YEEBO Limited
CTP Specialist

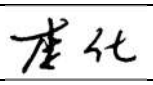
SPECIFICATION
FOR
CTP MODULE

MODULE NO: YB-TG1280800S07A-C-A0

Doc.Version:00

Customer Approval:

☐ Accept	☐ Reject

YEEBO	NAME	SIGNATURE	DATE
Prepare	Electronic Engineer		2019-01-11
Check	Mechanical Engineer		
Verify			
Approval			2019-01-11

☐ APPROVAL FOR SPECIFICATIONS ONLY

■ APPROVAL FOR SPECIFICATIONS AN SAMPLE

WIMRD005-02-C

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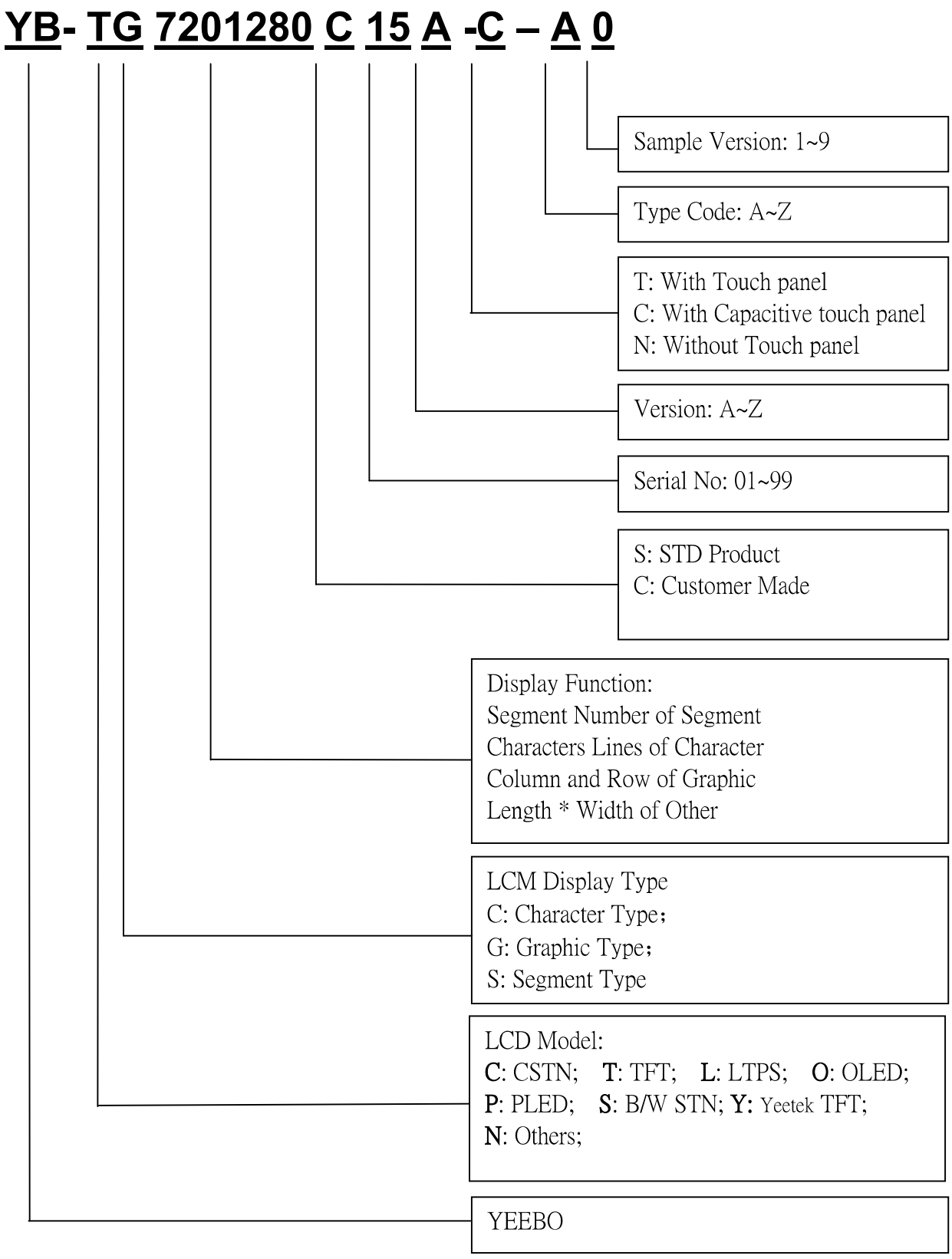
1. Revision History

Sample Version	DOC. Version	DATE	DESCRIPTION		CHANGED BY
A0	00	2019-01-10	FULL SPEC	First issue	zhanglei

2. Table of Contents:

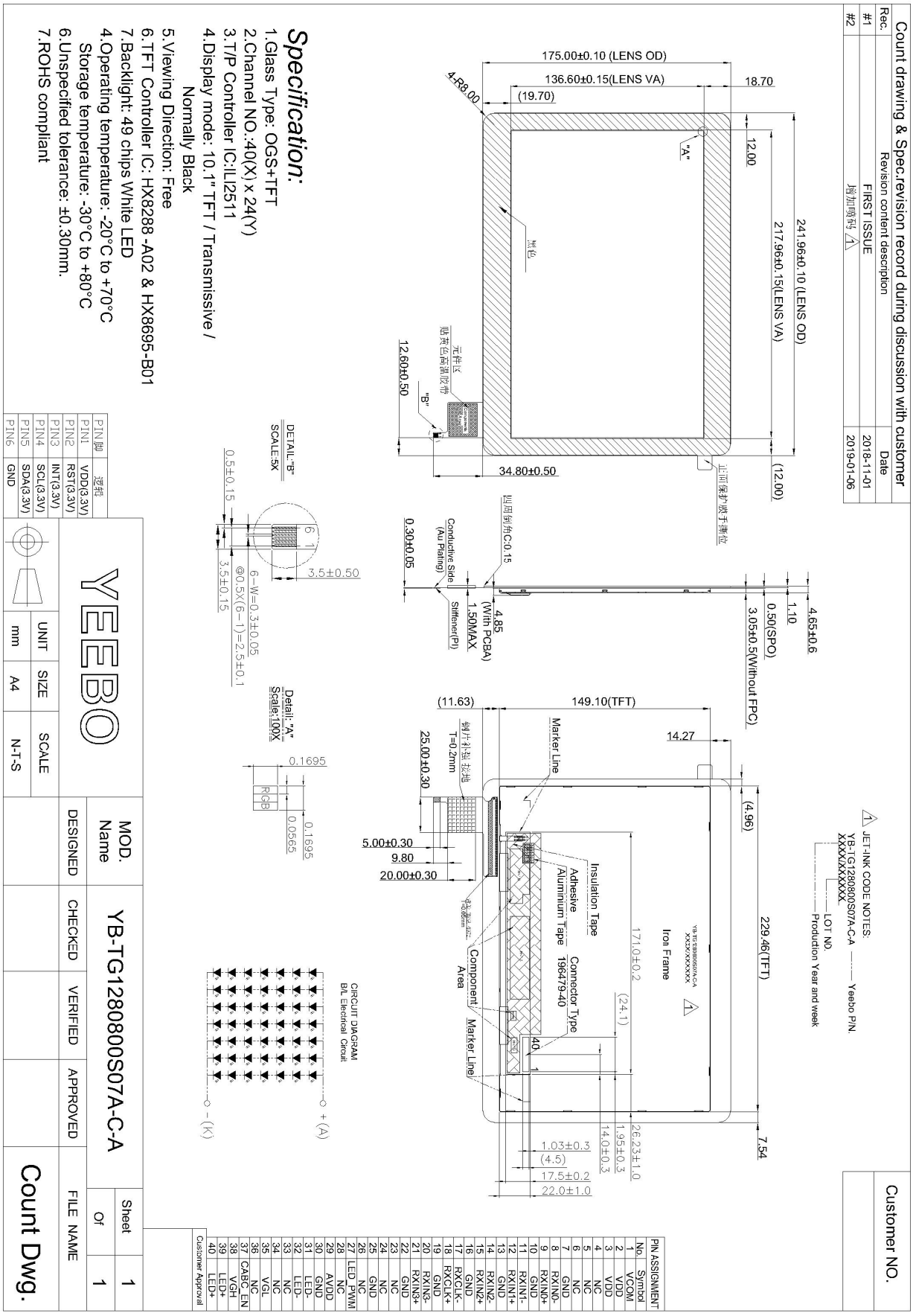
3. Module Numbering System:



4. General Specification:

ITEM	CONTENTS
Module Size	241.96(W) * 175(H) * 4.65 (T) mm(Without FPC)
Display Size(Diagonal)	10.1inch
Display Format	1280(RGB) * 800 Pixels
Pixel Pitch	0.1695 * 0.1695 mm
LCD Type	TFT(16.7M) / Transmissive / Normal Black / Glare
Active Area	216.96(W) * 135.6(H) mm
View Angle	Free
TFT Controller IC	HX8288*4 & HX8695*1
TFT Interface	LVDS
CTP IC	ILI2511
CTP Interface	I2C
Weight(g)	≈285.5
Fireware	ILI2511041101O000100_V6005.hex
Test Configuration	2801_20170825_V6.dat

5. LCM drawing:



6. Electrical Characteristics

6-1 CTP Electrical Characteristics

6-1-1 TP Absolute Maximum Ratings (Ta=25℃ VSS=0V)

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are for stress ratings. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may remain possibility to affect device reliability.

Table 5-1: Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
USB 5V input power supply voltage	V_{DD5V}	-0.3	6.0	V
V_{DD3A} to GND	V_{DD3A}	-0.3	3.6	V
V_{DD3D} to GND	V_{DD3D}	-0.3	3.6	V
V_{DDIO} to GND	V_{DDIO}	-0.3	3.6	V
V_{DD16} to GND	V_{DD16}	-0.3	1.65	V
V_{GH} to GND	V_{GH}	-0.3	32	V
V_{TX} to GND	V_{TX}	-0.3	32	V
ESD Susceptibility HBM (Human Body Mode)**(Note 1)**	HBM		4000	V
ESD Susceptibility MM (Machine Mode)	MM		400	V

Note 1: Devices are ESD sensitive. Handling precaution is recommended.

6-1-2 TP Operating Conditions (Ta=25℃)

Table 5-2: Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
USB 5V input power supply voltage	V_{DD5V}	4.4	5.5	V
V_{DD3A} to GND	V_{DD3A}	3.0	3.6	V
V_{DD3D} to GND	V_{DD3D}	3.0	3.6	V
V_{DDIO} to GND	V_{DDIO}	1.8	3.6	V
V_{GH} to GND	V_{GH}	-0.3	32	V
V_{TX} to GND	V_{TX}	-0.3	32	V
Operating Ambient Temperature Range	T_A	-40	105	°C
Operating Junction Temperature Range	T_J	-40	125	°C
Storage Ambient Temperature Range	T_{ST}	-40	150	°C

Note: The device is not guaranteed to function outside its operating conditions.

6-1-3 TP Timing Characteristics

TP I^2C interface

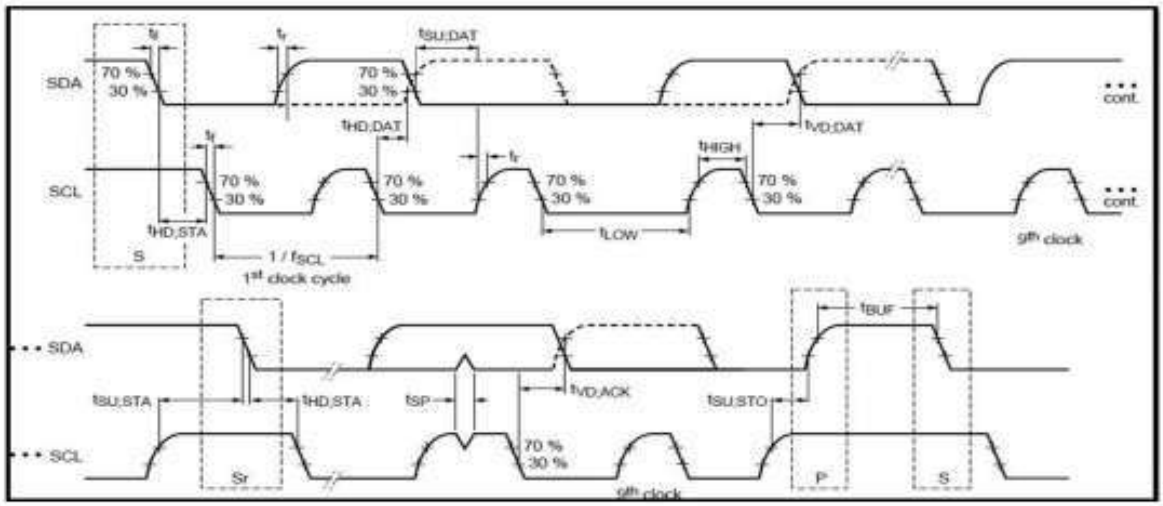


Table 5-7: I2C AC Characteristics

Parameter	Symbol	Standard-mode		Fast-mode		Unit
		Min	Max	Min	Max	
SCL clock frequency	f_{SCL}	0	100	0	400	kHz
Hold time START condition	$t_{HD;STA}$	4.0	-	0.6	-	us
LOW period of the SCL clock	t_{Low}	4.7	-	1.3	-	us
HIGH period of the SCL clock	t_{High}	4.0	-	0.6	-	us
Set-up time for a repeated START condition	$t_{SU:STA}$	4.7	-	0.6	-	us
Data hold time	$t_{HD;DAT}$	300	-	300	-	ns
Data set-up time	$t_{SU;DAT}$	250	-	100	-	ns
Rise time of both SDA and SCL signals (30% to 70%)	t_r	-	1000	20	300	ns
Fall time of both SDA and SCL signals (70% to 30%)	t_f	-	300	20	300	ns
Set-up time for STOP condition	$t_{SU;STO}$	4.0	-	0.6	-	us
Bus free time between a STOP and START condition	t_{BUF}	4.7	-	1.3	-	us
Capacitive load for each bus line	C_b	-	400	-	400	pF
Noise margin at the LOW level for each connected device	V_{nL}	$0.1V_{DD}$	-	$0.1V_{DD}$	-	V
Noise margin at the HIGH level for each connected device	V_{nH}	$0.2V_{DD}$	-	$0.2V_{DD}$	-	V

6-2 TFT Electrical Characteristics

6-2-1 Absolute Maximum Ratings (Ta=25℃ VSS=0V)

Item	Symbol	Min.	Type	Max.	Unit	Remark
Power Supply voltage	VDD	-0.3	-	3.9	Volt	-
	AVDD	-0.3	-	14		
	VGH	-0.3	-	42		
	VGL	-19		0.3		
	VGH-VGL	12	-	40		
Operating Temperature	Topr	-20	-	+70	℃	-
Storage Temperature	Tstg	-30	-	+80	℃	-

Note ：The absolute maximum rating values of this product are not allowed to be exceeded at any times. Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed.

6-2-2 Operating Conditions (Ta=25℃)

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Power Supply voltage	VDD	3.0	3.3	3.6	Volt	Note 2
	AVDD	8.0	8.2	8.4		
	V_{GH}	21.7	22	22.3		
	V_{GL}	-7.3	-7	-3.7		
Input signal voltage	VCOM	2.7	3.0	3.3	Volt	Note 4
Input logic high voltage	V_{IH}	0.8 VDD	-	3.6	Volt	Note 3
Input logic low voltage	V_{IL}	0	-	0.2 DVDD	Volt	

Note : Be sure to apply VDD and V_{GL} to the LCD first, and then apply V_{GH}.
Note 2: VDD setting should match the signals output voltage (refer to Note 3) of customer's system board.
Note 4: Typical VCOM is only a reference value, it must be optimized according to each LCM. Be sure to use VR.

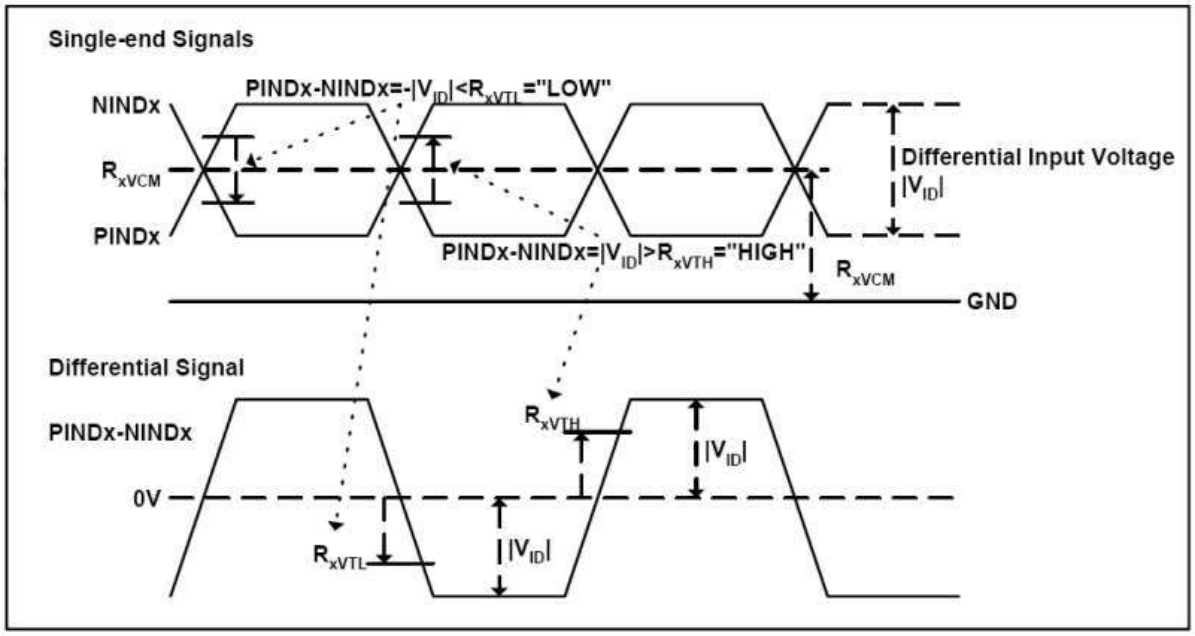
6-2-3 Current Consumption

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Current for Driver	I_{GH}	300	705	1000	uA	V_{GH}=22V
	I_{GL}	300	705	1000	uA	V_{GL}=-7V
	IV_{DD}	-	280	420	mA	V_{DD}=3.3V
	IAV_{DD}	8	45	70	mA	AV_{DD}=8.2V

6-2-4 LVDS Signal Timing Characteristics

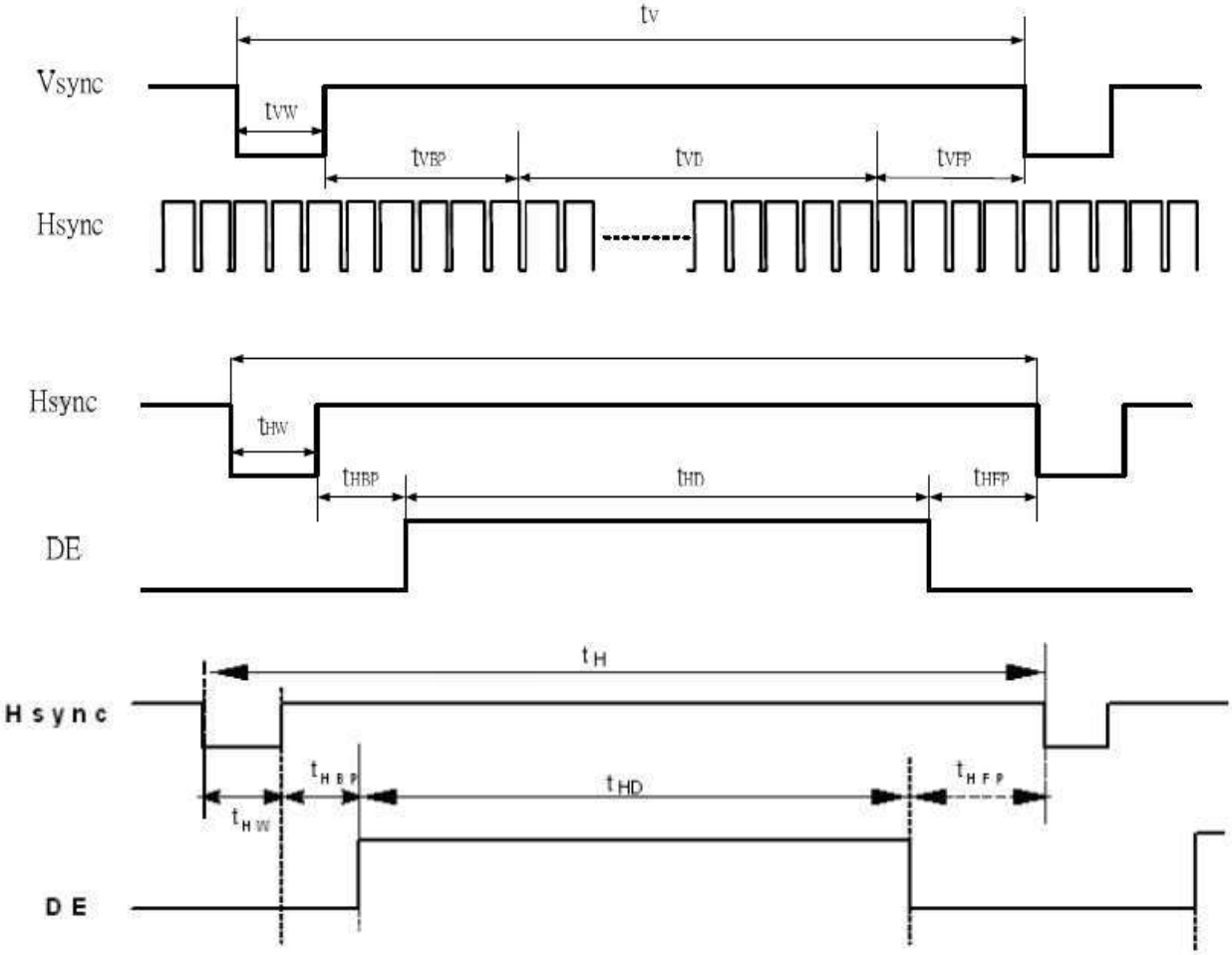
6-2-4-1 AC Electircal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Differential Input High	Vth	-	-	+100	mV	V_{CM}=1.2V
Differential Input Low	Vtl	-100	-	-	mV	V_{CM}=1.2V
Magnitude Differential Input	$\|V_{ID}\|$	200	-	600	mV	-
Common Mode Voltage	V_{CM}	0.7	-	1.6	V	-

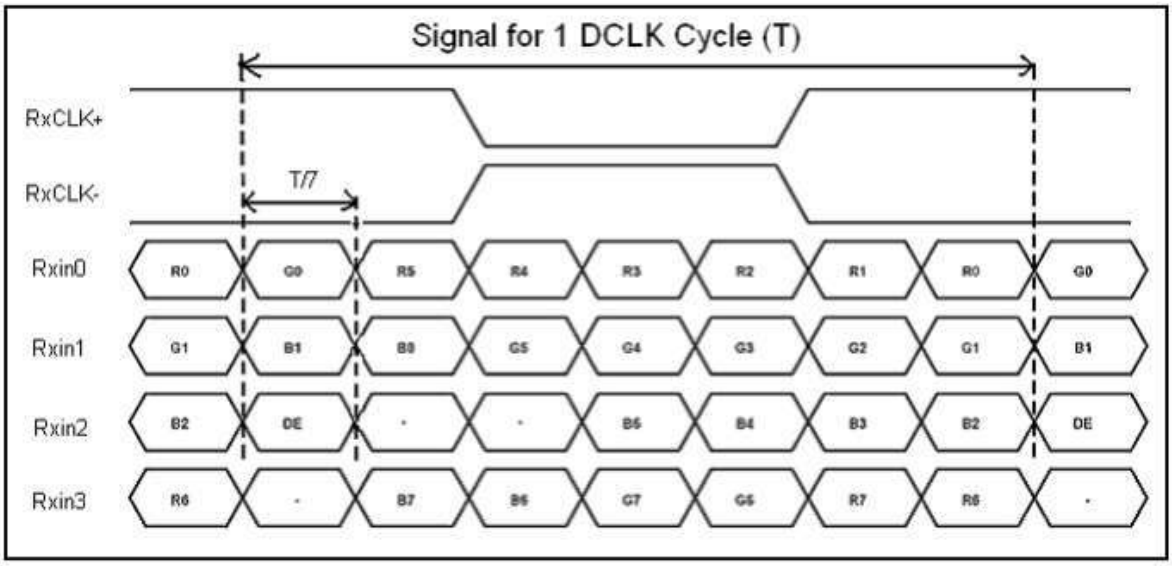


6-2-4-2 Timing Table

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Clock Frequency	1/Tc	(68.9)	71.1	(73.4)	MHz	Frame rate =60Hz
Horizontal display area	t_{HD}		1280		Tc	
HS period time	t_H	(1410)	1440	(1470)	Tc	
HS Width +Back Porch +Front Porch	t_{HW}+ t_{HBP} +t_{HFP}	(60)	160	(190)	Tc	
Vertical display area	t_{VD}		800		t_H	
VS period time	tv	(815)	823	(833)	t_H	
VS Width +Back Porch +Front Porch	t_{VW}+ t_{VBP} +t_{VFP}	(15)	23	(33)	t_H	

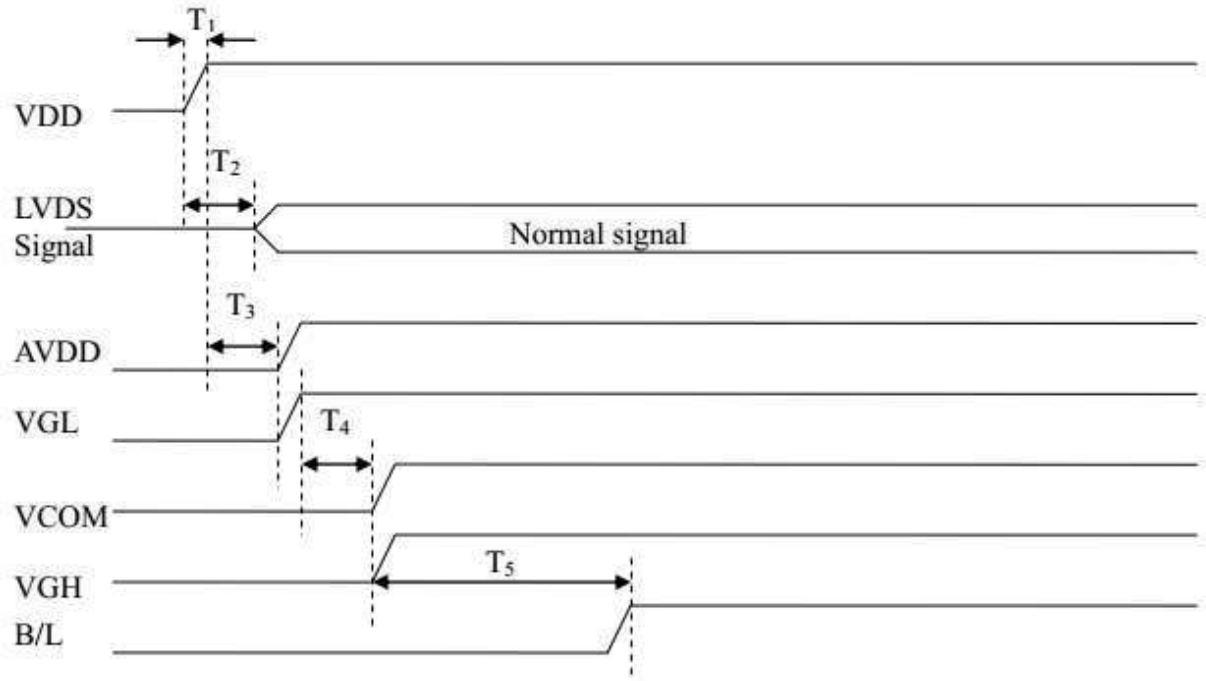


6-4-3 LVDS Data Input Format



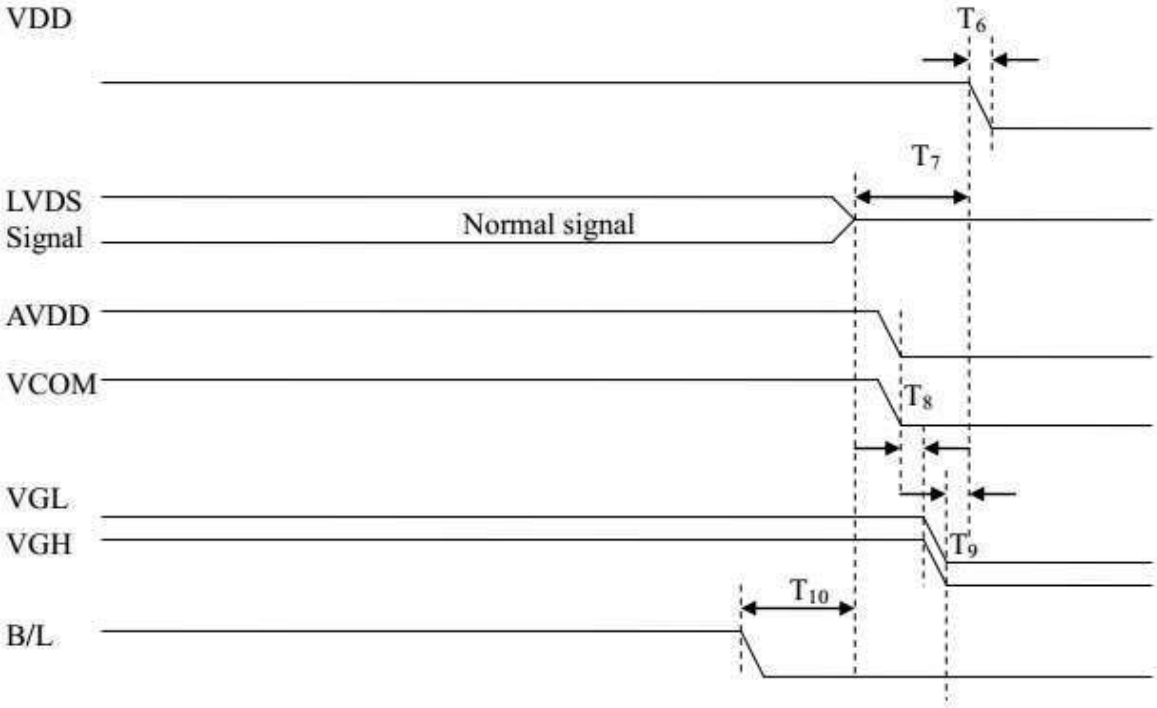
6-2-5 Power Sequence

a. Power on:



Symbol	Value			Unit
	Min.	Typ.	Max.	
T1	0.5	2	10	ms
T2	0	5	50	ms
T3	0	5	50	ms
T4	0	6	100	ms
T5	120	130	200	ms

b. Power off:



Symbol	Value			Unit
	Min.	Typ.	Max.	
T6	0.5	2	10	ms
T7	0	7	50	ms
T8	0	5	10	ms
T9	0	1	10	ms
T10	0	2	100	ms

7. Optical Characteristics:

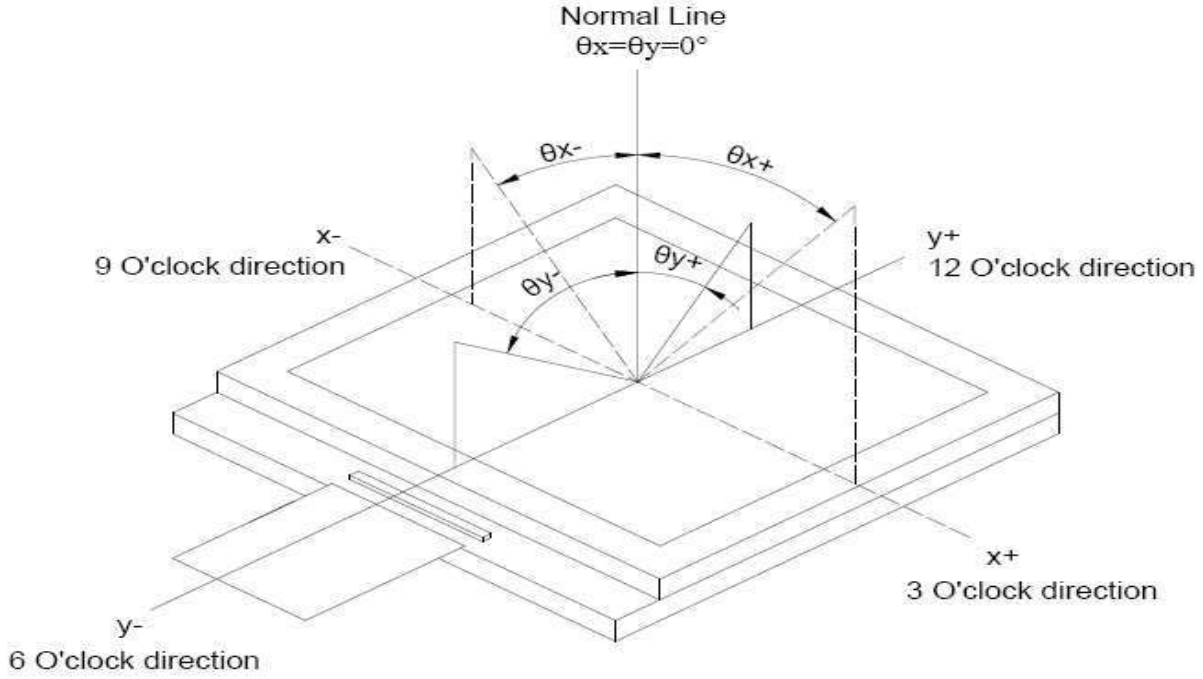
Item		Symbol	Conditions	Specifications			Unit	Note
				Min	Typ	Max		
Transmittance (With PLZ)		T(%)	-	4.8	5.4	-	%	-
Contrast Ratio		CR	Θ=0 Normal Viewing angle	600	800	-	-	(1) (2)
Response time		TR+TF	-	-	25	50	ms	(1) (3)
Viewing angle	Hor.	Θx+	CR≧10	75	85	-	deg.	-
		Θx-		75	85	-		
	Ver.	Θy+		75	85	-		
		Θy-		75	85	-		

Measuring Condition
1. Measuring surrounding: dark room
2. Ambient temperature: 25±2℃
3. 30 min. Warm-up time.

Color of CIE Coordinate:

Item		Symbol	Condition	Min.	Typ.	Max.
Chromaticity Coordinates (Transmissive)	Red	x	θ = ϕ = 0° LED Backlight Color Degree	0.5324	0.5824	0.6324
		y		0.2984	0.3484	0.3984
	Green	x		0.2831	0.3331	0.3831
		y		0.5413	0.5913	0.6413
	Blue	x		0.0997	0.1497	0.1997
		y		0.0962	0.1462	0.1962
	White	x		0.2622	0.3122	0.3622
		y		0.3132	0.3632	0.4132

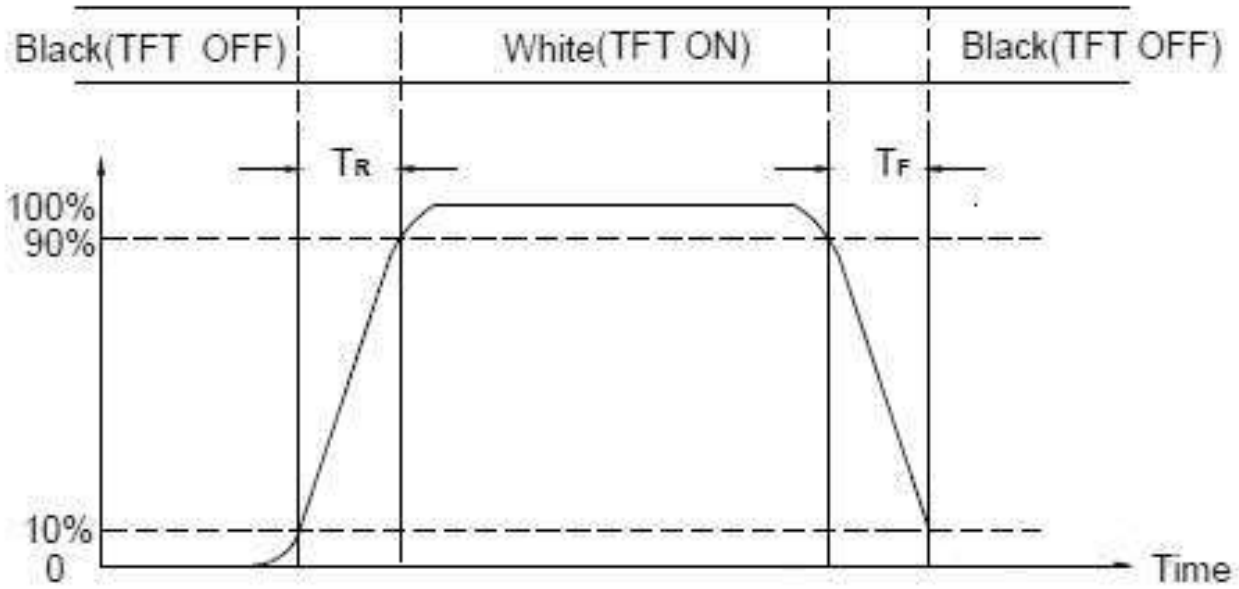
Note 1: Definition of viewing angle range



Note (2) Definition of Contrast Ratio(CR) :
measured at the center point of panel

$$\text{Contrast ratio (CR)} = \frac{\text{Photo detector output when LCD is at "White" state}}{\text{Photo detector output when LCD is at "Black}}$$

Note (3) Definition of Response Time : Sum of TR and TF



8. Interface Pin Assignment:

8-1 LCM FPC Interface

No.	Symbol	I/O	Function	Remark
1	VCOM	P	Common Voltage	
2	VDD	P	Power Voltage.	
3	VDD	P	Power Voltage.	
4	NC	---	Internal testing pin. (No Connection)	
5	NC	---	Internal testing pin. (No Connection)	
6	NC	---	Internal testing pin. (No Connection)	
7	GND	P	Ground	
8	RXIN0-	I	-LVDS differential data input	R0-R5, G0
9	RXIN0+	I	+LVDS differential data input	
10	GND	P	Ground	
11	RXIN1-	I	-LVDS differential data input	G1~G5, B0,B1
12	RXIN1+	I	+LVDS differential data input	
13	GND	P	Ground	
14	RXIN2-	I	-LVDS differential data input	B2-B5,HS,VS, DE
15	RXIN2+	I	+LVDS differential data input	
16	GND	P	Ground	
17	RXCLKIN-	I	-LVDS differential clock input	LVDS CLK
18	RXCLKIN+	I	+LVDS differential clock input	
19	GND	P	Ground	
20	RXIN3-	I	-LVDS differential data input	R6,R7,G6,G7, B6,B7
21	RXIN3+	I	+LVDS differential data input	
22	GND	P	Ground	
23	NC	---	No Connection	
24	NC	---	No Connection	
25	GND	P	Ground	
26	NC	---	No Connection	
27	LED_PWM	O	CABC controller signal output for backlight	Note2
28	NC	---	No Connection	
29	AVDD	P	Power for analog circuit	
30	GND	P	Ground	

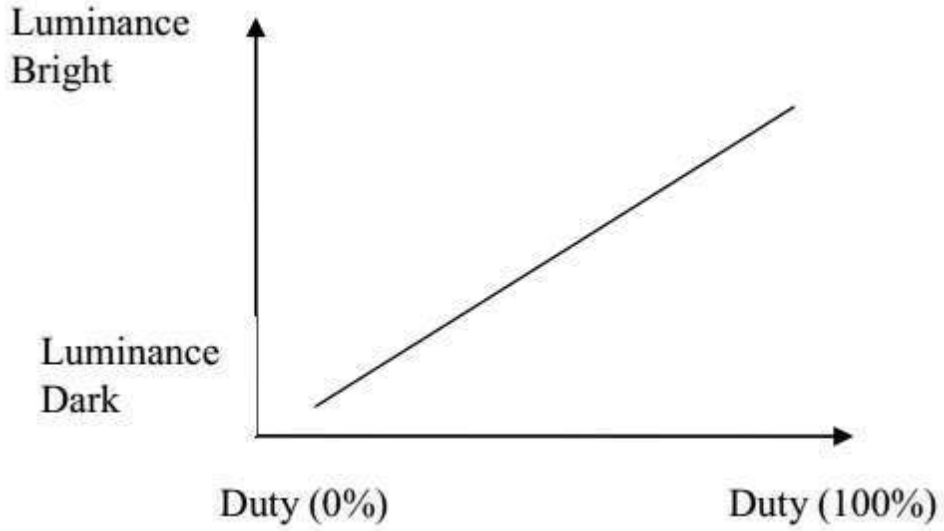
No.	Symbol	I/O	Function	Remark
31	LED-	P	LED Cathode	
32	LED-	P	LED Cathode	
33	NC	---	No Connection	
34	NC	---	No Connection	
35	VGL	P	Gate OFF voltage	
36	NC	---	No Connection	
37	CABC_EN	I	CABC Enable Input	Note1
38	VGH	P	Gate ON voltage	
39	LED+	P	LED Anode	
40	LED+	P	LED Anode	

I: input, O: output, P: Power

Note1: The setting of CABC function are as follows

Pin	Enable	Disable
CABC_EN	High Voltage	Low Voltage or open

Note2: LED_PWM is used to adjust backlight brightness.



8-2 TP FPC Interface

No.	Symbol	I/O	Function
1	VDD	P	Power Voltage for digital circuit
2	RST	I	Active low external reset
3	INT	O	Indicate coordinate data ready
4	SCL	I/O	I^2C Serial Clock
5	SDA	I/O	I^2C Serial Data
6	GND	P	Ground

9. Backlight:

1. Standard Lamp Styles (Edge Lighting Type):
The LED chips are distributed over the edge light area of the illumination unit, which gives the less power consumption:

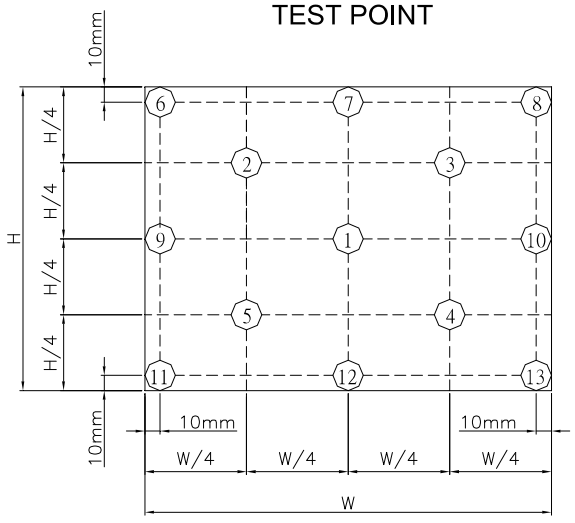
2. The Main Advantages of the LED Backlight are as following:
2.1 The brightness of the backlight can simply be adjusted.
By a resistor or a potentiometer.

3. Data About LED Backlight: (Ta=25℃)

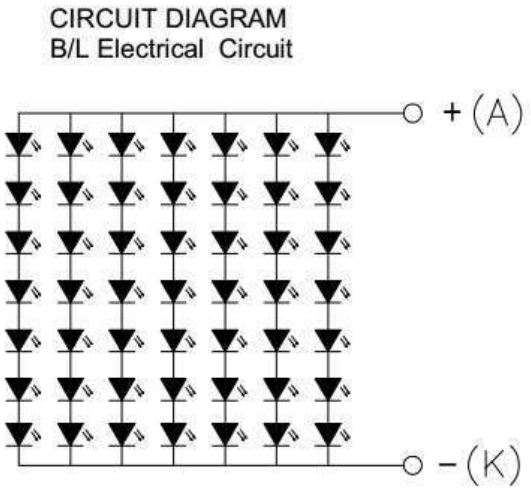
PARAMETER	Sym.	Min.	Typ.	Max.	Unit	Test Condition	Note
Supply Current	I	-	140	-	mA	-	-
Voltage of the Backlight	V_{BL}	18.9	21.0	24.5	V	If=140mA	-
Luminous Intensity for LCM	IV	522	696	-	cd/m^2		2
Uniformity for LCM	-	70	-	-	%		3
LED Life Time	-	50000	-	-	Hr		4
Color	White						

NOTE:
1. Backlight Only
2. Average Luminous Intensity of P1-P13
3. Uniformity = Min/Max * 100%
4. LED life time defined as follows: The final brightness is at 50% of original brightness

Measured Method: (X*Y: Light Area)



Internal Circuit Diagram



(Effective spatial Distribution)
Using aperture of 1°, distance 50cm.

10. Standard Specification for Reliability:

10–1. Standard Specifications for Reliability of (LCD+CTP) Module

No	Item	Description
01	High temperature operation	The sample should be allowed to stand at 70℃ for 120 hours under driving condition and then returning it to normal temperature condition, and allowing it stand for 2 hours.
02	Low temperature operation	The sample should be allowed to stand at -20℃ for 120 hours under driving condition and then returning it to normal temperature condition, and allowing it stand for 2 hours.
03	High temperature storage	The sample should be allowed to stand at 80℃ for 120 hours under no-load condition, and then returning it to normal temperature condition, and allowing it stand for 2 hours.
04	Low temperature storage	The sample should be allowed to stand at -30℃ for 120 hours under no-load condition, then returning it to normal temperature condition, and allowing it stand for 2 hours.
05	Moisture storage	The sample should be allowed to stand at 40℃,90%RH MAX for 120 hours under no-load condition, then taking it out and drying it at normal temperature for 2 hours.
06	Thermal shock storage	The sample should be allowed to stand the following 10 cycles : -0℃ for 30 minutes → normal temperature for 5 minutes → +50℃ for 30 minutes → normal temperature for 5 minutes, as one cycle.
07	Packing vibration	Frequency range : 10Hz ~ 55Hz Amplitude of vibration : 1.5mm Sweep time: 12 min X,Y,Z 2 hours for each direction.
08	Packing drop test	According to ISTA 1A 2001.

*Sample size for each test item is 3~5pcs

10 - 2. Testing Conditions and Inspection Criteria

For the final test the testing sample must be stored at room temperature for 24 hours, after the tests listed in Table 12.2, Standard specifications for Reliability have been executed in order to ensure stability.

No	Item	Test Model	In section Criteria
01	Current Consumption	Refer To Specification	The current consumption should conform to the product specification.
02	Contrast	Refer To Specification	After the tests have been executed, the contrast must be larger than half of its initial value prior to the tests.
03	Appearance	Visual inspection	Defect free.

10- 3. MTBF

MTBF	Functions, performance, appearance, etc. shall be free from remarkable deterioration within 50,000 hours under ordinary operating and storage conditions room temperature (25±5℃), normal humidity (50±10% RH), and in area not exposed to direct sun light.

11. Specification of Quality Assurance:

11-1. Pupose

This standard for Quality Assurance should affirm the quality of LCD module products to supply to purchaser by YEEBO CORPORATION (Supplier).

11-2. Standard for Quality Test

a. Inspection:

Before delivering, the supplier should take the following tests, and affirm the quality of product.

b. Electro-Optical Characteristics:

According to the individual specification to test the product.

c. Test of Appearance Characteristics:

According to the individual specification to test the product.

d. Test of Reliability Characteristics:

According to the definition of reliability on the specification for testing products.

e. Delivery Test:

Before delivering, the supplier should take the delivery test.

(i) Test method: According to MIL-STD105E.General Inspection Level Ⅱ take a single time.

(ii) The defects classify of AQL as following:

Major defect: AQL = 0.65%

Minor defect: AQL = 2.5%

Total defects: AQL = 2.5%

11-3. Non- conforming Analysis & Deal With Manners

a. Non- conforming Analysis:

(i) Purchaser should supply the detail data of non- conforming sample and the non-conforming.

(ii) After accepting the detail data from purchaser, the analysis of non- conforming should be finished in two weeks.

(iii) If supplier can not finish analysis on time, must announce purchaser before 3 days.

b. Disposition of non- conforming:

(i) If find any product defect of supplier during assembly time, supplier must change the good product for every defect after recognition.

(ii) Both supplier and customer should analyze the reason and discuss the disposition of non- conforming when the reason of nonconforming is not sure.

11-4. Agreement items

Both sides should discuss together when the following problems happen.

a. There is any problem of standard of quality assurance, and both sides should think that must be modified.
b. There is any argument item which does not record in the standard of quality assurance.
c. Any other special problem.

11-5. Standard of The Product Appearance Test

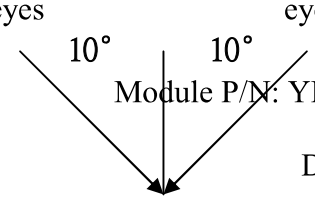
a. Manner of appearance test:

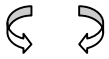
(i) The test must be under 20W × 2 or 40W fluorescent light, and the distance of view must be at 30±5cm.

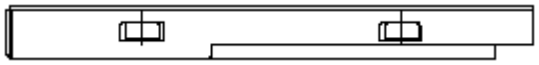
(ii) When test the model of transmissive product must add the reflective plate.

(iii)The test direction is base on around 10° of vertical line.

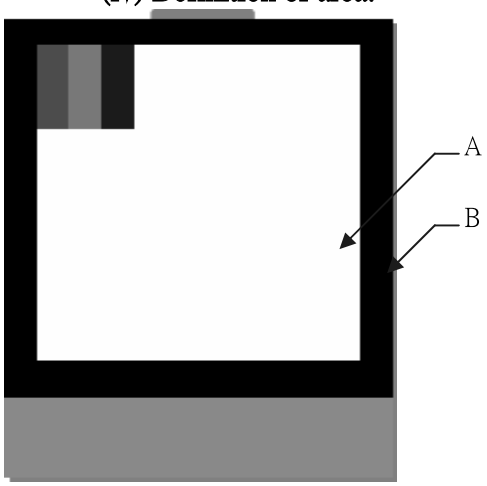
(iiii)Temperature: 25±5℃ Humidity: 60±10%RH







(iv) Definition of area:



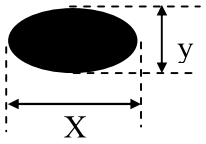
A. Area: Viewing area.
B. Area: Out of viewing area.
(Outside viewing area)

b. Basic principle:

(i) It will accord to the AQL when the standard can not be described.
(ii) The sample of the lowest acceptable quality level must be discussed by both supplier and customer when any dispute happened.
(iii) Must add new item on time when it is necessary.

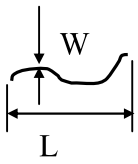
d. Standard of inspection: (Unit: mm)

11-6. Inspection specification

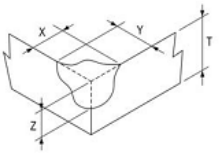
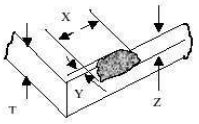
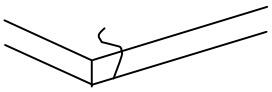
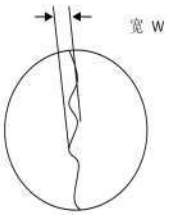
<table>
<tr><th>Item</th><th>Specification Unit : mm</th><th>AQL</th></tr>
<tr><td>Electrical Testing</td><td>1.1 Open
1.2 Short
1.3 T/P failure
1.4 Missing vertical, horizontal segment, segment contrast defect.
1.5 Missing character, dot or icon.
1.6 Display malfunction.
1.7 No function or no display.
1.8 Current consumption exceeds product specifications.
1.9 LCD viewing angle defect.
1.10 Mixed product types.
1.11 Flicker</td><td>0.65</td></tr>
<tr><td>Black spots / White spots /Bright spots/ Color spots /polluted inside/ punctured</td><td>
<table>
<tr><th>Product type</th><th>D</th><th>Acceptable numbers</th></tr>
<tr><td rowspan="4">LAD</td><td>≤0.2</td><td>ignored (No more than five spots within 5mm)</td></tr>
<tr><td>0.2≤D≤0.4</td><td>4</td></tr>
<tr><td>0.4＜D≤0.8</td><td>3</td></tr>
<tr><td>D＞0.8</td><td>NG</td></tr>
</table>


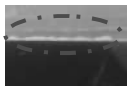
D=(x+y)/2
1.Product’s front side checked according to this specification, back side ignored, but light leakage is not allowed.
2.Printing ink peel off is not allowed.

3、The particle will be ignored when it is removable by cleaning

* Densely spaced: No more than two spots within 10mm</td><td>2.5</td></tr>
<tr><td>Linear Object: Fiber, scurf, scratches and other linear defects (not affecting function)</td><td>
<table>
<tr><th>Product type</th><th>W</th><th>L</th><th>Acceptable numbers</th></tr>
<tr><td rowspan="3">LAD</td><td>≤0.05</td><td>≤8</td><td>ignored No more than five lines within 5mm)</td></tr>
<tr><td>0.1＜W≤0.3</td><td>≤8</td><td>4</td></tr>
<tr><td>W＞0.3</td><td></td><td>NG</td></tr>
</table>


The reverse side scratches, not affect to the electronic circuit, cannot find the scratches from the front side is acceptable
* Densely spaced: No more than two lines within 10mm</td><td>2.5</td></tr>
</table>

<table>
<tr><td>Glass edge chipping、edge breakage</td><td>
<table>
<tr><td colspan="3">Edge breakage can’t affect visual effection (edge breakage can’t cause damage to circuit); over lens have no visual damage</td></tr>
<tr><td>Product type</td><td>conditions</td><td>Acceptable numbers</td></tr>
<tr><td>LAD</td><td>X≤3mm,Y≤2mm, Z≤T</td><td>5</td></tr>
</table>


</td><td>2.5</td></tr>
<tr><td>Glass broken</td><td>Visual broken is NG, and there is no potential fault.
  </td><td>0.65</td></tr>
<tr><td>1. V/A printed edges sawtooth inspected according to this standard
2. LOGO’s sawtooth</td><td>
<table>
<tr><td colspan="2">Some contentious defect judged according to samples</td></tr>
<tr><td>Product type</td><td>Conditions</td></tr>
<tr><td>Same size</td><td>1、width below 0.2 inch（included）ignored，above 0.2 NG
2、Length not accounted</td></tr>
</table>


</td><td>2.5</td></tr>
<tr><td>Specific dimension</td><td>In accordance with product outline drawing or specification (key dimension) or engineering sample.</td><td>2.5</td></tr>
<tr><td>Glue overflow/Frame</td><td>1. Glue overflow exceed 0.2mm to the black frame is not allowed.
  </td><td>2.5</td></tr>
<tr><td rowspan="3">FPC</td><td>Bonding bubble/ Misalignment</td><td>FPC golden finger hot pressure’s bubble or impurity diameter shall be below 1/2 of the pressed area, pressed deviation shall not exceed 1/2 of the silver line width, and 40X microscope cannot have obvious cracks.</td><td>0.65</td></tr>
<tr><td>Folded mark （minor fault）</td><td>Linearity irreversibility folded mark and acute angle folded mark is NG.</td><td>2.5</td></tr>
<tr><td>EMI FILM （minor fault）</td><td>Surface broken, scratched≦0.3mm
Surface broken below 5mm can be modified by print ink, after modified, the result shall be achieved to EMI</td><td>2.5</td></tr>
</table>

12. Handling Precaution:

12.1 Warranty

This product has been manufactured to specifications as a part for use in your company's general electronic products. It is guaranteed to perform according to delivery specifications. For any other use apart from general electronic equipment, we will not take responsibility if the product is used in medical devices, nuclear power control equipment, aerospace equipment, fire and security systems, or any other applications in which there is a direct risk to human life and where extremely high levels of reliability are required. If the product is to be used in any of the above applications, we will need to enter into a separate product liability agreement.

1. We cannot accept responsibility for any defect arise after additional process of the product (including disassembly and reassembly), after product delivery.
2. We cannot accept responsibility for any defect, which may arise after the application of strong external force to the product.
3. We cannot accept responsibility for any defect, which may arise due to the application of static electricity after the product has passed your company's acceptance inspection procedures.
4. We cannot accept responsibility for industrial property, which may arise through the use of your product, with exception to those issues relating directly to the structure or method of manufacturing of our product 3months from YEEBO production.
5. The liability of YB is limited to repair or replacement on the terms set forth below. YB will not be responsible for any subsequent or consequential events or injury or damage to any personnel or user including third party personnel and/or user. Unless otherwise agreed in writing between YB and the customer, YB will only replace or repair any of its CTP which is found defective electrically or visually when inspected in accordance with YB GENERAL CTP INSPECTION STANDARD.

12.2. Precautions in Use of CTP Module

12.2-1. Handling of CTP Module

12.2-1-1 Please operate the capacitive touch panel by touch the panel surface with finger or electric pen

12.2-1-2 Store the products at the temperature and humidity mentioned in the specification in a good package do not expose the products under direct sunlight.

12.2-1-3 Do not hit the capacitive touch panel in strong force , or drop it down, it is made of glass and friable.

12.2-1-4 Put on finger coats，glovers or mask to protect the products from fingerprint of stain. Do not upload/unload the touch panel by holding the FPC cable. Do not bend the FPC cableoften or pull it hard when installing, as FPC cable is soft and connected to touch panel body.

12.2-1-5 Pay attention to the prevention from high voltage and static electricity.

12.2-2 Storage

12.2-2-1 Store in ambient temperature of 25±5℃, and relative humidity of 50±10%RH. Do not expose to sunlight or fluorescent light.

12.2-2-2 Storage in a clean environment, free from dust, active gas, and solvent.

12.2-2-3 Store in anti-static electricity container.

12.2-2-4 Store without any physical load.

12.2-2-5 Appearance,3months;Function,1year;within the validity, failed CTP can be replaced 1 to 1

12.3 Guarantee

Our products meet requirements of the environment.YEEBO ROHS requirement is based on European Union Directive 2011/65/EU (ROHS) Requirements and Update.