PRODUCT SPECIFICATION

4.0" TFT LCD MODULE
MODEL: YDP LCD I 400 MI

ROHS

< ◇ >   Preliminary Specification

< ◆ >   Finally Specification

CUSTOMER'S APPROVAL	
CUSTOMER :	
SIGNATURE:	DATE:

APPROVED BY	PM REVIEWED	PD REVIEWED	PREPARED BY
——	TFT W. S. L 20241206	——	TFT Funny 20241206

knitter-switch

Revision History

Revision	Date	Originator	Detail	Remarks
1.0	2024.12.06	ZFY	Initial Release	

Table of Contents

1. General Description

The specification is a transmissive type color active matrix liquid crystal display (LCD) which uses amorphous thin film transistor (TFT) as switching devices. This product is composed of a TFT-LCD panel, driver ICs and a backlight unit.

2. Module Parameter

Features	Details	Unit
Display Size(Diagonal)	4.0"	
LCD type	IPS TFT	
Display Mode	Transmissive /Normally Black	
Resolution	280 RGB x 1020	Pixels
View Direction	Full viewing	Best Image
Module Outline	34.05(H) x 105.98(V) x 2.5(T)　 (Note1)	mm
Active Area	25.2(H) x 98.43(V)	mm
Pixel Pitch	90(H) x 96.5(V)	um
Pixel Arrangement	RGB Vertical stripe	
Display Colors	16.7M	
Interface	MIPI	
Driver IC	AXS15231B	
With or without the touch panel	Without	
Operating Temperature	**-20～70**	℃
Storage Temperature	**-30～80**	℃
Weight	TBD	g

Note 1: Exclusive hooks, posts, FFC/FPC tail etc.

3. Absolute Maximum Ratings

GND=0V, Ta=25℃

Item	Symbol	Min.	Max.	Unit
Supply Voltage	VCI	-0.3	4.0	V
	VDDI	-0.3	4.0	
Storage temperature	T_{STG}	**-30**	**+80**	℃
Operating temperature	T_{OP}	**-20**	**+70**	℃

Note 1: If Ta below 50℃, the maximal humidity is 90%RH, if Ta over 50℃, absolute humidity should be less than 60%RH.

Note 2: The response time will be extremely slow when the operating temperature is around -10℃, and the back ground will become darker at high temperature operating.

4. DC Characteristics

Item	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage(analog)	VCI	3.0	3.3	3.6	V
I/O Supply Voltage(logic)	VDDI	1.65	1.8	3.6	V
Current Consumption All White	I_{VCI}	-	TBD	-	mA

5. Backlight Characteristic

5.1. Backlight Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	Ta=25 ºC, I_F=20mA/LED	13.5	**15**	16	V
Forward Current	I_F	Ta=25 ºC, V_F=3V/LED	-	**40**	-	mA
Power dissipation	P_D	-	-	**600**	-	mW
Uniformity	Avg	-	-	80	-	%
LED working life(25℃)			-	30000	-	Hrs
Drive method	**Constant current**					
LED Configuration	10 White LEDs (5 LEDs in one string and 2 groups in parallel)					

Note1: LED life time defined as follows: The final brightness is at 50% of original brightness.

The environmental conducted under ambient air flow, at Ta=25±2 ºC,60%RH±5%, I_F=20mA/LED.

### 5.2. Backlighting circuit
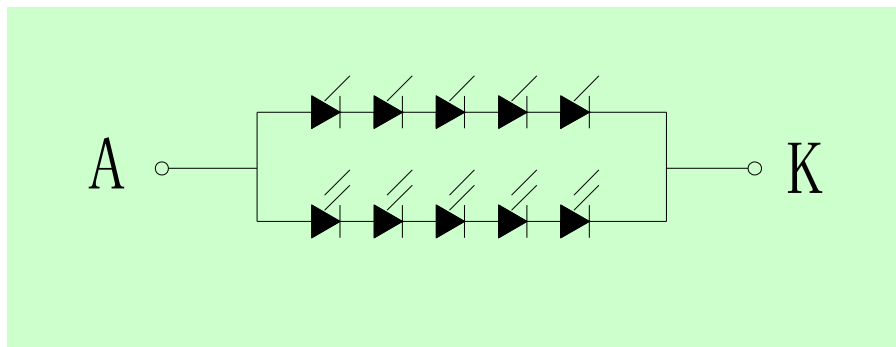
6. Optical Characteristics

6.1. Optical Characteristics

Ta=25ºC, VCI=3.3V

Item		Symbol	Condition	Specification			Unit
				Min.	Typ.	Max.	
Backlight On (Transmissive Mode) — Luminance on TFT(I_f =20mA/LED)		Lv	Normally viewing angle θx = φY =0º	**240**	**300**	-	cd/m²
Contrast ratio(See 6.3)		CR		(1000)	(1200)	-	
Response time (See 6.2)		T_R+T_F		-	30	35	ms
Chromaticity Transmissive (See6.5)	Red	X_R		-	**TBD**	-	
		Y_R		-	**TBD**	-	
	Green	X_G		-	**TBD**	-	
		Y_G		-	**TBD**	-	
	Blue	X_B		-	**TBD**	-	
		Y_B		-	**TBD**	-	
	White	X_W		-	**TBD**	-	
		Y_W		-	**TBD**	-	
Viewing Angle (See 6.4)	Horizontal	θx+	Center CR≥10	75	80	-	Deg.
		θx-		75	80	-	
	Vertical	φY+		75	80	-	
		φY-		75	80	-	
NTSC Ratio(Gamut)				-	70	-	%

6.2. Definition of Response Time

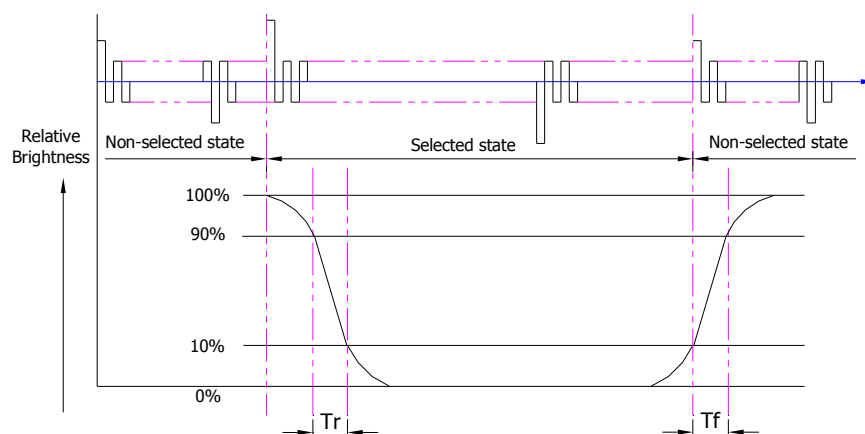### 6.2.1. Normally Black Type (Negative)
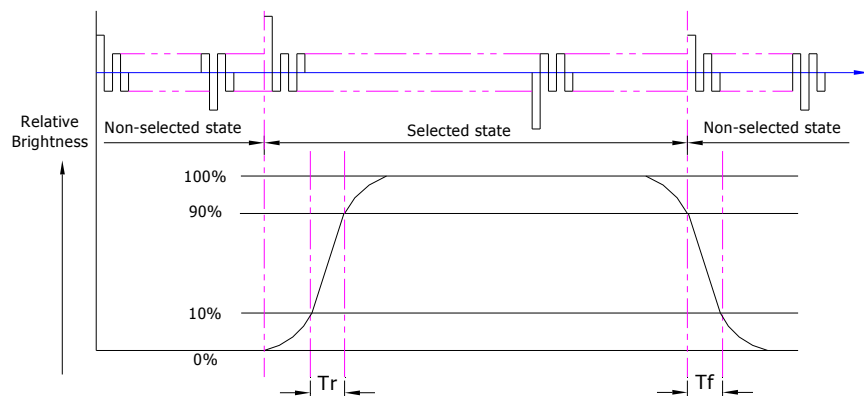
Tr is the time it takes to change form non-selected stage with relative luminance 10% to selected state with relative luminance 90%;

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

Note: Measuring machine: LCD-5100

6.2.2. Normally White Type (Positive)

Tr is the time it takes to change form non-selected stage 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%;

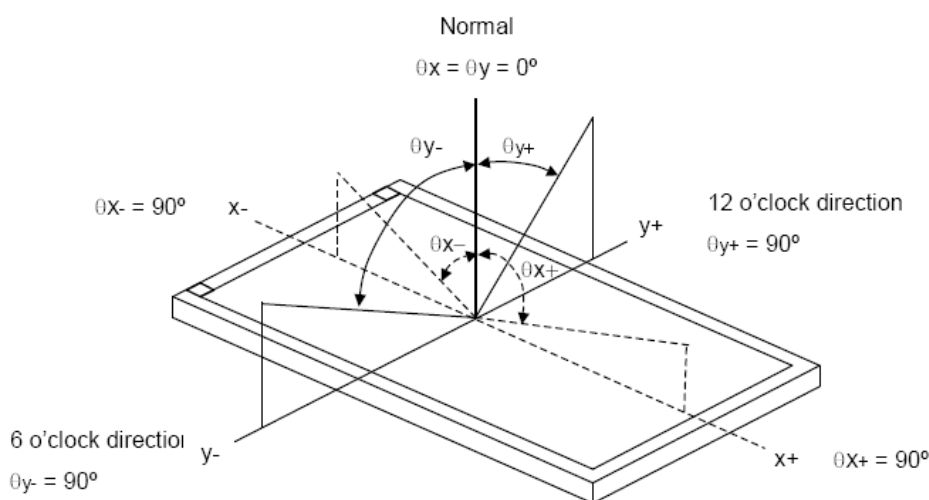Note: Measuring machine: LCD-5100 or EQUI

6.3. Definition of Contrast Ratio

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

Measuring Equipment	Eldim or Equivalent
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

6.4. Definition of Viewing Angles

Normal

$\theta x = \theta y = 0°$

$\theta x- = 90°$ x-

$\theta y-$ $\theta y+$

12 o'clock direction

$\theta y+ = 90°$

y+

$\theta x-$ $\theta x+$

6 o'clock direction   y-

$\theta y- = 90°$

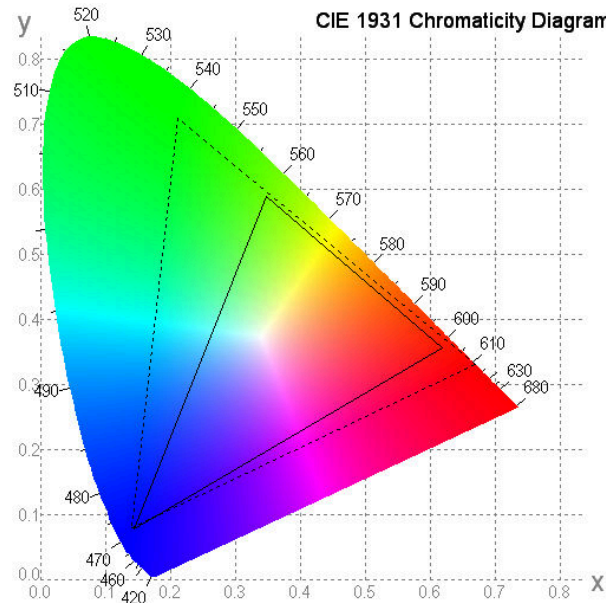x+ $\theta x+ = 90°$

Measuring machine: LCD-5100 or EQUI

6.5. 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)

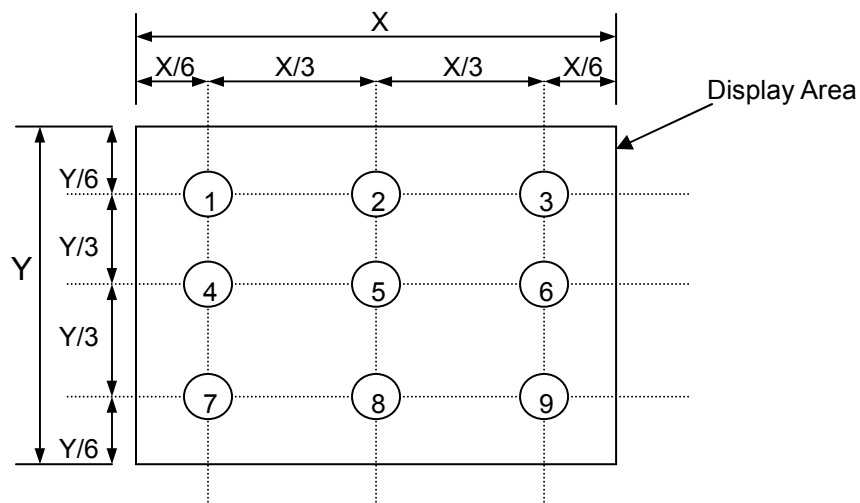### 6.6. Definition of Surface Luminance, Uniformity and Transmittance

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

6.6.1.   Surface Luminance: L_V = average (L_{P1}:L_{P9})

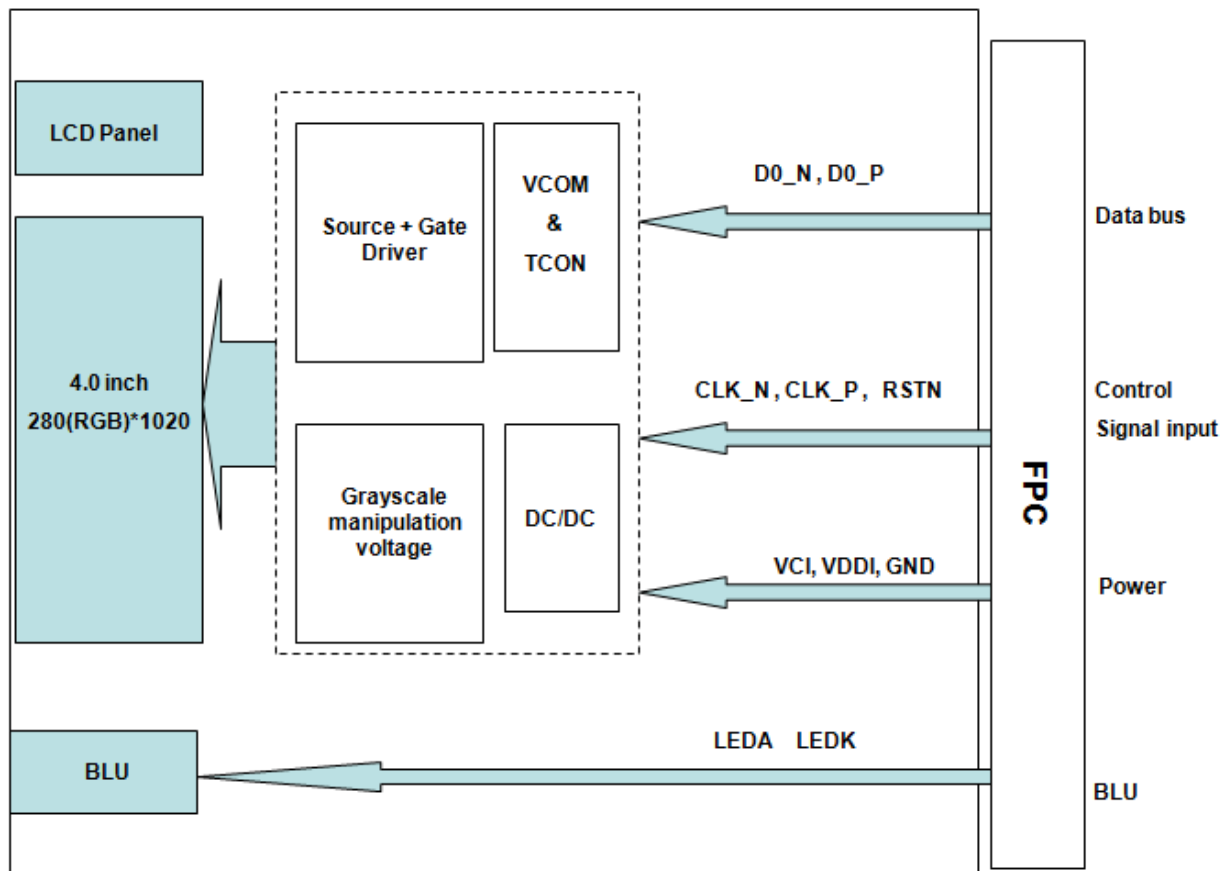6.6.2.   Uniformity = Minimal (L_{P1}:L_{P9}) / Maximal (L_{P1}:L_{P9}) * 100%

6.6.3.   Transmittance = L_V on LCD / L_V on Backlight * 100%

Note: Measuring machine: BM-7

7. Block Diagram and Power Supply

8. Interface Pins Definition

No.	Symbol	Function	Remark
1	LEDK	Led cathode	
2	LEDA	Led anode	
3	VPP	Supply for OTP program	
4	GND	Ground	
5	VCI	Power supply for analog	
6	GND	Ground	
7	VDDI	Power supply for logic	
8	GND	Ground	
9	D0_N	MIPI-DSI data Lane 0 negative-end input/output pin	
10	D0_P	MIPI-DSI data Lane 0 positive-end input/output pin	
11	GND	Ground	
12	CLK_N	MIPI-DSI clock Lane negative-end input pin	
13	CLK_P	MIPI-DSI clock Lane positive-end input pin	
14	GND	Ground	
15	TP_SCL	TP_SCL	
16	TP_SDA	TP_SDA	
17	GND	Ground	
18	TP_INT	TBD	
19	GND	Ground	
20	GPIO3	GPIO3	Out
21	LED_PWM	Backlight control setting pin. Output load 50pf	Out
22	TE	output tearing effect signal from IC to host	Out
23	GND	Ground	
24	RSTN	This signal will reset the device and must be applied to properly initialize the chip. Signal is active low. pull up to avoid floating.	
25	GND	Caution: TP and Driver share the same RSTN-PIN	

9. AC Characteristics

9.1. MIPI characteristic

1) High speed mode
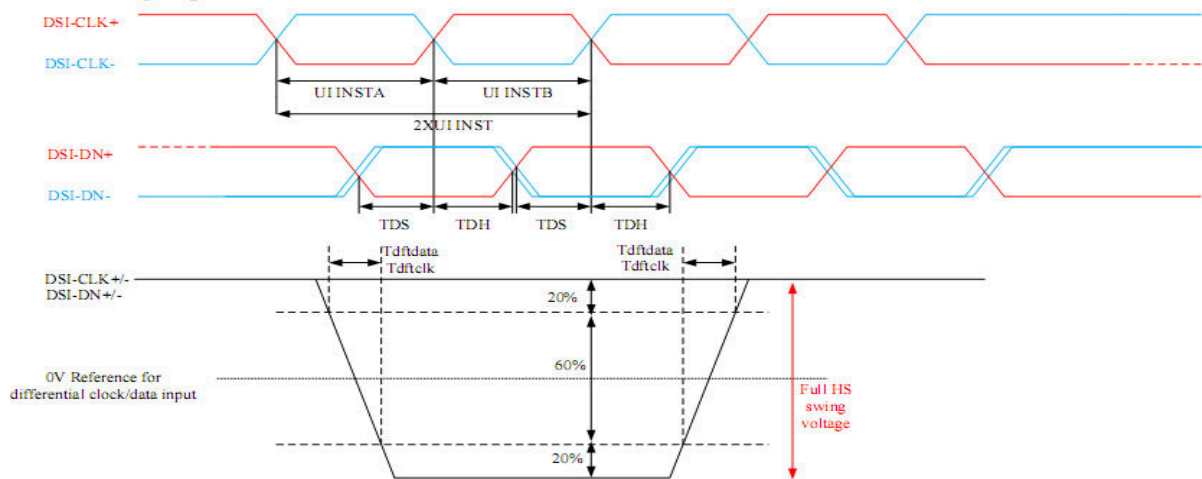
Parameter	Symbol	Parameter	Specification MIN	Specification TYP	Specification MAX	Unit	Description
DSI-CLK+/-	$2xUI_{INSTA}$	Double UI instantaneous	4		25	ns	
DSI-CLK+/-	UI_{INSTA} UI_{INSTB}	UI instantaneous halfs	2		12.5	ns	$UI=UI_{INSTA}=UI_{INSTB}$
DSI-D0+/-	T_{DS}	Data to clock setup time	0.15	-		UI	
DSI-D0+/-	T_{DH}	Data to clock hold time	0.15	-		UI	

2) Low power mode

Parameter	Symbol	Parameter	Specification MIN	Specification TYP	Specification MAX	Unit
		Low Power Mode				
DSI-D0+/-	T_{LPXM}	Length of LP-00, LP-01, LP-10 or LP-11 periods MPU Display Module	50	-	-	ns
DSI-D0+/-	T_{LPXD}	Length of LP-00, LP-01, LP-10 or LP-11 periods Display Module MPU	58	-	-	ns
DSI-D0+/-	$T_{TA-SURED}$	Time-out before the MPU start driving	T_{LPXD}	-	$2XT_{LPXD}$	ns
DSI-D0+/-	$T_{TA-GETD}$	Time to driver LP-00 by display module	$5XT_{LPXD}$	-	-	ns
DSI-D0+/-	T_{TA-GOD}	Time to driver LP-00 after turnaround request - MPU	$4XT_{LPXD}$	-	-	ns
DSI-D0+/-	Ratio T_{LPX}	Ratio of T_{LPXM} / T_{LPXD} between MCU and display module	2/3	-	3/2	
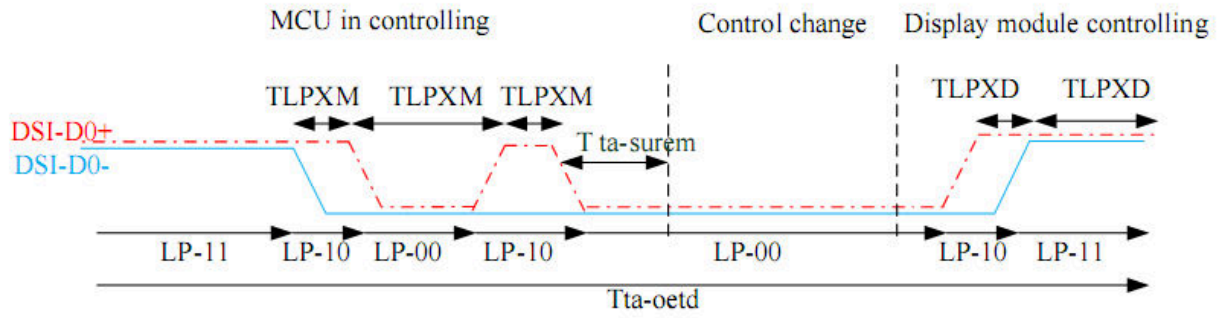
Figure: BTA from the MCU to the Display Module
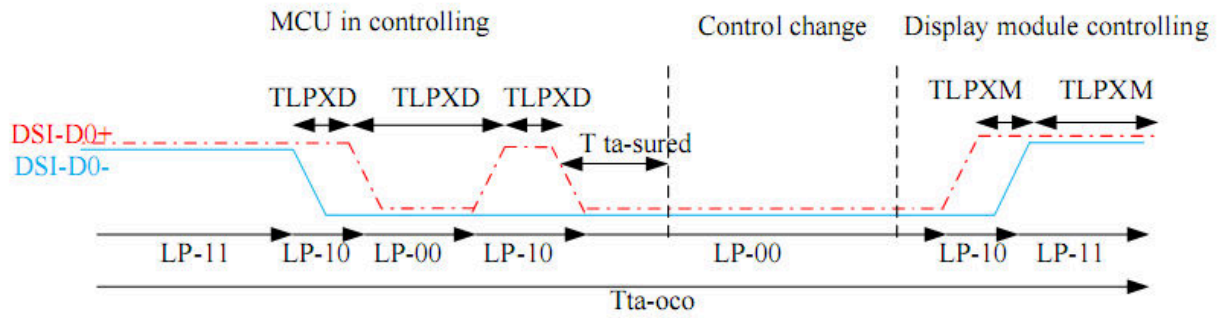
3) Bursts

|			MIN	TYP	MAX	
High Speed Data Transmission Bursts						
DSI-Dn+/-	T_{LPX}	Length of any low-power state period	50	-	-	ns
DSI-Dn+/-	$T_{HS-PREPARE}$	Time to driver LP-00 to prepare for HS transmission	40ns + 4UI	-	85ns + 6UI	ns
DSI-Dn+/-	$T_{HS-PREPARE} + T_{HS-ZERO}$	$T_{HS-PREPARE}$ + time to driver HS-0 before the sync sequence	145ns + 10UI	-	-	ns
DSI-Dn+/-	$T_{D-TERM-EN}$	Time to enable Data Lanereceiver line termination measured from when Dn crosses $V_{IL(max)}$	Time for Dn to reach $V_{TERM-EN}$	-	35ns + 4UI	ns
DSI-Dn+/-	$T_{HS-SKIP}$	Time-out at RX to ignore transition period of EoT	40	-	55ns + 4UI	ns
DSI-Dn+/-	$T_{HS-TRAIL}$	Time to driver flipped differential state after last payload data bit of a HS transmission burst	max (8UI, 60ns+4UI)	-	-	ns
DSI-Dn+/-	$T_{HS-EXIT}$	Time to driver LP-11 after HS burst	100	-	-	ns
DSI-Dn+/-	T_{EoT}	Time from start of $T_{HS-TRAIL}$ Period to start of LP-11 state	-	-	105ns +12UI	ns
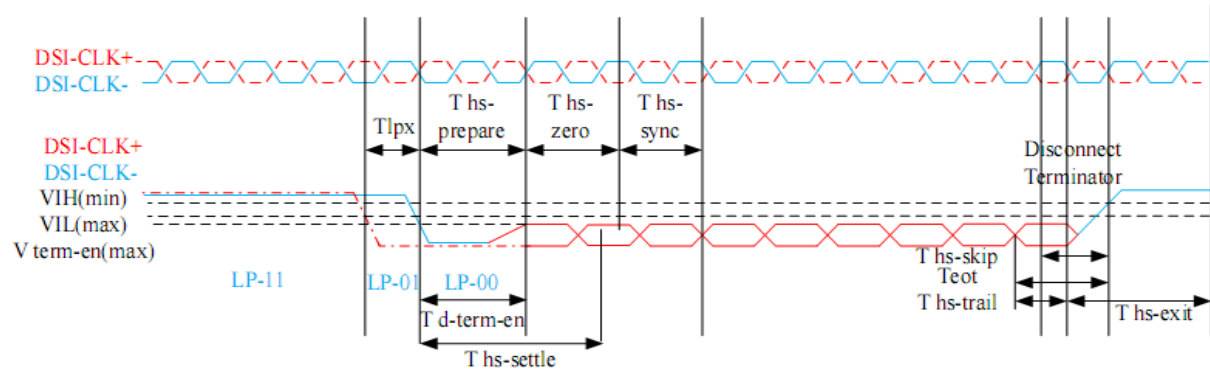
Figure: High Speed Data Transmission Bursts
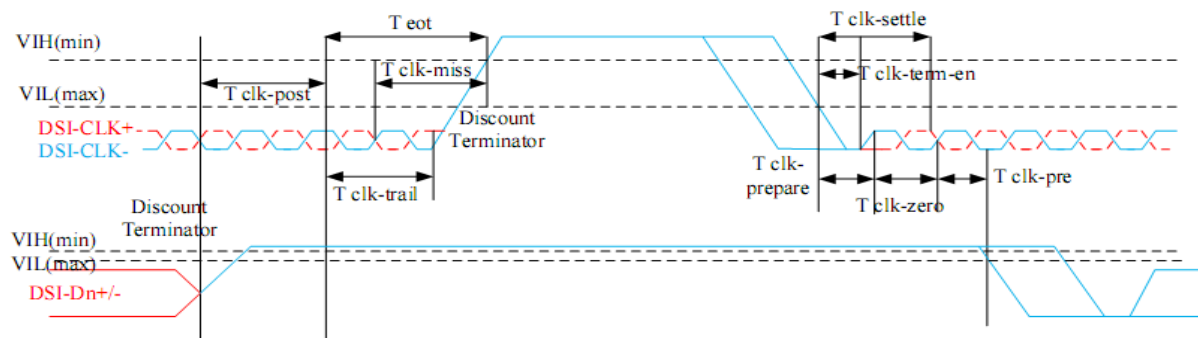
Figure: Switching the clock Lane between clock Transmission and Low Power Mode

Parameter	Symbol	Parameter	Specification			Unit
			MIN	TYP	MAX	
Switching the clock Lane between clock Transmission and Low Power Mode						
DSI-CLK+/-	T$_{CLK-POST}$	Time that the transmitter shall continue sending HS clock after the last associated Data Lanehas transitioned to LP mode	60ns + 52UI	-	-	ns
DSI-CLK+/-	T$_{CLK-PRE}$	Time that the HS clock shall be drivern prior to any associated Data Lanebeginning the transition from LP to HS mode	8	-	-	UI
DSI-CLK+/-	T$_{CLK-PREPARE}$	Time to driver LP-00 to prepare for HS clock transmission	38	-	95	ns
DSI-CLK+/-	T$_{CLK-TERM-EN}$	Time to enable Clock Lanereceiver line termination measured from when Dn crosses V$_{IL(max)}$	Time for Dn to reach V$_{TERM-EN}$	-	38	ns
DSI-CLK+/-	T$_{CLK-PREPARE}$ +T$_{CLK-ZERO}$	T$_{CLK-PREPARE}$+ time for lead HS-0 driver period before starting Clock	300	-	-	ns
DSI-CLK+/-	T$_{CLK-TRAIL}$	Time to driver HS differential state after last payload clock bit of a HS transmission burst	60	-	-	ns
DSI-CLK+/-	T$_{EoT}$	Time from start of T$_{CLK-TRAIL}$ periodto start of LP-11 state	-	-	105ns + 12UI	ns

9.2. Power on/off
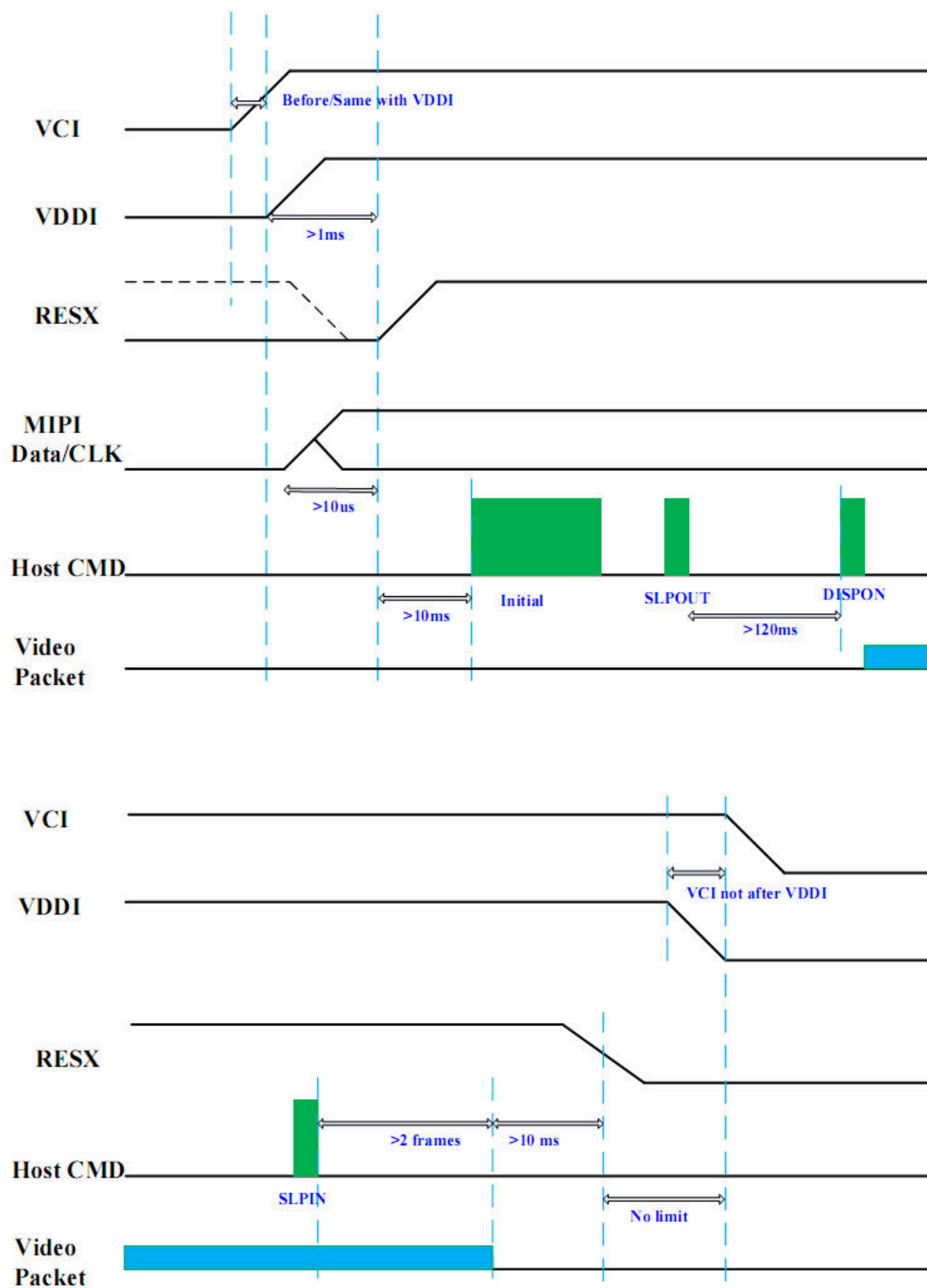
10. Quality Assurance

10.1. Purpose

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

10.2. Standard for Quality Test

10.2.1. Sampling Plan:

GB2828.1-2012

Single sampling, general inspection level II

10.2.2. Sampling Criteria:

Visual inspection: AQL 1.5

Electrical functional: AQL 0.65.

10.2.3. Reliability Test:

Detailed requirement refer to Reliability Test Specification.

10.3. Nonconforming Analysis & Disposition

10.3.1. Nonconforming analysis:

10.3.1.1. Customer should provide overall information of non-conforming sample for their complaints.

10.3.1.2. After receipt of detailed information from customer, the analysis of nonconforming parts usually should be finished in one week.

10.3.1.3. If can not finish the analysis on time, customer will be notified with the progress status.

10.3.2. Disposition of nonconforming:

10.3.2.1. Non-conforming product over PPM level will be replaced.

10.3.2.2. The cause of non-conformance will be analyzed. Corrective action will be discussed and implemented.

10.4. Agreement Items

Shall negotiate with customer if the following situation occurs:

10.4.1. There is any discrepancy in standard of quality assurance.

10.4.2. Additional requirement to be added in product specification.

10.4.3. Any other special problem.

10.5. Standard of the Product Visual Inspection

10.5.1. Appearance inspection:

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

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

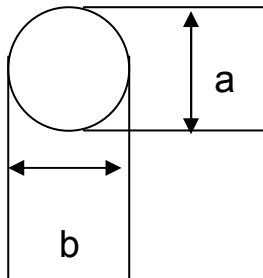10.5.1.3. Definition of area: A Zone: Active Area, B Zone: Viewing Area,
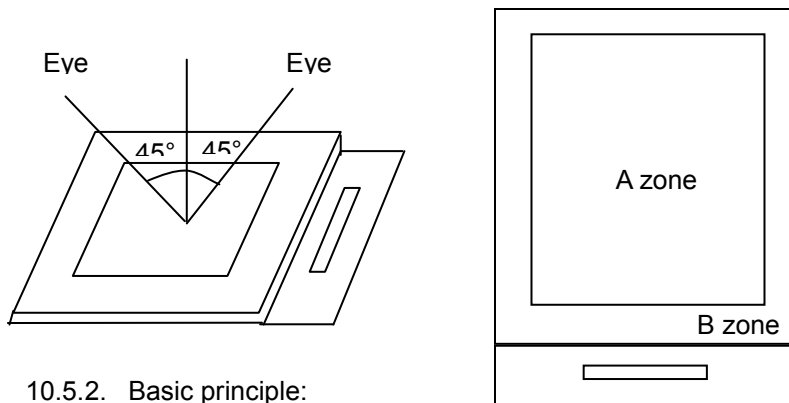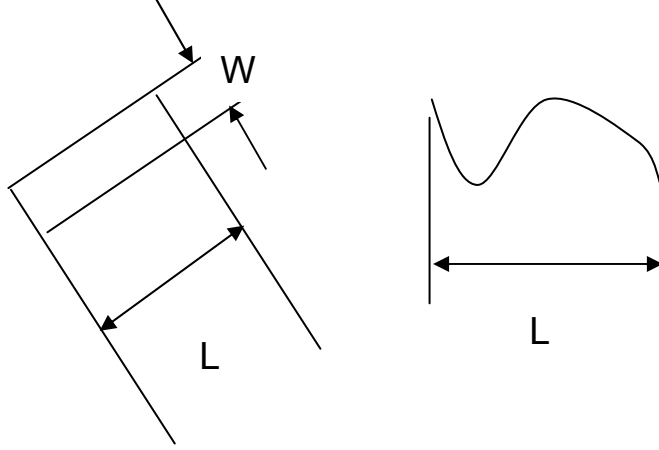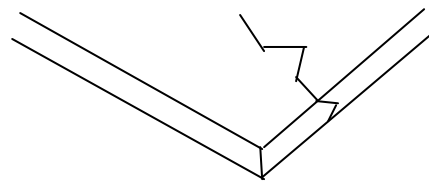

10.5.2. Basic principle:

10.5.2.1. A set of sample to indicate the limit of acceptable quality level must be discussed by both us and customer when there is any dispute happened.
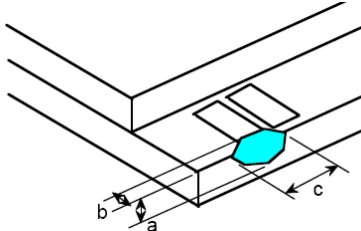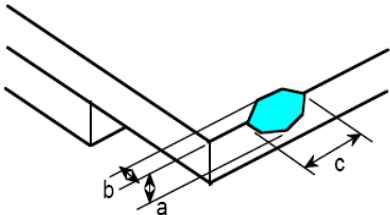
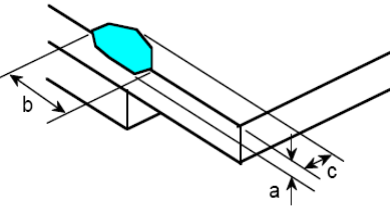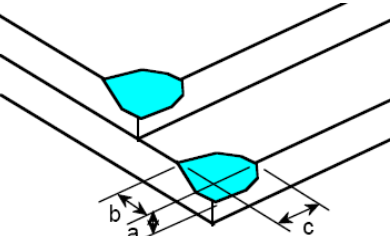10.5.2.2. New item must be added on time when it is necessary.
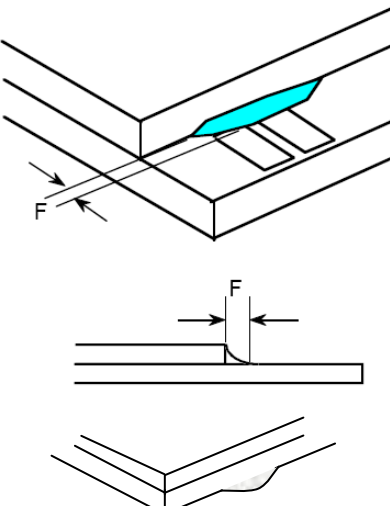
10.6. Inspection Specification

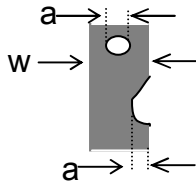| No.	Item	Criteria (Unit: mm)		
01	Black / White spot Foreign material (Round type) Pinholes Stain Particles inside cell. (Minor defect)	 $\varphi = (a + b) /2$ Distance between 2 defects should more than 3mm apart.		

Size \ Area	Acc. Qty
$\varphi \leqslant 0.10$	Ignore
$0.10 < \varphi \leqslant 0.15$	2
$0.15 < \varphi \leqslant 0.25$	1
$0.25 < \varphi$	0
Total	2 no include $\varphi \leqslant 0.10$

No.	Item	Criteria

	Display Area	Total	
Bright dot	0	0	Note1
Dark dot	N≤2	N≤2	
Total dot	N≤2	N≤2	
Mura	Not visible through 5% ND filters.		Note2

Electrical Defect (Minor defect) — No. 02

Remark:
1. Bright dot caused by scratch and foreign object accords to item 1.

03	Black and White line Scratch Foreign material (Line type) (Minor defect)	W L L		

Length	Width	Acc. Qty
/	W $\leqq$ 0.03	Ignore
L $\leqq$ 2.5	0.03 $<$ W $\leqq$ 0.05	3
L $\leqq$ 2.5	0.05 $<$ W $\leqq$ 0.10	2
/	0.1 $<$ W	0
Total		3

Distance between 2 defects should more than 3mm apart. Scratches not viewable through the back of the display are acceptable.

04	Glass Crack (Minor defect)

Crack is potential to enlarge, any type is not allowed.

05	Glass Chipping Pad Area: (Minor defect)	

Length and Width	Acc. Qty
c > 3.0, b< 1.0	1
c< 3.0, b< 1.0	3
a<Glass Thickness	

06	Glass Chipping Rear of Pad Area: (Minor defect)	Length and Width	Acc. Qty
		c > 3.0, b< 1.0	1
		c< 3.0, b< 1.0	2
		c< 3.0, b< 0.5	4
		a<Glass Thickness	

07	Glass Chipping Except Pad Area: (Minor defect)	Length and Width	Acc. Qty
		c > 3.0, b< 1.0	1
		c< 3.0, b< 1.0	2
		c< 3.0, b< 0.5	4
		a<Glass Thickness	

08	Glass Corner Chipping: (Minor defect)	Length and Width	Acc. Qty
		c < 3.0, b< 3.0	Ignore
		a<Glass Thickness	

Glass Burr:
(Minor defect)

Length	Acc. Qty
F < 1.0	Ignore

Glass burr don't affect assemble and module dimension.

10	FPC Defect: (Minor defect) a→ ◌ w → ○ a→	10.1 Dent, pinhole width a<w/3. (w: circuitry width.) 10.2 Open circuit is unacceptable. 10.3 No oxidation, contamination and distortion.
11	Bubble on Polarizer (Minor defect)	<table><tr><td>Diameter</td><td>Acc. Qty</td></tr><tr><td>φ≤0.20</td><td>Ignore</td></tr><tr><td>0.20 <φ≤0.30</td><td>4</td></tr><tr><td>0.30 <φ≤0.50</td><td>1</td></tr><tr><td>0.50 < φ</td><td>None</td></tr></table>
12	Dent on Polarizer (Minor defect)	<table><tr><td>Diameter</td><td>Acc. Qty</td></tr><tr><td>φ≤0.20</td><td>Ignore</td></tr><tr><td>0.20 <φ≤0.30</td><td>4</td></tr><tr><td>0.30 <φ≤0.50</td><td>1</td></tr><tr><td>0.50 < φ</td><td>None</td></tr></table>
13	Bezel	13.1 No rust, distortion on the Bezel. 13.2 No visible fingerprints, stains or other contamination.
14	PCB	14.1 No distortion or contamination on PCB terminals. 14.2 All components on PCB must same as documented on the BOM/component layout. 14.3 Follow IPC-A-600F.
15	Soldering	Follow IPC-A-610C standard
16	Electrical Defect (Major defect)	The below defects must be rejected. 16.1 Missing vertical / horizontal segment, 16.2 Abnormal Display. 16.3 No function or no display. 16.4 Current exceeds product specifications. 16.5 LCD viewing angle defect. 16.6 No Backlight. 16.7 Dark Backlight. 16.8 Touch Panel no function.

Remark: LCD Panel Broken shall be rejected. Defect out of LCD viewing area is acceptable.

10.7. Classification of Defects

    10.7.1. Visual defects (Except no / wrong label) are treated as minor defect and electrical defect is major.

    10.7.2. Two minor defects are equal to one major in lot sampling inspection.

10.8. Identification/marking criteria

    Any unit with illegible / wrong /double or no marking/ label shall be rejected.

10.9. Packaging

    10.9.1. There should be no damage of the outside carton box, each packaging box should have one identical label.

    10.9.2. Modules inside package box should have compliant mark.

    10.9.3. All direct package materials shall offer ESD protection.

Note1: Bright dot is defined as the defective area of the dot is larger than 50% of one sub-pixel area.
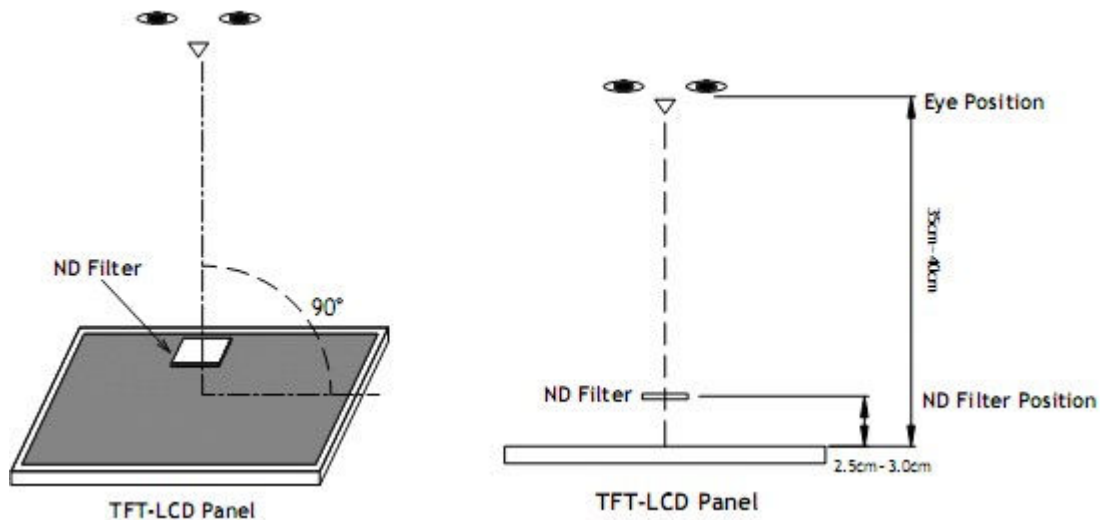
Bright dot: The bright dot size defect at black display pattern. It can be recognized by 2% transparency of filter when the distance between eyes and panel is 350mm±50mm.

Dark dot: Cyan, Magenta or Yellow dot size defect at white display pattern. It can be recognized by 5% transparency of filter when the distance between eyes and panel is 350mm±50mm.

Note2: Mura on display which appears darker / brighter against background brightness on parts of display area.

11. Reliability Specification

No	Item	Condition	Quantity	Criteria
1	High Temperature Operating	**70℃, 96Hrs**	2	GB/T2423.2 -2008
2	Low Temperature Operating	**-20℃, 96Hrs**	2	GB/T2423.1 -2008
3	High Humidity Storage	**50℃, 90%RH, 96Hrs**	2	GB/T2423.3 -2016
4	High Temperature Storage	**80℃, 96Hrs**	2	GB/T2423.2 -2008
5	Low Temperature Storage	**-30℃, 96Hrs**	2	GB/T2423.1 -2008
6	Thermal Cycling Test Storage	-20℃, 60min~ 70℃, 60min, 20 cycles.	2	GB/T2423.22 -2012
7	Packing vibration	Frequency range:10Hz~50Hz Acceleration of gravity:5G X, Y, Z 30 min for each direction.	-	GB/T5170.14 -2009
8	Electrical Static Discharge	Air:±4KV 150pF/330Ω 5 times	2	GB/T17626.2 -2018
		Contact:±2KV 150pF/330Ω 5 times		
9	Drop Test (Packaged)	Height:80 cm,1 corner, 3 edges, 6 surfaces.	-	GB/T2423.7- 2018

Note1.   No defection cosmetic and operational function allowable.

Note2.   Total current Consumption should be below double of initial value

12. Precautions and Warranty

12.1. Safety

12.1.1.   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.

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

12.2. Handling

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

12.2.2.   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.

12.3. Storage

12.3.1.   Do not store the LCD module beyond the specified temperature ranges.

12.3.2.   Strong light exposure causes degradation of polarizer and color filter.

12.4. Metal Pin (Apply to Products with Metal Pins)

12.4.1.   Pins of LCD and Backlight

　　12.4.1.1. Solder tip can touch and press on the tip of Pin LEAD during the soldering

　　12.4.1.2. Recommended Soldering Conditions

　　　　Solder Type: Sn96.3~94-Ag3.3~4.3-Cu0.4~1.1

　　　　Maximum Solder Temperature: 370℃

　　　　Maximum Solder Time: 3s at the maximum temperature

　　　　Recommended Soldering Temp: 350±20℃

　　　　Typical Soldering Time: ≤3s

　　12.4.1.3. Solder Wetting

Solder　　Pin Lead　　　　Solder　　　Pin Lead

Recommended　　　　　Not Recommended
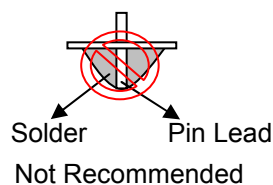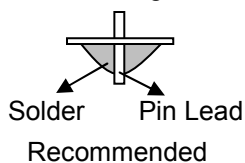
12.4.2.   Pins of EL

　　12.4.2.1. Solder tip can touch and press on the tip of EL leads during soldering.

　　12.4.2.2. No Solder Paste on the soldering pad on the motherboard is recommended.

　　12.4.2.3. Recommended Soldering Conditions

　　　　Solder type: Nippon Alimit Leadfree SR-34, size 0.5mm

　　　　Recommended Solder Temperature: 270～290℃

　　　　Typical Soldering Time: ≤2s

　　　　Minimum solder distance from EL lamp (body):2.0mm

　　12.4.2.4. No horizontal press on the EL leads during soldering.

　　12.4.2.5. 180° bend EL leads three times is not allowed.

12.4.2.6. Solder Wetting
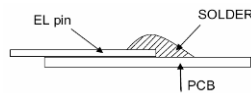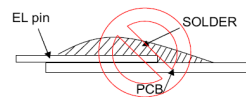
Recommended   Not Recommended

12.4.2.7. The type of the solder iron:
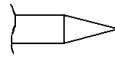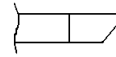
Recommended   Not Recommended

12.4.2.8. Solder Pad
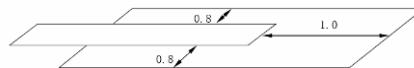
12.5. Operation

12.5.1.   Do not drive LCD with DC voltage

12.5.2.   Response time will increase below lower temperature

12.5.3.   Display may change color with different temperature

12.5.4.   Mechanical disturbance during operation, such as pressing on the display area, may cause the segments to appear "fractured".

12.5.5.   Do not connect or disconnect the LCM to or from the system when power is on.

12.5.6.   Never use the LCM under abnormal condition of high temperature and high humidity.

12.5.7.   Module has high frequency circuits. Sufficient suppression to the electromagnetic interface shall be done by system manufacturers. Grounding and shielding methods may be important to minimize the interference.

12.5.8.   Do not display the fixed pattern for long time（we suggest the time not longer than one hour）because it will develop image sticking due to the TFT structure.

12.6. Static Electricity

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

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

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

12.7. Limited Warranty

12.7.1.   Our warranty liability is limited to repair and/or replacement. We will not be responsible for any consequential loss.

12.7.2.   If possible, we suggest customer to 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.

12.7.3.   After the product shipped, any product quality issues must be feedback within three months, otherwise, we will not be responsible for the subsequent or consequential events.

13. Packaging

TBD

REV.	DESCRIPTION	DATE	NAME
A	First Issue	23.12.20	ZWH

34.05±0.2
(2.2)
(25.2)/A.A
(2.505)
105.98±0.2
(98.43)/A.A
4.0"TFT
280(H)×1020(V)
27.73±0.5
8.09±0.5
UL-Enumber
Single Area
0.5±0.1
W=0.3±0.05
P0.5*17=12±0.05
3±0.3
25   1

2.5±0.2
Contact side
STIFFENER (PI)
0.3±0.05

A ——— K
Backlight LED Circuit:5×2=10(LED)
If=40mA;Vf=13.5~16V

5±0.5
13±0.1

Pin	Symbol
1	LEDK
2	LEDA
3	VPP
4	GND
5	VCI
6	GND
7	VDDI
8	GND
9	D0_N
10	D0_P
11	GND
12	CLK_N
13	CLK_P
14	GND
15	TP_SCL
16	TP_SDA
17	GND
18	TP_INT
19	GND
20	GPIO3
21	LED_PWM
22	TE
23	GND
24	RSTN
25	GND

NOTES:
1. Display size:4.0"TFT IPS
2. Viewing direction:full view
3. Display mode:Transmissive/Normal Black
4. Operation temperature:-20°C~+70°C
5. Storage temperature:-30°C~+80°C
6. Driver IC:AXS15231B
7. Power supply voltage:3.3 V
8. Backlight :White(10LED)/15(TYP)V/40mA
9. LCM Luminance:300(TYP)cd/m^2
10. Interface type:MIPI
11. RoHS must be complied
* The dimension with mark brackets "()" just for reference

General Tolerance±				
DIM \ Level	1	2	3	4
0-5	0.05	0.1	0.1	0.2
5-10	0.05	0.1	0.1	0.2
10-50	0.05	0.1	0.2	0.3
50-100	0.1	0.2	0.3	0.5
100-150	0.1	0.2	0.5	0.8
Level Seclect				◎

	VERSION	DATE	MODEL	YDP LCD I 400 MI
	A	2024-12-05	NAME:	
SCALE	NO.	UNIT		
1:1	1/1	mm	TITLE: Outline	
APPROVED	CHECKED	DRAWN	FILE,	
			NAME:	