

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

SPECIFICATION FOR

Module:YS-T080002D V1.0

Designed by	R&D Checked by	Quality Department by	Approved by

Approval by Customer:

OK

NG, Problem survey

Approved By _____

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

Contents

List	Description	Page No.
	Cover	1
	Revision Record	2
	Contents	3
1	Technical parameters	4
2	Block Dimension	5
3	Outline Dimensions	6
4	Input terminal Pin Assignment Description	7
5	LCD Optical Characteristics	9
6	TFT Electrical Characteristics	12
7	Timing Characteristics	14
8	Inspection Standard	15
9	Reliability Test Conditions and Methods	20
10	Cautions and Handling Precautions	22
11	Packing Method	25

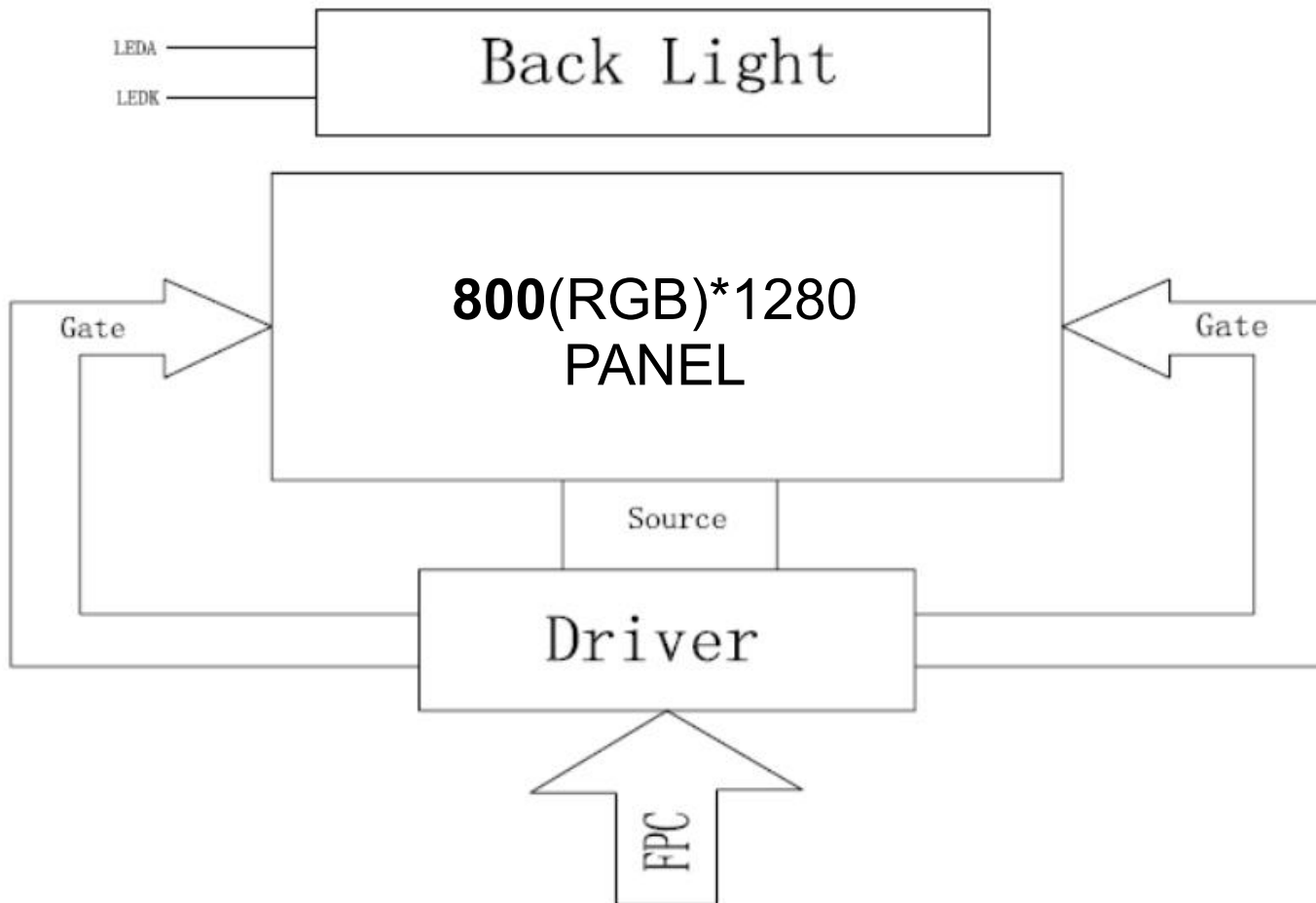
深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

1. Technical parameters

ITEM	STANDARD VALUES	UNITS
LCD type	8.0TFT	--
Dot arrangement	800(RGB)×1280	dots
Color filter array	RGB vertical stripe	--
Display mode	IPS/ Transmission / Normally Black	-
Eyes Viewing Direction	ALL	--
Driver IC	ILI9881C	--
Module size	114.66(W)×184.16(H)×2.6(T)(Exclude FPC)	mm
Active area	107.64(W)×127.22(H)	mm
Interface	MIPI4	--
Operating temperature	-20 ~ +60	°C
Storage temperature	-20 ~ +60	°C
Back Light	White LED*21	--

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

2. Block Dimension



4. Input terminal Pin Assignment Description

Pin No.	Symbol	Description
1-3	LED+	Power Supply for BL Anode
4	NC	No Connection
5-8	LED-	Power Supply for BL Cathode
9	GND	GND
10	GND	GND
11	D2P	MIPI-DSI Data differential signal input pins. (Data lane 2)
12	D2N	MIPI-DSI Data differential signal input pins. (Data lane 2)
13	GND	GND
14	D1P	MIPI-DSI Data differential signal input pins. (Data lane 1)
15	D1N	MIPI-DSI Data differential signal input pins. (Data lane 1)
16	GND	GND
17	DCLKP	MIPI-DSI Clock differential signal input pins.
18	DCLKN	MIPI-DSI Clock differential signal input pins.
19	GND	GND
20	D0P	MIPI-DSI Data differential signal input pins. (Data lane 0)
21	D0N	MIPI-DSI Data differential signal input pins. (Data lane 0)
22	GND	GND
23	D3P	MIPI-DSI Data differential signal input pins. (Data lane 3)
24	D3N	MIPI-DSI Data differential signal input pins. (Data lane 3)
25	GND	GND
26	LPTE	Tearing effect output pin to synchronize MCU to frame writing, activated by S/W command. When this pin is not activated, this pin is low. If not used, open this pin.
27	RESET	RESET PIN
28	GND	GND
29	VDDIO	IO Power Supply (1.8V)
30	VDD	Power Supply (2.8V)
31	VDD	Power Supply (2.8V)

5. LCD Optical Characteristics

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Viewing Angle range	Horizontal	Θ_3	CR > 10	-	80	-	Deg.	WV-Pol Note 1
		Θ_9		-	80	-	Deg.	
	Vertical	Θ_{12}		-	80	-	Deg.	
		Θ_6		-	80	-	Deg.	
Luminance Contrast ratio		CR	$\Theta = 0^\circ$	900	1200	-		Note 2
Cell Transmittance		Tr		-	4.8	-	%	W/O APF
White Chromaticity		x_w		TYP. - 0.03	TYP. + 0.03	0.306		Note 3 Base on C Light
		y_w				0.360		
Reproduction of color (C light)	Red	R_x	0.646					
		R_y	0.339					
	Green	G_x	0.271					
		G_y	0.581					
Blue	B_x	0.138						
	B_y	0.158						
Color Gamut (C light)			-	60%	-	%	NTSC	
Response Time (Rising + Falling)		T_{RT}	Ta= 25° C $\Theta = 0^\circ$	-	-	35	ms	Note 4

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

Note :

1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface .
2. Contrast measurements shall be made at viewing angle of $\Theta = 0$ and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state . Luminance Contrast Ratio (CR) is defined mathematically.

$$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$

3. Transmittance is the Value with Polarizer.
4. The color chromaticity coordinates specified in Table 6 shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Calculation is based on C light.
5. The electro-optical response time measurements shall be made as FIGURE 6 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr, and 90% to 10% is Td.

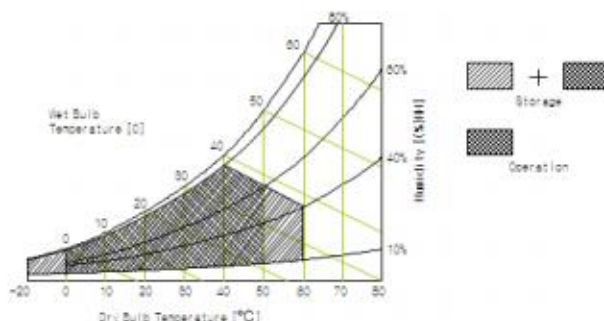
6. TFT Electrical Characteristics

6.1 Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Remarks
Maximum Temperature range	TOP	-20	+60	°C	Note 1-3
Storage Temperature	T _{ST}	-20	+60	°C	
Operating Ambient Humidity	Hop	10	90	%RH	
Storage Humidity	Hst	10	90	%RH	

Note :

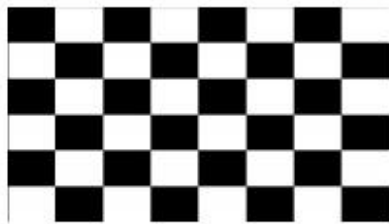
1. These range above is maximum value not the actual operating temperature . Actual Operating temperature is no more than 40°C and temperature refers to the Panel surface temperature ; Length of operation: No more than 8 hours per day, and no more than 4 hours of continuous use one time.
2. BOE is not responsible for product problems beyond the use conditions.
3. Temperature and relative humidity range are shown in the figure below; Wet bulb temperature should be 39 °C max. and no condensation of water.



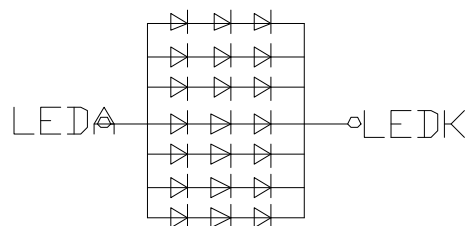
6.2 DC Characteristics

Parameter	Symbol	Values			Unit	Notes	
		Min.	Typ.	Max.			
Power Supply Voltage	VDD	2.6	2.8	3.3	V		
	VSP	5.2	5.5	5.8	V		
	VSN	-5.8	-5.5	-5.2	V		
Power Supply Current	IDD	-	20	25	mA	Note 1	
	ISP	-	20	35	mA		
	ISN	-	10	25	mA		
Power Consumption	PLCD	-	0.2	0.375	W		
CMOS Interface	Input Voltage	VIH	0.7VDD	-	VDD	V	
		VIL	0	-	0.3VDD	V	
	Output Voltage	VOH	0.8VDD	-	VDD	V	
		VOL	0	-	0.2VDD	V	

Notes : 1. The supply voltage is measured and specified at the interface connector of LCM.
The current draw and power consumption specified is for Frame rate $f_v=60\text{Hz}$
and Clock frequency = 201MHz. Test Pattern of power supply current
a) Typ : Mosaic 8 x 6 Pattern(L0/L255)



6.3 LED Backlight Characteristics



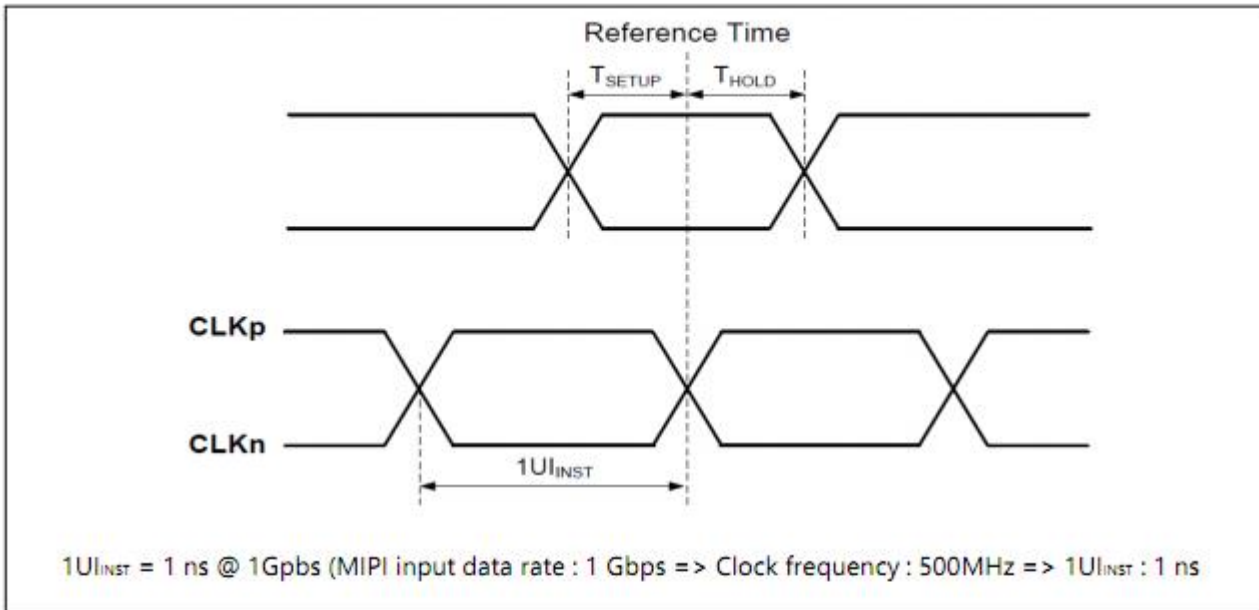
(CIRCUIT DIAGRAM)

Item	Symbol	MIN	TYP	MAX	UNIT	Test Condition
Supply Voltage	Vf	-	9.6	-	V	If=140mA
Supply Current	If	-	140	-	mA	-
Luminous Intensity for LCM	-	-	280	-	cd/m ²	If=140mA
Uniformity for LCM	-	-	60	-	%	If=140mA
Life Time	-	-	50000	-	Hr	If=140mA
Backlight Color	White					

7. Timing Characteristics

7.1 TFT Timing Characteristics

7.1.1 Display Timing Characteristics (MIPI system)

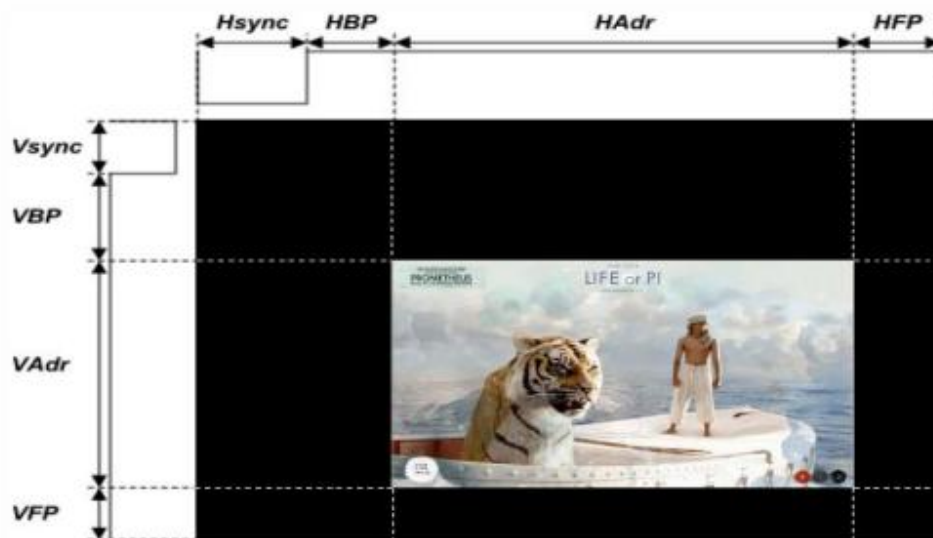


< Timing Diagram of MIPI Transmitter >

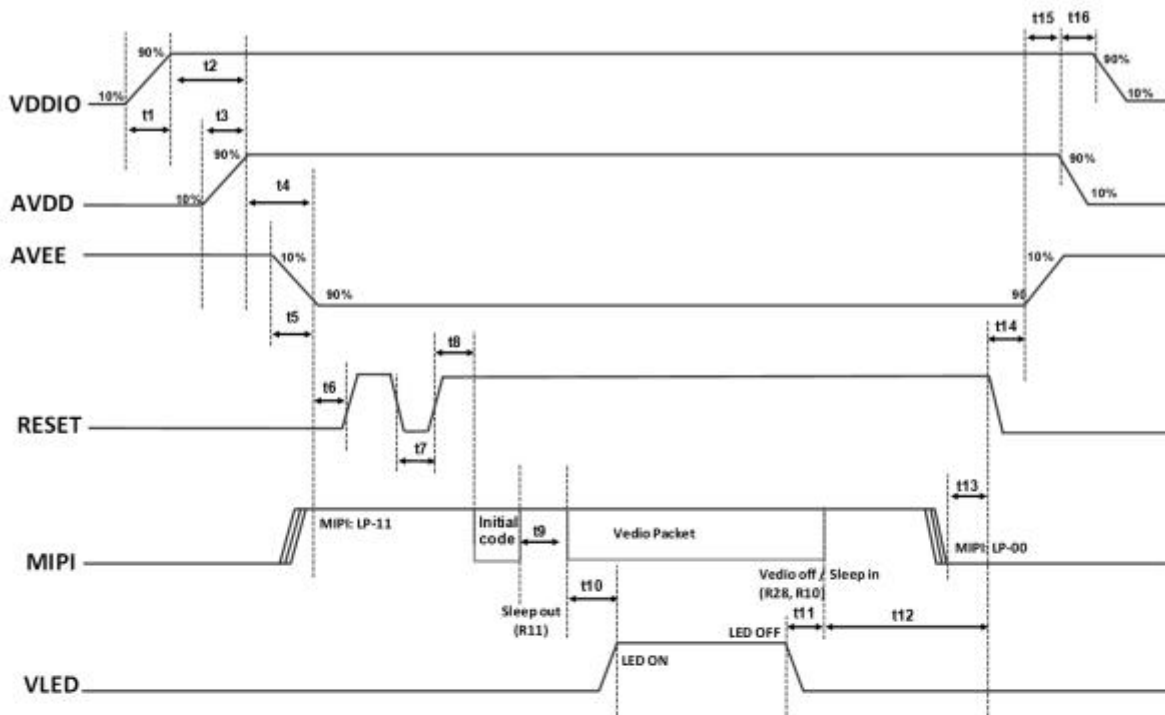
< Table7. AC Specification >

Description	Symbol	Condition	Min	Typ	Max	Unit
Data to Clock Setup Time	T_{SETUP}	-	0.15	-	-	U_{INST}
Clock to Data Hold Time	T_{HOLD}	-	0.15	-	-	U_{INST}

Item		Symbol	min	typ	max	UNIT	
LCD	Frame Rate	-	-	60	-	Hz	
	Pixels Rate	-	-	67.8	-	MHz	
Timing	DCLK	Frequency	fCLK	-	201	MHz	
		Period	Tclk	-	4.975	ns	
	Horizontal	Horizontal total time	tHP	-	872	-	t _{CLK}
		Horizontal Active time	tHadr	800			t _{CLK}
		Horizontal Pulse Width	tHsync	-	20	-	t _{CLK}
		Horizontal Back Porch	tHBP	-	20	-	t _{CLK}
		Horizontal Front Porch	tHFP	-	32	-	t _{CLK}
	Vertical	Vertical total time	tvp	-	1296	-	t _H
		Vertical Active time	tVadr	1280			t _H
		Vertical Pulse Width	tVsync	-	4	-	t _H
		Vertical Back Porch	tVBP	-	4	-	t _H
Vertical Front Porch		tVFP	-	8	-	t _H	
Bit Rate		TX SPD (Mbps)	-	402	-	Mbps	
Lane			-	4	-	Lane	

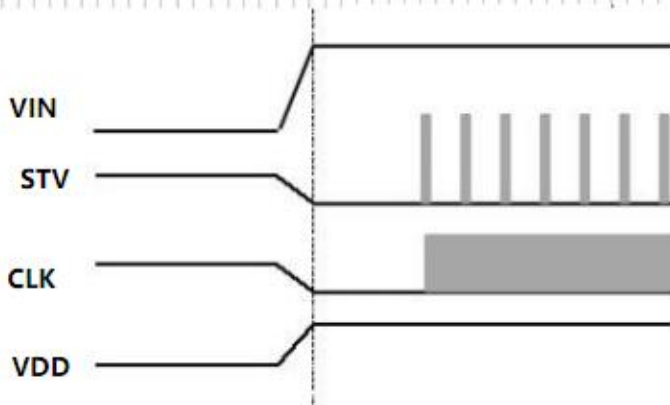
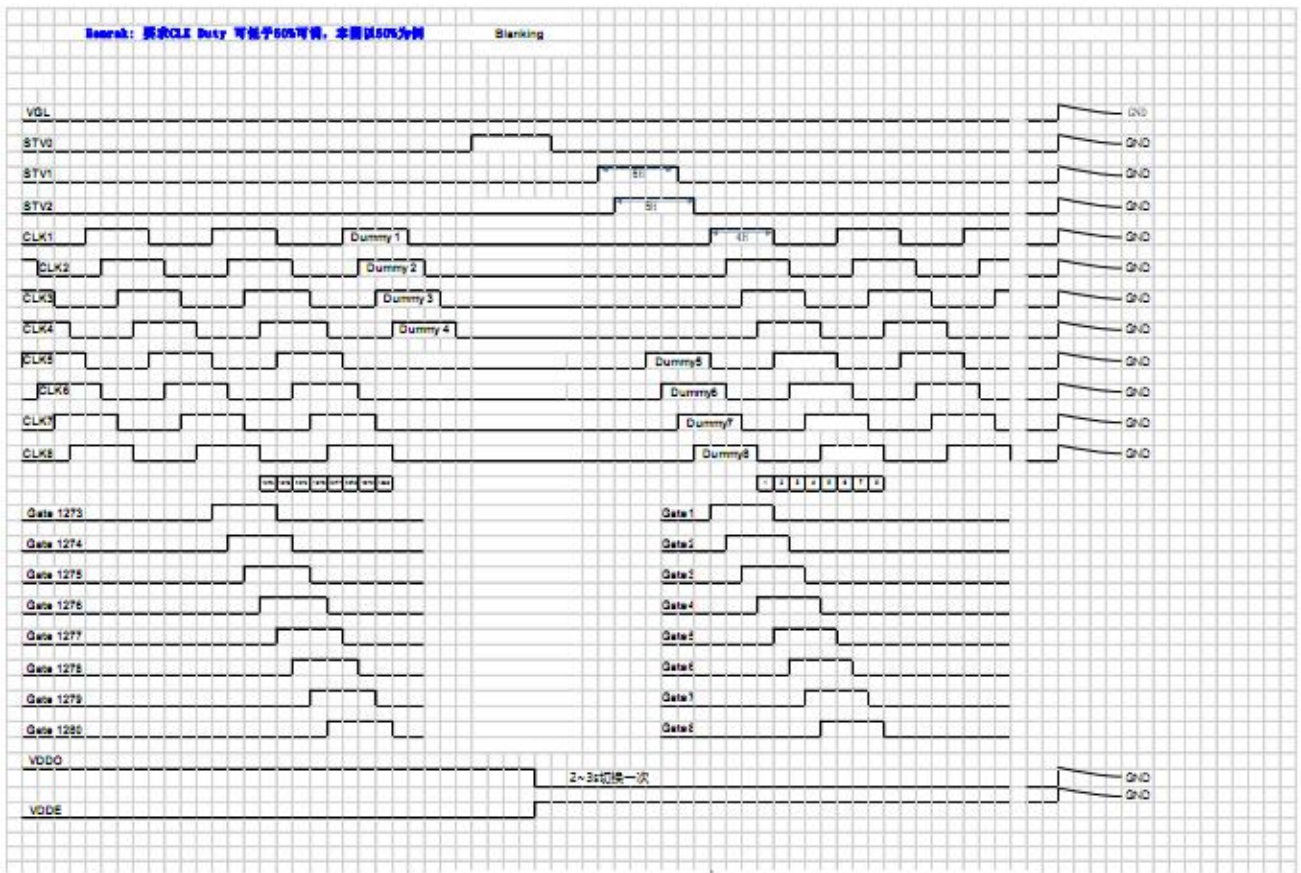


Color & Gray Scale		Input Data Signal																							
		Red Data								Green Data				Blue Data											
		R7	R6	R5	R4	R3	R2	R1	R0	G7	G6	G5	G4	G3	G2	G1	G0	B7	B6	B5	B4	B3	B2	B1	B0
Basic Colors	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	Green	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	Cyan	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Red	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Magenta	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gray Scale of Red	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	△	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Darker	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	△																								
	▽																								
	Brighter	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	▽	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray Scale of Green	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	△	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
	Darker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
	△																								
	▽																								
	Brighter	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	
	▽	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	
	Green	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Gray Scale of Blue	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	△	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	Darker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	△																								
	▽																								
	Brighter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	
	▽	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	
Gray Scale of White	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	△	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
	Darker	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	
	△																								
	▽																								
	Brighter	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	
	▽	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	



< Table10. Sequence Table >

Item	Time	Unit	Remark
t1	$0.2 < t1 < 20$	ms	
t2	$t2 \geq 5$	ms	
t3	$0.2 < t3 < 20$	ms	
t4	$t4 \geq 0$	ms	
t5	$0.2 < t5 < 20$	ms	
t6	$t6 \geq 5$	ms	
t7	$t7 > 10$	us	
t8	$t8 \geq 5$	ms	OTP Reload time
t9	$t9 \geq 120$	ms	
t10	$t10 \geq 100$	ms	Back light power on
t11	$t11 \geq 50$	ms	Back light power off
t12	$t12 \geq 120$	ms	Scan Black
t13	$0 \leq T13 \leq T12 - 120\text{ms}$	ms	
t14	$t14 \geq 0$	ms	
t15	$t15 \geq 0$	ms	
t16	$t16 \geq 0$	ms	



上电: VDD较STV1提前1H上电

Item	Setting	Adjustable Range	Remark	
VGH(V)	18	Tolerance ± 3	VGH-VGL \leq 30V	
VGL(V)	-12	Tolerance ± 3		
STV/CLK (V)	H Level	18	Tolerance ± 3	H short to VGH
	L Level	-12	Tolerance ± 3	L short to VGL
Dummy CLK	Front Porch	4	CLK5~CLK8	
	Back Porch	4	CLK1~CLK4(Stop before STV)	
Driver	Bilateral cr oss	Unilateral/Bilateral cross/Bilateral		
STV	H Level	5H	-	Overlap 1H
	Num	3ea	-	
CLK	Duty Cycle	45%	Tolerance $\pm 1\%$	
	Num	8ea	-	
GOE(pixel CLK)	238 pixel C LK=3.5us	0~1/2Htotal pixel CLK	From G(n-1) CLK fall to Dn start	
Scan direction	Forward	Forward : STVL→STVR,CLKL→CLK R→CLKBL→CLKBR	VDS=VGH,VSD= VGL	
		Backward : STVR→STVL,CLKBR→ CLKBL→CLKR→CLKL	VDS=VGL,VSD= VGH	

For more information pls check the IC datasheet!

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

8. Inspection Standard

8.1 Incoming Inspection and Standard:

The below incoming inspection are applied to the TFT LCM Modules supplied by ShenZhen Yes-Display International Technology CO.,LTD. The customers should inspect the LCM within 14 days after receiving the goods. The result of inspection should be notified to the Seller in the writing copy promptly, if the customer do not send them within 14 days, the seller has the right to judge as acceptance of goods. The inspection lot size is treated as the quantity per shipment and per model. The sampling plan shall be inspected under MIL-STD015E in Level II by single sampling. The acceptable quality level (AQL) are categorized as below grades:

CRITICAL= 0.4%, MAJOR= 0.65%, MINOR= 1.5%

8.2 Inspection condition and Warranty policy:

The delivered LCM should be stored properly, ideally under climate-controlled environment at 25 (±5) degree Celsius as well as 60% (±10) Relative Humidity. The LCM shall be inspected in the viewing angle of 45 degree from the four major angles (U/D/L/R) under the single fluorescent lamp of 20W (equal to 300 to 500 lux). For warranty, ShenZhen Yes-Display International Technology CO.,LTD. will provide 12 months of warranty period as standard, and provide the new replacement for the defective products which belong to the Seller's responsibility verified by the quality department.

8.3 Inspection Criteria:

8.3.1 Critical defect

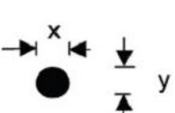
Item No.	Inspection content	Judgement
8.3.1.1	Functional defects	No display, abnormal display, short circuit, missing line, off-contrast and chromaticity, Touch Panel non-function
8.3.1.2	Model mixed	Other model mixed

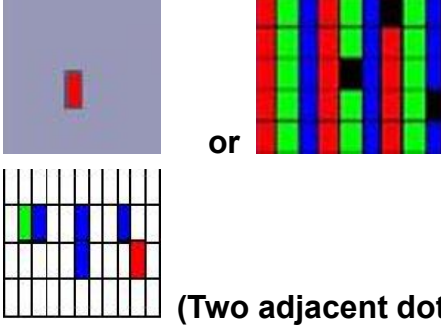
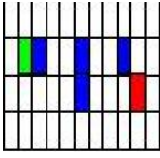
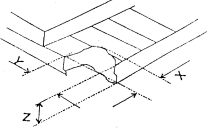
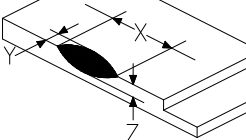
8.3.2 Major defect:

Item No.	Inspection content	Judgement
8.3.2.1	Product indication	Missing model no. and wrong model no. is indicated on the LCM.
8.3.2.2	Glass cracking	The LCD and touch panel glass crack or breakage

8.3.2.3	Missing component	The function component missing such as connector, cable, etc.
---------	-------------------	---

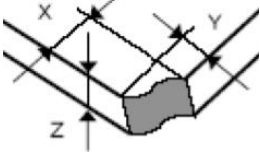
8.3.3 Minor defect (LCD) :

Item No.	Inspection content	Judgement												
8.3.3.1	Black/White spot Foreign particles Dust in the cell	$\phi = (x+y) / 2$  <table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$\Phi \leq 0.1$</td> <td>Ignore</td> </tr> <tr> <td>$0.1 < \Phi \leq 0.25$</td> <td>3 (Distance>5mm)</td> </tr> <tr> <td>$0.25 < \Phi$</td> <td>Not allowed</td> </tr> </tbody> </table>	Diameter (mm)	Acceptable Q'ty	$\Phi \leq 0.1$	Ignore	$0.1 < \Phi \leq 0.25$	3 (Distance>5mm)	$0.25 < \Phi$	Not allowed				
Diameter (mm)	Acceptable Q'ty													
$\Phi \leq 0.1$	Ignore													
$0.1 < \Phi \leq 0.25$	3 (Distance>5mm)													
$0.25 < \Phi$	Not allowed													
8.3.3.2	Linear defect Black/white line Black/white scratch	<table border="1"> <thead> <tr> <th>Length(mm)</th> <th>Width (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td></td> <td>$W \leq 0.03$</td> <td>Ignore</td> </tr> <tr> <td>$L \leq 5.0$</td> <td>$0.03 < W \leq 0.07$</td> <td>3</td> </tr> <tr> <td></td> <td>$0.07 < W$</td> <td>Follow 8.3.3.1</td> </tr> </tbody> </table>	Length(mm)	Width (mm)	Acceptable Q'ty		$W \leq 0.03$	Ignore	$L \leq 5.0$	$0.03 < W \leq 0.07$	3		$0.07 < W$	Follow 8.3.3.1
Length(mm)	Width (mm)	Acceptable Q'ty												
	$W \leq 0.03$	Ignore												
$L \leq 5.0$	$0.03 < W \leq 0.07$	3												
	$0.07 < W$	Follow 8.3.3.1												
8.3.3.3	Polarizer Bubbles Dent on polarizer	<table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$\Phi \leq 0.2$</td> <td>Ignore</td> </tr> <tr> <td>$0.2 < \Phi \leq 0.5$</td> <td>2 (Distance>5mm)</td> </tr> <tr> <td>$0.5 < \Phi$</td> <td>Not allowed</td> </tr> </tbody> </table>	Diameter (mm)	Acceptable Q'ty	$\Phi \leq 0.2$	Ignore	$0.2 < \Phi \leq 0.5$	2 (Distance>5mm)	$0.5 < \Phi$	Not allowed				
Diameter (mm)	Acceptable Q'ty													
$\Phi \leq 0.2$	Ignore													
$0.2 < \Phi \leq 0.5$	2 (Distance>5mm)													
$0.5 < \Phi$	Not allowed													

<p>8.3.3.4</p>	<p>Electrical Defect Dot</p>	<p>Bright dot and Dark dot definition:</p>  <p>or</p>  <p>(Two adjacent dot)</p> <p>Inspection pattern: black, white, red, green, and blue screen.</p> <table border="1" data-bbox="730 730 1441 913"> <thead> <tr> <th>Items</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>Bright dot</td> <td>$N \leq 4$ (Distance >5mm)</td> </tr> <tr> <td>Dark dot</td> <td>$N \leq 4$ (Distance >5mm)</td> </tr> </tbody> </table>	Items	Acceptable Q'ty	Bright dot	$N \leq 4$ (Distance >5mm)	Dark dot	$N \leq 4$ (Distance >5mm)
Items	Acceptable Q'ty							
Bright dot	$N \leq 4$ (Distance >5mm)							
Dark dot	$N \leq 4$ (Distance >5mm)							
<p>8.3.3.5</p>	<p>Glass Defect- Corner chipping</p>	 <table border="1" data-bbox="730 1104 1441 1377"> <thead> <tr> <th>Size(mm)</th> <th>Judgement</th> </tr> </thead> <tbody> <tr> <td> $X \leq 3\text{mm}$, $Y \leq S$, $Z \leq T$ (S= ITO length, T=Single glass thickness) </td> <td>Accept</td> </tr> </tbody> </table>	Size(mm)	Judgement	$X \leq 3\text{mm}$, $Y \leq S$, $Z \leq T$ (S= ITO length, T=Single glass thickness)	Accept		
Size(mm)	Judgement							
$X \leq 3\text{mm}$, $Y \leq S$, $Z \leq T$ (S= ITO length, T=Single glass thickness)	Accept							
<p>8.3.3.6</p>	<p>Glass Defect- Side fragment</p>	 <table border="1" data-bbox="730 1574 1441 1787"> <thead> <tr> <th>Size(mm)</th> <th>Judgement</th> </tr> </thead> <tbody> <tr> <td> $X \leq 2 \text{ mm}$, $Y \leq \text{border edge}$ $Z \leq T$ (T= single glass thickness) </td> <td>Accept</td> </tr> </tbody> </table>	Size(mm)	Judgement	$X \leq 2 \text{ mm}$, $Y \leq \text{border edge}$ $Z \leq T$ (T= single glass thickness)	Accept		
Size(mm)	Judgement							
$X \leq 2 \text{ mm}$, $Y \leq \text{border edge}$ $Z \leq T$ (T= single glass thickness)	Accept							

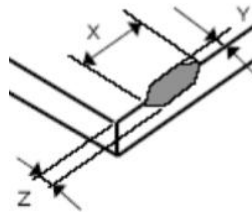
8.3.4 Minor defect (Touch Panel)

Item No.	Inspection content	Judgement
----------	--------------------	-----------

8.3.4.1	Scratch, dust, particles, foreign materials in "linear type"	<table border="1"> <thead> <tr> <th>Size (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$W \leq 0.05\text{mm}, L \leq 10\text{mm}$</td> <td>Ignore</td> </tr> <tr> <td>$0.05\text{mm} < W \leq 0.07\text{mm}, L \leq 10\text{mm}$</td> <td>3</td> </tr> <tr> <td>$W > 0.07\text{mm}$</td> <td>Reject</td> </tr> </tbody> </table>	Size (mm)	Acceptable Q'ty	$W \leq 0.05\text{mm}, L \leq 10\text{mm}$	Ignore	$0.05\text{mm} < W \leq 0.07\text{mm}, L \leq 10\text{mm}$	3	$W > 0.07\text{mm}$	Reject
Size (mm)	Acceptable Q'ty									
$W \leq 0.05\text{mm}, L \leq 10\text{mm}$	Ignore									
$0.05\text{mm} < W \leq 0.07\text{mm}, L \leq 10\text{mm}$	3									
$W > 0.07\text{mm}$	Reject									
8.3.4.2	Scratch, dust, particles, foreign materials in "round type"	<table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$\Phi \leq 0.25\text{mm}$</td> <td>Ignore</td> </tr> <tr> <td>$0.25\text{mm} < \Phi \leq 0.35\text{mm}$</td> <td>5</td> </tr> <tr> <td>$\Phi > 0.35\text{mm}$</td> <td>Reject</td> </tr> </tbody> </table>	Diameter (mm)	Acceptable Q'ty	$\Phi \leq 0.25\text{mm}$	Ignore	$0.25\text{mm} < \Phi \leq 0.35\text{mm}$	5	$\Phi > 0.35\text{mm}$	Reject
Diameter (mm)	Acceptable Q'ty									
$\Phi \leq 0.25\text{mm}$	Ignore									
$0.25\text{mm} < \Phi \leq 0.35\text{mm}$	5									
$\Phi > 0.35\text{mm}$	Reject									
8.3.4.3	Air bubbles	<table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$\Phi \leq 0.2\text{mm}$</td> <td>Ignore</td> </tr> <tr> <td>$0.2\text{mm} < \Phi \leq 0.5\text{mm}$</td> <td>3</td> </tr> <tr> <td>$\Phi > 0.5\text{mm}$</td> <td>Reject</td> </tr> </tbody> </table>	Diameter (mm)	Acceptable Q'ty	$\Phi \leq 0.2\text{mm}$	Ignore	$0.2\text{mm} < \Phi \leq 0.5\text{mm}$	3	$\Phi > 0.5\text{mm}$	Reject
Diameter (mm)	Acceptable Q'ty									
$\Phi \leq 0.2\text{mm}$	Ignore									
$0.2\text{mm} < \Phi \leq 0.5\text{mm}$	3									
$\Phi > 0.5\text{mm}$	Reject									
8.3.4.5	Scratch on printing area	<table border="1"> <thead> <tr> <th>Size (mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$W \leq 0.03\text{mm}, L \leq 5\text{mm}$</td> <td>Ignore</td> </tr> <tr> <td>$0.03\text{mm} < W \leq 0.05\text{mm}, L \leq 5\text{mm}$</td> <td>3</td> </tr> <tr> <td>$W > 0.05\text{mm}$ or $L > 5\text{mm}$</td> <td>Reject</td> </tr> </tbody> </table>	Size (mm)	Acceptable Q'ty	$W \leq 0.03\text{mm}, L \leq 5\text{mm}$	Ignore	$0.03\text{mm} < W \leq 0.05\text{mm}, L \leq 5\text{mm}$	3	$W > 0.05\text{mm}$ or $L > 5\text{mm}$	Reject
Size (mm)	Acceptable Q'ty									
$W \leq 0.03\text{mm}, L \leq 5\text{mm}$	Ignore									
$0.03\text{mm} < W \leq 0.05\text{mm}, L \leq 5\text{mm}$	3									
$W > 0.05\text{mm}$ or $L > 5\text{mm}$	Reject									
8.3.4.6	Corner chipping	 <table border="1"> <thead> <tr> <th>Size(mm)</th> <th>Judgement</th> </tr> </thead> <tbody> <tr> <td>$X \leq 2\text{mm}, Y \leq 2\text{mm}$ $Z < 1/2T$ (T= single glass thickness)</td> <td>Accept</td> </tr> </tbody> </table>	Size(mm)	Judgement	$X \leq 2\text{mm}, Y \leq 2\text{mm}$ $Z < 1/2T$ (T= single glass thickness)	Accept				
Size(mm)	Judgement									
$X \leq 2\text{mm}, Y \leq 2\text{mm}$ $Z < 1/2T$ (T= single glass thickness)	Accept									

8.3.4.7

Edge chipping



Size(mm)	Judgement
$X \leq 3 \text{ mm}, Y \leq 3 \text{ mm}$ $Z \leq 1/2 T$ (T= single glass thickness)	Accept

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

9. Reliability Test Conditions and Methods

9.1 Reliability Test Conditions and Methods:

NO.	TEST ITEMS	TEST CONDITION	INSPECTION AFTER TEST
①	High Temperature Storage	80°C±2°C×96Hours	Inspection after 2~4hours storage at room temperature, the samples should be free from defects: 1, Air bubble in the LCD. 2, Seal leak. 3, Non-display. 4, Missing segments. 5, Glass crack. 6, Current IDD is twice higher than initial value. 7, The surface shall be free from damage. 8, The electric characteristic requirements shall be satisfied.
②	Low Temperature Storage	-30°C±2°C×96Hours	
③	High Temperature Operating	70°C±2°C×96Hours	
④	Low Temperature Operating	-20°C±2°C×96Hours	
⑤	Temperature Cycle(Storage)	-20°C ↔ 25°C ↔ 70°C (30min) ← (5min) → (30min) 1cycle Total 10cycle	
⑥	Damp Proof Test (Storage)	50°C±5°C×90%RH×96Hours	
⑦	Vibration Test	Frequency:10Hz~55Hz~10Hz Amplitude:1.5MM X,Y,Z direction for total 3hours (packing condition test will be tested by a carton)	
⑧	Drooping Test	Drop to the ground from 1M height one time every side of carton. (packing condition test will be tested by a carton)	
⑨	ESD Test	Voltage:±8KV,R:330Ω,C:150PF,Air Mode,10times	

REMARK:

- 1, The Test samples should be applied to only one test item.
- 2, Sample side for each test item is 5~10pcs.
- 3, For Damp Proof Test, Pure water(Resistance > 10MΩ) should be used.
- 4, In case of malfunction defect caused by ESD damage, if it would be recovered to normal state after resetting, it would be judge as a good part.
- 5, EL evaluation should be accepted from reliability test with humidity and temperature: Some defects such as black spot/blemish can happen by natural chemical reaction with humidity and Fluorescence EL has.
- 6, Failure Judgment Criterion: Basic Specification Electrical Characteristic, Mechanical Characteristic, Optical Characteristic.

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

10. Cautions and Handling Precautions

10.1 Mounting method

The LCD panel of TFT module consists of two thin glass plates with polarizes which easily be damaged. And since the module in so constructed as to be fixed by utilizing fitting holes in the printed circuit board.

Extreme care should be needed when handling the LCD modules.

10.2 Caution of LCD handling and cleaning

When cleaning the display surface, Use soft cloth with solvent

[Recommended below] and wipe lightly

- Isopropyl alcohol
- Ethyl alcohol

Do not wipe the display surface with dry or hard materials that will damage the polarizer surface.

Do not use the following solvent:

- Water
- Aromatics

Do not wipe ITO pad area with the dry or hard materials that will damage the ITO patterns

Do not use the following solvent on the pad or prevent it from being contaminated:

- Soldering flux
- Chlorine (Cl) , Sulfur (S)

If goods were sent without being silicon coated on the pad, ITO patterns could be damaged due to the corrosion as time goes on.

If ITO corrosion happen by miss-handling or using some materials such as Chlorine (Cl), Sulfur (S) from customer, Responsibility is on customer.

10.3 Caution against static charge

The LCD module use C-MOS LSI drivers, so we recommended that you:

Connect any unused input terminal to power or ground, do not input any signals before power is turned on, and ground your body, work/assembly areas, and assembly equipment to protect against static electricity.

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

10.4 packing

- Module employs LCD elements and must be treated as such.
- Avoid intense shock and falls from a height.
- To prevent modules from degradation, do not operate or store them exposed direct to sunshine or high temperature/humidity

10.5 Caution for operation

- It is an indispensable condition to drive LCD's within the specified voltage limit since the higher voltage then the limit cause the shorter LCD life.
- An electrochemical reaction due to direct current causes LCD's undesirable deterioration, so that the use of direct current drive should be avoided.
- Response time will be extremely delayed at lower temperature then the operating temperature range and on the other hand at higher temperature LCD's how dark color in them. However those phenomena do not mean malfunction or out of order with LCD's, which will come back in the specified operation temperature.
- If the display area is pushed hard during operation, some font will be abnormally displayed but it resumes normal condition after turning off once.
- Slight dew depositing on terminals is a cause for electro-chemical reaction resulting in terminal open circuit.

Usage under the maximum operating temperature, 50%Rh or less is required.

10.6 storing

In the case of storing for a long period of time for instance, for years for the purpose or replacement use, the following ways are recommended.

- Storage in a polyethylene bag with the opening sealed so as not to enter fresh air outside in it. And with no desiccant.
- Placing in a dark place where neither exposure to direct sunlight nor light's keeping the storage temperature range.
- Storing with no touch on polarizer surface by the anything else.

[It is recommended to store them as they have been contained in the inner container at the time of delivery from us

10.7 Safety

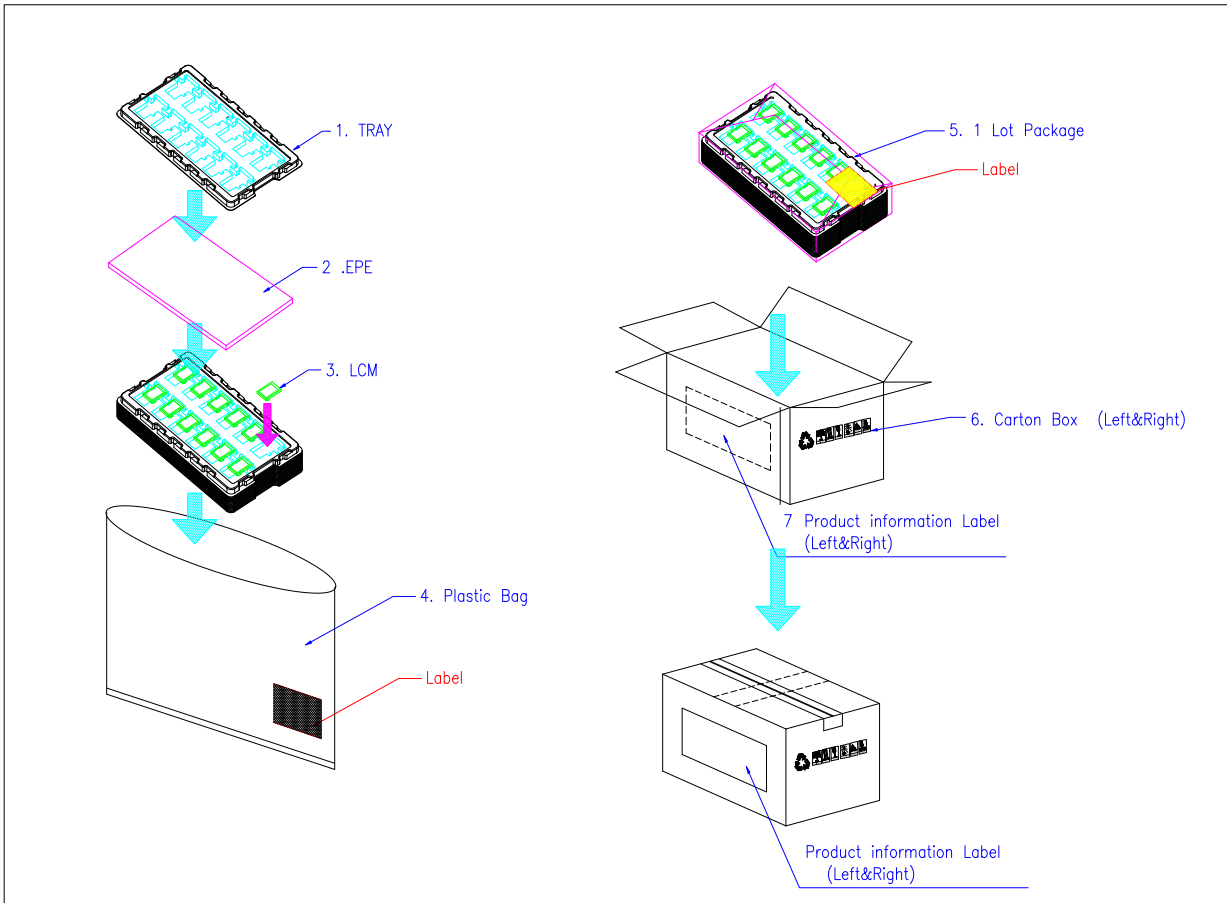
- It is recommendable to crash damaged or unnecessary LCD's into pieces and wash off liquid crystal by either of solvents such as acetone and ethanol, which should be burned up later.

深圳市亿显国际科技有限公司 ShenZhen Yes-Display International Technology CO.,LTD.			8.0 寸液晶显示屏 8.0 Inch LCD Display Screen	
File NO.		REV	A/01	http://www.yes-display.com

- When any liquid leaked out of a damaged glass cell comes in contact with your hands, please wash it off well with soap and water

11. Packing Method

11.1 Method



11.2 Packing Label

TBD