KV, air touch 8KV



8. HANDLING PRECAUTION

8.1 SAFETY

- (1) Do not swallow any liquid crystal, even if there is no proof that liquid crystal is poisonous.
- (2) If the LCD panel breaks, be careful not to get liquid crystal to touch your skin.
- (3) If skin is exposed to liquid crystal, wash the area thoroughly with alcohol or soap.

8.2 STORAGE CONDITIONS

- (1) Store the panel or module in a dark place where the temperature is $23\pm5^{\circ}\text{C}$ and the humidity is below $50\pm 20\%\text{RH}$.
- (2) Store in anti-static electricity container.
- (3) Store in clean environment, free from dust, active gas, and solvent.
- (4) Do not place the module near organics solvents or corrosive gases.
- (5) Do not crush, shake, or jolt the module.

8.3 HANDLING PRECAUTIONS

- (1) Avoid static electricity which can damage the CMOS LSI.
- (2) The polarizing plate of the display is very fragile. So, please handle it very carefully.
- (3) Do not give external shock.
- (4) Do not apply excessive force on the surface.
- (5) Do not wipe the polarizing plate with a dry cloth, as it may easily scratch the surface of plate.
- (6) Do not use ketonic solvent & Aromatic solvent, use with a soft cloth soaked with a cleaning naphtha solvent.
- (7) Do not operate it above the absolute maximum rating.
- (8) Do not remove the panel or frame from the module.

8.4 WARRANTY

The period is within twelve months since the date of shipping out under normal using and storage conditions.
