



CUSTOMER APPROVAL SHEET

Company Name	
MODEL	C101EAT03.3
CUSTOMER APPROVED	Title : Name :

- ☐ APPROVAL FOR SPECIFICATIONS ONLY (Spec. Ver. 1.3)
- ☐ APPROVAL FOR SPECIFICATIONS AND ES SAMPLE (Spec. Ver. 1.3)
- ☐ APPROVAL FOR SPECIFICATIONS AND CS SAMPLE (Spec. Ver. 1.3)
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Doc. Version	1.3
Total Page	2/31
Date	2021/12/7

Product Specification

10.1" COLOR TFT-LCD MODULE

MODEL NAME: C101EAT03.3

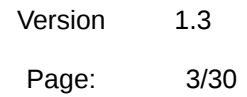
Model Name:	C101EAT03.3
Planned Lifetime:	From 2022/March~2023/Dec
Phase-out Control:	2024/Jan~2024/Jun
EOL Schedule:	2024/Jun

< >Preliminary Specification

< ◆ >Final Specification

Note: The content of this specification is subject to change.

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A. General Description

C101EAT03.2 is an a-Si type Thin Film Transistor Liquid crystal Display (TFT-LCD) with AHVA (Advanced Hyper-Viewing Angle) technology. This model is composed of a TFT-LCD, touch panel, driver ICs, FPCA, and a backlight unit.

B. Features

- 10.1"-inch display
- 1280 RGB x 720 resolution in RGB stripe dot arrangement
- High brightness
- Interfaces: LVDS (8 bit, VESA, DE mode)
- AHVA – wide view technology
- RoHs compliance

For Desay Internal Use Only

C. Physical Specifications

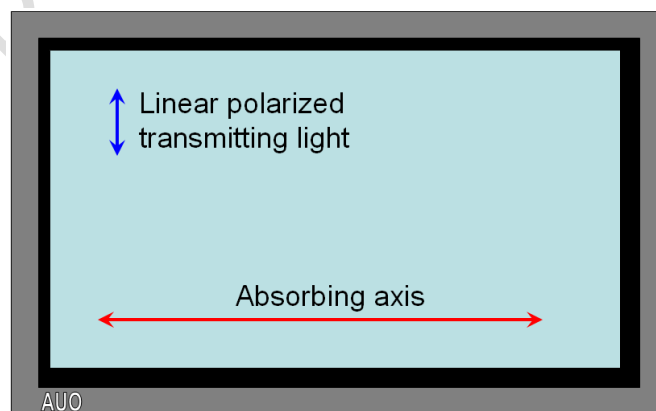
1. TFT LCD Panel

NO.	Item	Unit	Specification	Remark
1	Display Resolution	dot	1280 RGB(H)x 720(V)	
2	Active Area	mm	223.68 x 125.82mm	
3	Screen Size	inch	10.1"(Diagonal)	
4	Dot Pitch	μm	174.75um	
5	Color Configuration	–	R. G. B. Stripe	
6	Color Depth	–	16.7 M colors	
7	Overall Dimension	mm	286.82 * 159.44 * 9.12(ASF to Bezel)	
8	Weight	g	460	
9	Display Mode	-	Normal Black	

Note 1: Below figure shows dot stripe arrangement.



Note 2: Below figure shows dot stripe arrangement.

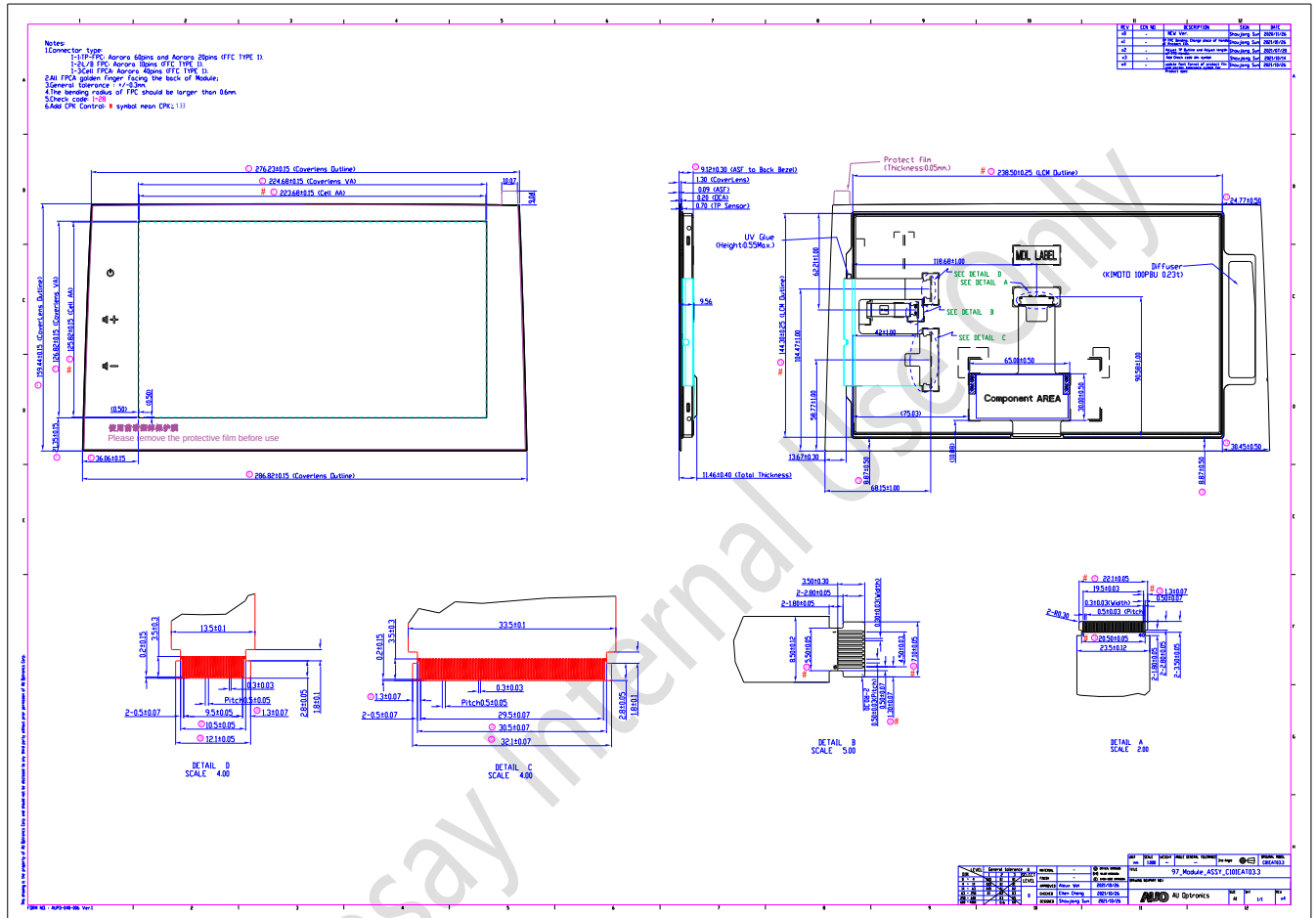


2. Touch Panel

NO.	Item	Unit	Specification	Remark
1	Screen size	inch	10.1"	
2	Surface treatment		AGARAF	
3	Haze	%	8%±3%	(ASF)
4	Structure	--	GG+ASF	
5	VA (mm)	mm	224.68 (W) x 126.82 (H)	
6	Input mode		Multi Finger	
7	Channel (Resolution)	--	AA 区: X:40, Y:22 按键: X:1 , Y:3	
8	Sensor Pitch	mm	5.65 (W) * 5.82(H)	
9	Sensor Mode	--	Capacitance sensor	
10	TP Dimension(mm)	mm	286.82(W) x 159.44 (V) x 2.29(H)	GG+ASF
11	Hardness	H	2H/750g	(ASF)
12	Single / Multi-touch Accuracy	mm	Center ±1.5, Edge: ±2	Subject to TP FW configuration
13	Linearity	mm	Center ±1.5, Edge: ±2	Subject to TP FW configuration
14	The smallest distance between 2 points	mm	12	

D. Outline Dimension

1. TFT-LCD Module TFT-LCD Module



E. Electrical Specifications

1. TFT LCD Panel Pin Assignment

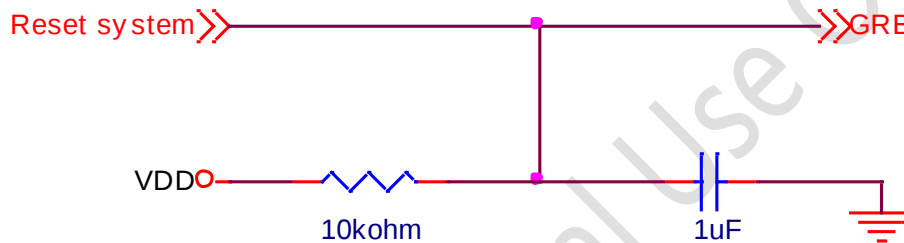
Recommended Connector: AORORA F31L-1A7H1-11040

No.	Pin Name	I/O	Description	Remarks
1	GND	G	GND	
2	GND	G	GND	
3	NC		NC	
4	VGL	PI	Negative power supply voltage for TFT Gate off.	
5	NC		NC	
6	VGH	PI	Positive power supply voltage for TFT Gate on.	
7	NC		NC	
8	AVDD	PI	Analog power supply voltage.	
9	AVDD	PI	Analog power supply voltage.	
10	NC		NC	
11	VPP	P	NC (Auo internal use)	
12	NC		NC	
13	VDD	PI	Digital power supply voltage.	
14	VDD	PI	Digital power supply voltage.	
15	NC		NC	
16	GND		GND	
17	SDA	O	I ² C_SDA	
18	SCL		I ² C_SCL	
19	GND	G	GND	
20	GRB	I	Global reset pin.	Note 1
21	GND	G	GND	
22	NIND3	I	Negative LVDS differential input.	
23	PIND3	I	Positive LVDS differential input.	
24	GND	G	GND	
25	NIND2	I	Negative LVDS differential input.	
26	PIND2	I	Positive LVDS differential input.	
27	GND	G	GND	
28	NIND1	I	Negative LVDS differential input.	
29	PIND1	I	Positive LVDS differential input.	
30	GND	G	GND	
31	NIND0	I	Negative LVDS differential input.	
32	PIND0	I	Positive LVDS differential input.	
33	GND	G	GND	

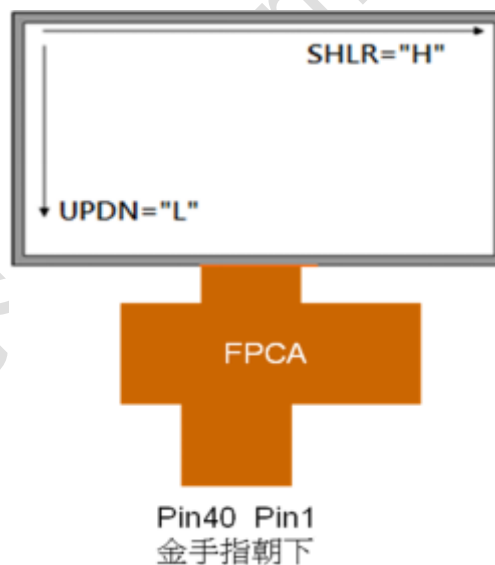
34	CLKN	I	Negative LVDS differential clock input.	
35	CLKP	I	Positive LVDS differential clock input.	
36	GND	G	GND	
37	SHLR	I	Vertical scan direction control. “H” Down to Up; “L” Up to Down.	Note 2
38	UPDN	I	Horizontal scan direction control. “H” Left to Right; “L” Right to Left.	Note2
39	GND	G	GND	
40	GND	G	GND	

I: Digital signal input, O: Digital signal output, G: GND, PI: Power input, R: thermistor.

Note1: Outside GRB Circuit



Note2: Scan direction



2. Touch Sensor Pin Assignment

Connector = AORORA :F31L-1A7H1-11020 (外购超声 touch panel)_20 Pin

Pin No.	Symbol	Symbol	Description	Remark
1	GND	P	Ground	
2	GND	P	Ground	
3	DS0	S	Driven Shield Signal	
4	X20	S	X Line connection	

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5	X19	S	X Line connection	
6	X18	S	X Line connection	
7	X17	S	X Line connection	
8	X16	S	X Line connection	
9	X15	S	X Line connection	
10	X14	S	X Line connection	
11	X13	S	X Line connection	
12	X12	S	X Line connection	
13	X11	S	X Line connection	
14	X10	S	X Line connection	
15	X9	S	X Line connection	
16	X8	S	X Line connection	
17	X7	S	X Line connection	
18	X6	S	X Line connection	
19	DS0	S	Driven Shield Signal	
20	GND	P	Ground	

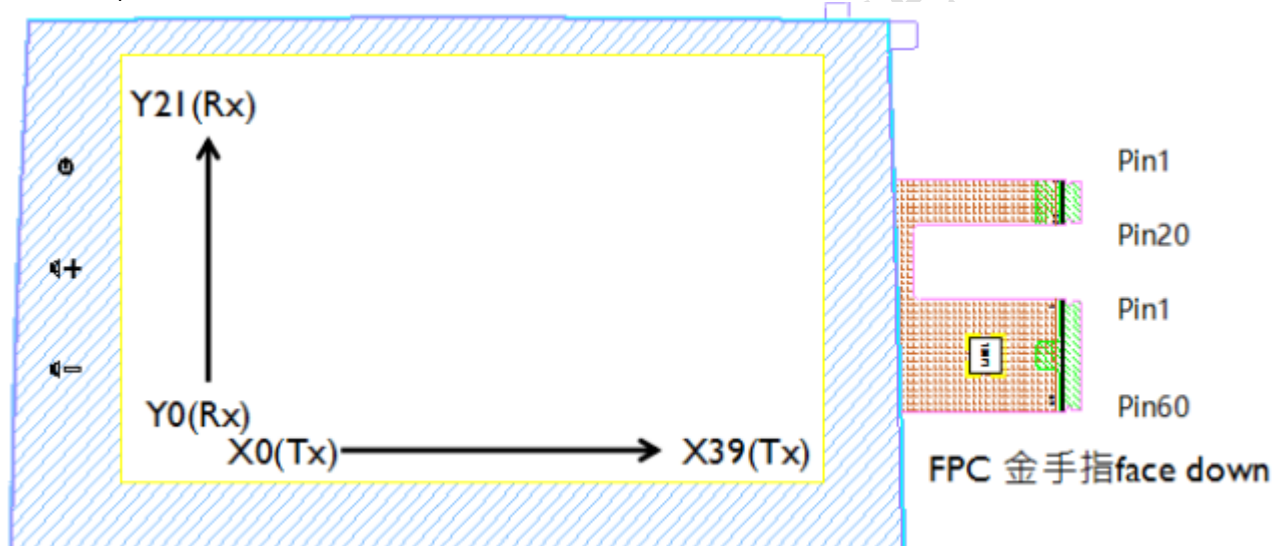
Connector = AORORA : AORORA F31L-1A7H1-11060 (外购超声 touch panel)_60 Pin

Pin No.	Symbol	Symbol	Description	Remark
1	GND	P	Ground	
2	DS0	S	Driven Shield Signal	
3	X5	S	X Line connection	
4	X4	S	X Line connection	
5	X3	S	X Line connection	
6	X2	S	X Line connection	
7	X1	S	X Line connection	
8	X0	S	X Line connection	
9	DS0	S	Driven Shield Signal	
10	Y0	S	Y Line connection	
11	Y1	S	Y Line connection	
12	Y2	S	Y Line connection	
13	Y3	S	Y Line connection	
14	Y4	S	Y Line connection	
15	Y5	S	Y Line connection	

16	Y6	S	Y Line connection	
17	Y7	S	Y Line connection	
18	Y8	S	Y Line connection	
19	Y9	S	Y Line connection	
20	Y10	S	Y Line connection	
21	Y11	S	Y Line connection	
22	Y12	S	Y Line connection	
23	Y13	S	Y Line connection	
24	Y14	S	Y Line connection	
25	Y15	S	Y Line connection	
26	Y16	S	Y Line connection	
27	Y17	S	Y Line connection	
28	Y18	S	Y Line connection	
29	Y19	S	Y Line connection	
30	Y20	S	Y Line connection	
31	Y21	S	Y Line connection	
32	DS0	S	Driven Shield Signal	
33	X21	S	X Line connection	
34	X22	S	X Line connection	
35	X23	S	X Line connection	
36	X24	S	X Line connection	
37	X25	S	X Line connection	
38	X26	S	X Line connection	
39	X27	S	X Line connection	
40	X28	S	X Line connection	
41	X29	S	X Line connection	
42	X30	S	X Line connection	
43	X31	S	X Line connection	
44	X32	S	X Line connection	
45	X33	S	X Line connection	
46	X34	S	X Line connection	
47	X35	S	X Line connection	
48	X36	S	X Line connection	
49	X37	S	X Line connection	

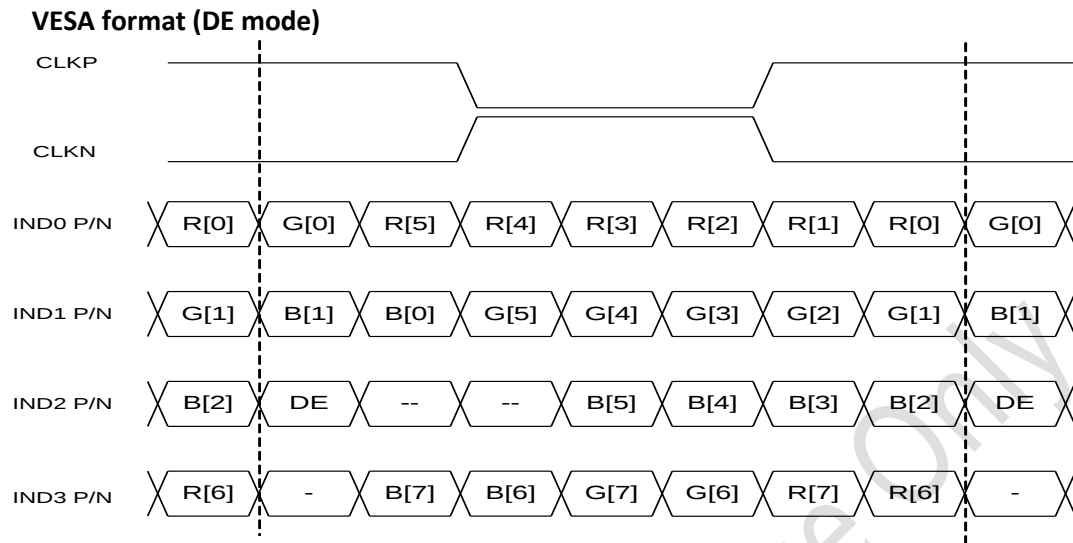
50	X38	S	X Line connection	
51	X39	S	X Line connection	
52	DS0	S	Driven Shield Signal	
53	GND	P	Ground	
54	Y22	S	Y Line connection	
55	Y23	S	Y Line connection	
56	Y24	S	Y Line connection	
57	GND	P	Ground	
58	X40	S	X Line connection	
59	GND	P	Ground	
60	GND	P	Ground	

S: Sense pin, P: Ground



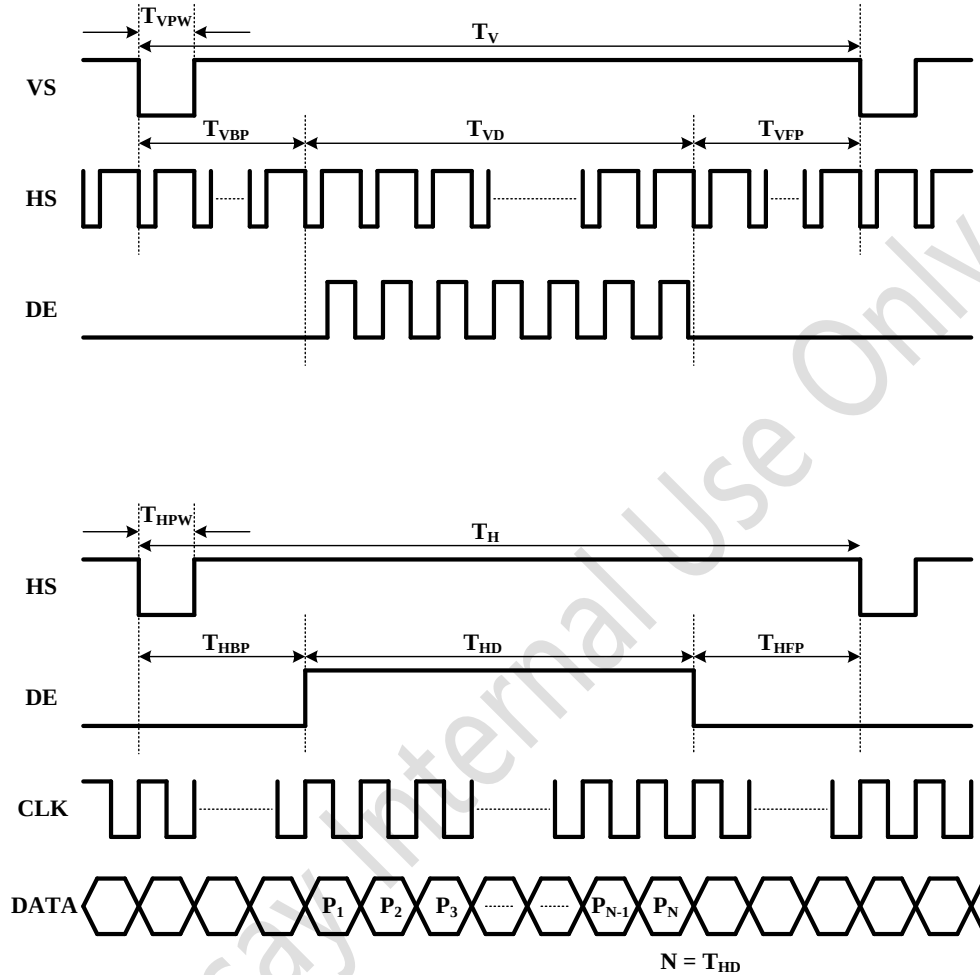
I-con 按键			
X40	Y22	POWER	
X40	Y23	+	
X40	Y24	-	

3. Differential Input Data Format



4. Input Timing Diagram

Fig. 2. Input Timing Diagram



Parameter		Symbol	Min.	Typ.	Max.	Unit.	Remark
CLK Frequency		F_{CLK}	69.49	71.15	75.54	MHz	
HSYNC	Period	T_H	1524	1540	1566	CLK	
	Horizontal display area	T_{HD}	1280			CLK	
	Blanking	$T_{HBP} + T_{HFP}$	244	260	286	CLK	
VSYNC	Period	T_V	760	770	804	HS	
	Vertical display area	T_{VD}	720			HS	
	Blanking	$T_{VBP} + T_{VFP}$	40	50	84	HS	

5. Absolute Maximum Ratings

Items	Symbol	Values			Unit	Condition
		Min.	Max.			
Power Voltage	VDD	-0.3	5		V	GND = 0 V
	AVDD	-0.3	14.5		V	GND = 0 V
	VGH-VHL	-0.3	30		V	GND = 0 V
	VGL	-20	0.3		V	GND = 0 V
Input Signal Voltage	Vi	-0.3	VDD		V	GND = 0 V
Operation Temperature	Topa	-30	85		°C	Ambient
Storage Temperature	Tstg	-40	95		°C	Ambient

Note 1: Functional operation should be restricted under normal ambient temperature.

Note 2: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only. Functional operation of this device at these or under any other conditions above those indicated in the operational sections of this specification is not implied and exposure to absolute maximum rating conditions for extended periods may affect device reliability.

6. DC Electrical Characteristics

The following items are measured under stable condition and suggested application circuit.

a. Power Specification

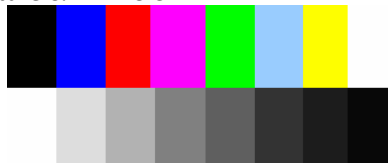
Parameter	Symbol	Min	Typ	Max	Unit	Notes
Power Supply	VDD	3	3.3	3.6	V	
	IVDD	-	35.0		mA	Note 1
	IVDD inrush current			180	mA	Note 2
	AVDD	-	13.5	-	V	
	IAVDD	-	17.5	-	mA	Note 1
	IAVDD inrush current			1.2	A	Note 2
	VGH	-	18	-	V	
	IVGH		1.3		mA	Note 1
	VGL	-	-8	-	V	
	IVGL		0.8		mA	Note 1

*** The limitation range of minimum and maximum is derived base on operating at ambient temp 25°C

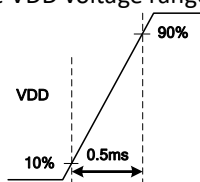
All conditions should be set typical value.

The panel can operate normally in the recommended operating condition.

Note 1: Test pattern is the following picture & VDD=3.3V



Note2: Test condition is the VDD voltage range between 3.0V~3.6V on the rising time 0.5ms,



Please see below picture.

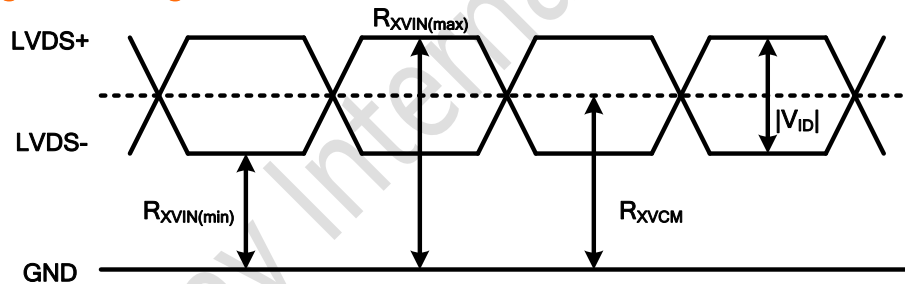
b.Signal DC Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Input signal voltage	V_i	-0.3	-	VDD	V	
Input high level voltage	V_{IH}	0.7VDD	-	VDD	V	
Input low level voltage	V_{IL}	GND	-	0.3VDD	V	
Differential input high threshold	R_{XVTH}	0.2	-	-	V	Note 2
Differential input low threshold	R_{XVTL}	-	-	-0.2	V	Note 2
Input voltage range (singled-end)	R_{XVIN}	0	-	VDD-1.2	V	Note 2
Input differential voltage	$ V_{ID} $	0.2	-	0.6	V	Note 1 Note 2
Differential Input Common Mode Voltage	R_{XVCM}	$ V_{ID} / 2$	-	$VDD-1.2- V_{ID} / 2$	V	Note 2

Note 1: The VID of transceiver suggest up to +/-400mV, this is better solution for receivers at high speed transmission

Note 2: LVDS interface signal DC characteristic

Single-end Signal



Differential Signal

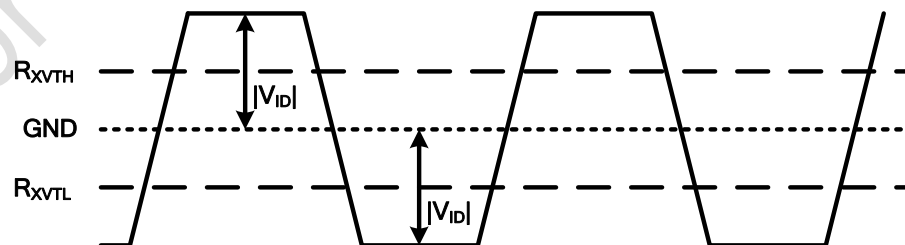


Fig. 6.b.1. LVDS DC characteristics diagram

b. Backlight Driving Conditions (Note 1)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
BLU Power				4.47	4.95	W	Note 2
LED Supply Current	I_L	At 25°C		85	90	mA	single serial Note 3&4
LED Supply Voltage	V_L	IF=80(mA) At 25°C		25.5	28.05	V	Note 3&4
LED Life Time	L_L	At 25°C	10,000			hr	Note 5

Note 1: LED backlight has 16 LEDs (2strings, 8 pcs for each string). Ambient temperature is 25 °C

Note 2: The LED supply power is for 2 string of LED.

Note 3: LED is Current Driving and the voltage capacity of LED driver IC must be over the max of LED Supply Voltage condition.

Note 4: The backlight should be operated with constant driving current, with permissible driving current range between 85 mA ~ 90mA.

Note 5: The LED lifetime 10000hrs means , after normal use at 80mA, under +25 ° C, the brightness of LED unit decreases to 70% of original level.

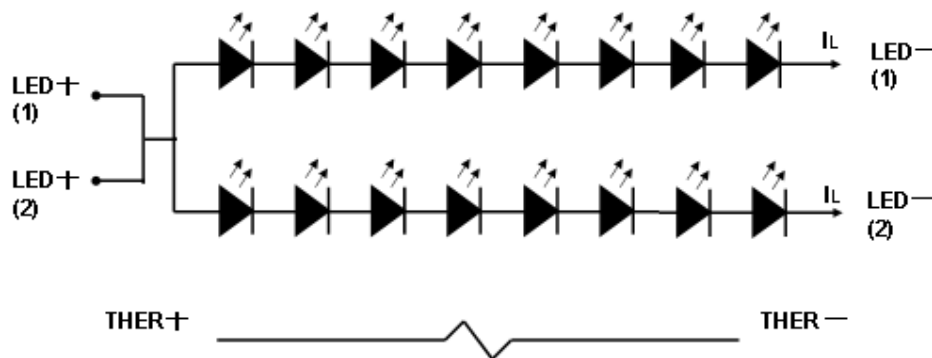


Fig. 5. Light bar structure

Note 6: Thermistor type: MURATA – NCU15XH103F6SRC.

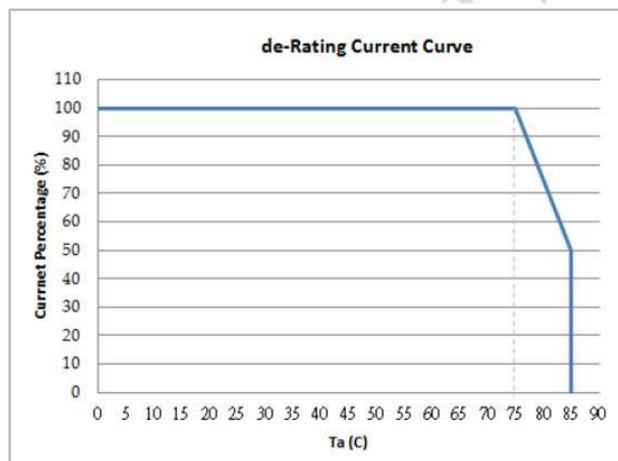
Thermistor Characteristics: The resistances of thermistor are measured by the thermistor vendor and for reference only.

Temperature (Ta; °C)	Rthermistor-Low (kΩ)	Rthermistor-Center (kΩ)	Rthermistor-High (kΩ)
-30	109.5221	113.3471	117.294
-25	84.8227	87.5588	90.3741
-20	66.2694	68.2367	70.2554
-15	52.2283	53.6496	55.104
-10	41.4765	42.5062	43.557
-5	33.1462	33.8922	34.6515
0	26.678	27.2186	27.7675
5	21.6294	22.0211	22.4175
10	17.643	17.9255	18.2107

15	14.4712	14.6735	14.8772
20	11.9371	12.0805	12.2244
25	9.9	10	10.1
30	8.2162	8.3145	8.4132
35	6.8534	6.9479	7.043
40	5.7443	5.8336	5.9238
45	4.8333	4.9169	5.0015
50	4.0833	4.1609	4.2395
55	3.4634	3.535	3.6076
60	2.9486	3.0143	3.0812
65	2.5259	2.5861	2.6476
70	2.1724	2.2275	2.2839
75	1.8741	1.9245	1.9761
80	1.6225	1.6685	1.7157
85	1.4101	1.4521	1.4952
90	1.2296	1.2680	1.3074
95	1.0746	1.1096	1.1456
100	0.9419	0.9738	1.0067

De-rating Current Curve:

Ta (°C)	Current Percentage (%)
0~75	100
76	95
77	90
78	85
79	80
80	75
81	70
82	65
83	60
84	55
85	50

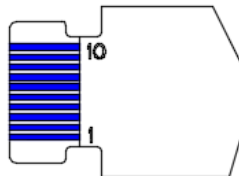


d. BACK LIGHT UNIT FPC

No.	Pin Name	I/O	Description	Remarks
-----	----------	-----	-------------	---------

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1	THERMISTOR (-)	Rout	Thermistor (-)	
2	THERMISTOR (+)	Rin	Thermistor (+)	
3	Dummy	NA	No USE	
4	CATHODE 1	C1	Cathode 1	
5	CATHODE 2	C2	Cathode 2	
6	Dummy	NA	No USE	
7	Dummy	NA	No USE	
8	ANODE	A1	LED power supply voltage	
9	ANODE	A1	LED power supply voltage	
10	Dummy	NA	No USE	



7. AC Electrical Characteristics

a. Input AC characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
VDD power on slew time	T_{POR}	-	-	15	ms	From 0V to 90% VDD Note 1
GRB active pulse width	T_{GRB}	1	-	20	ms	VDD=3.3V
VDD resettle time	T_{RES}	500	-	-	ms	

Note 1: The inrush current spec should follow VDD power on slew time min value is 1ms and max value is 15ms. Inrush current maybe out of spec.(max:500mA)

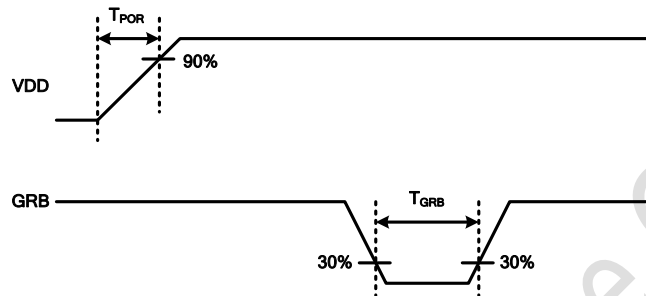


Fig. 7.1. VDD and GRB timing diagram

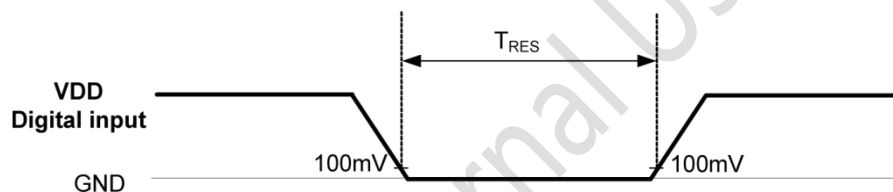


Fig. 7.2. Power resettle time

b. Differential signal AC characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Clock frequency	R_{XFCLK}	69.49	-	76	MHz	
Input data skew margin	T_{RSKM}	-	-	400	ps	$ V_{ID} =200mV$ $R_{XVCM}=1.2V$ $R_{XFCLK}=75MHz$
Clock high time	TLVCH	-	$4/7/R_{XFCLK}$	-	ns	
Clock low time	TLVCL	-	$3/7/R_{XFCLK}$	-	ns	

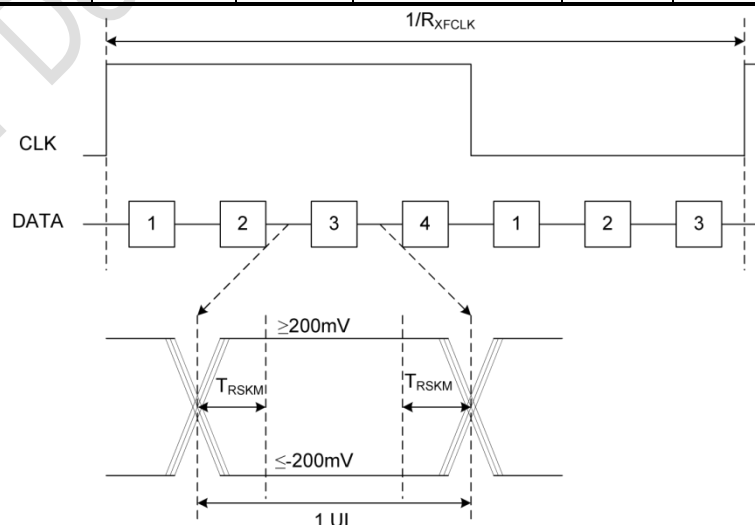


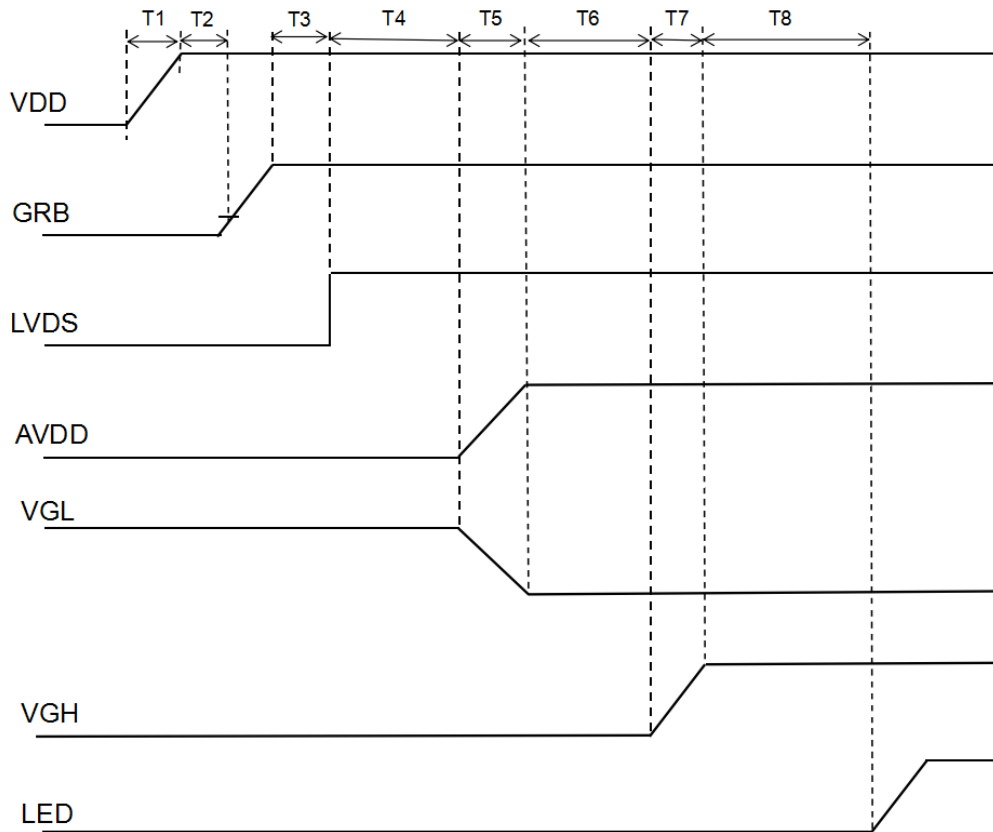
Fig. 8 LVDS AC characteristics diagram

8. Power on/off sequence

The LCD adopts high voltage driver IC, so it could be permanently damaged under a wrong power on/off sequence. The suggested LCD power sequence is below:

a. Power on:

VDD → GRB → LVDS → AVDD & VGL → VGH → LED (BKLEN)

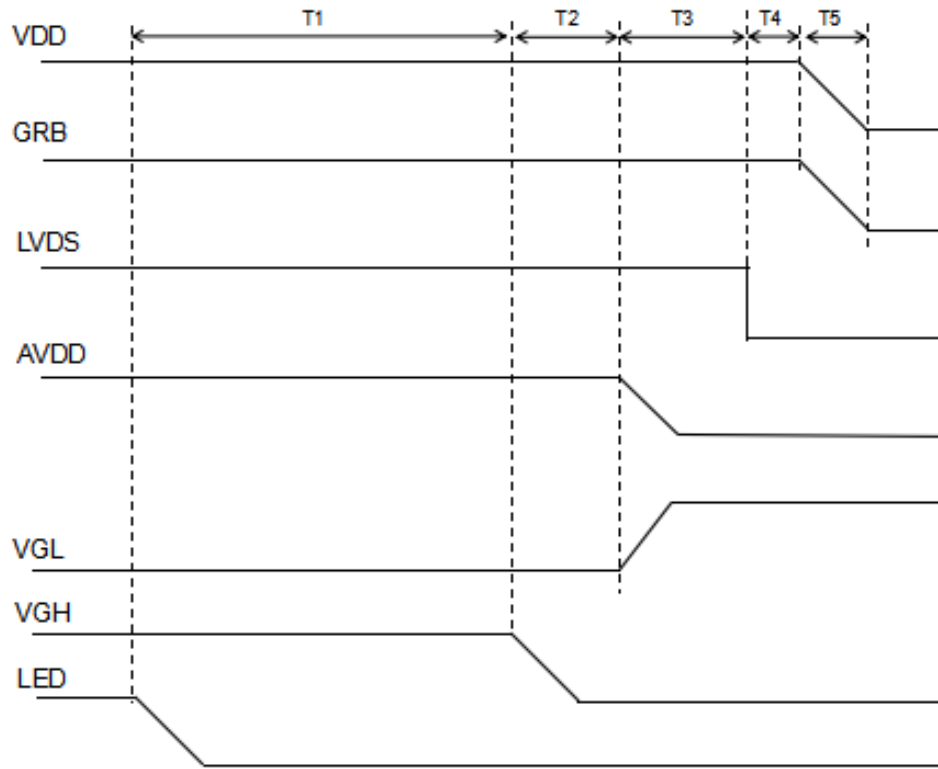


Power on timing:

Parameter	Value			Units
	Min.	Typ.	Max.	
T1		-	15	ms
T2	0.1	-	-	ms
T3	20	-		ms
T4	20		33.2	ms
T5	16.6	-		ms
T6	16.6	-		ms
T7	16.6			ms
T8	200	300		ms

b. Power off:

LED → VGH → AVDD&VGL → LVDS → VDD&GRB


Power off timing:

Parameter	Value			Units Min.
	Min.	Typ.	Max.	
T1	0	-	-	ms
T2	16.6	-	-	ms
T3	16.6	-	-	ms
T4	0	-	-	ms
T5	1	-	-	ms

F. Optical specifications (all for reference)

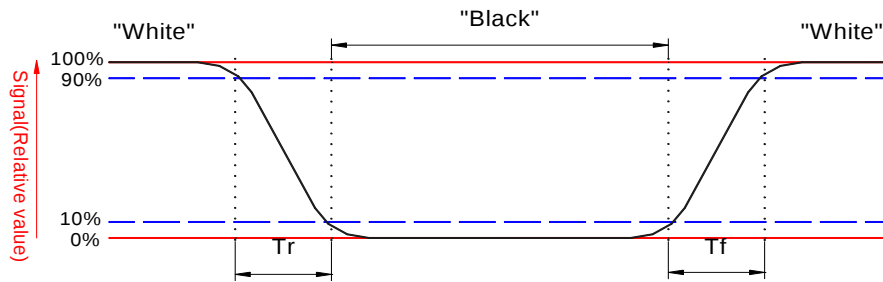
Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Response Time Rise Fall	Tr	$\vartheta = 0^\circ$	-	-	20	ms	Note 2, 3
	Tf		-	-	20		
Viewing Angle Top Bottom Left Right		$CR \geq 10$	-	80 80 80 80	-	deg.	Note 2, 7, 8
Contrast ratio	CR	$\vartheta = 0^\circ$	800	1000	-		Note 2, 4, 5, 6
Brightness	Y_L	$\vartheta = 0^\circ$	480		-	cd/m ²	Note 2, 9
White Chromaticity	X	$\vartheta = 0^\circ$	0.244	0.284	0.324		Note 2, 10
	Y	$\vartheta = 0^\circ$	0.272	0.312	0.352		
Red Chromaticity	X	$\vartheta = 0^\circ$	0.615	0.655	0.695		
	Y	$\vartheta = 0^\circ$	0.268	0.308	0.348		
Green Chromaticity	X	$\vartheta = 0^\circ$	0.224	0.264	0.304		
	Y	$\vartheta = 0^\circ$	0.602	0.642	0.682		
Blue Chromaticity	X	$\vartheta = 0^\circ$	0.114	0.154	0.194		
	Y	$\theta=0^\circ$	0.018	0.058	0.098		
Uniformity	White	-	80			%	Note 2, 11
Uniformity	Black	-	40			%	Note 2, 11
Reflectance	SCI	$\theta=0^\circ$, $T_a=25^\circ\text{C}$			CTP 单体 < 7 TTL < 4	%	Note 12,13

Note 1: Measurement should be performed in the dark room, optical ambient temperature = 25 °C, and backlight current $I_L = 85\text{mA}$.

Note 2: To be measured in the center area of TFT-LCD with a field angle of 1° by Topcon luminance meter SR3, after 10 minutes operation and warm up 30 minutes.

Note 3: Definition of response time:

The output signals of photo detector are measured when the input signals are changed from “black state” to “white state” (falling time) and from “white state” to “black state” (rising time), respectively.



Note 4: Based on liquid crystal characteristics, the response time will become slower and the color of panel will become darker than the above optical specification when ambient temperature is below 25 °C.

Note 5: Contrast ratio is calculated with the following formula.

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

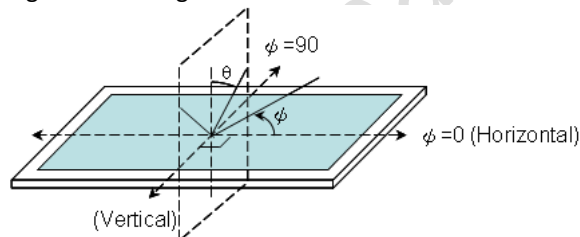
Note 6: White Vdata=V1 or V18

Black Vdata=V9 or V10

(For definition of V1, V9, V10 & V18, please refer to Appendix)

The 100% transmission is defined as the transmission of LCD panel when all the input terminals of module are electrically opened.

Note 7: Definition of viewing angle: refer to figure as below.



Note 8: Viewing angles are measured at the center of the panel when all the input terminals of LCD panel are electrically opened.

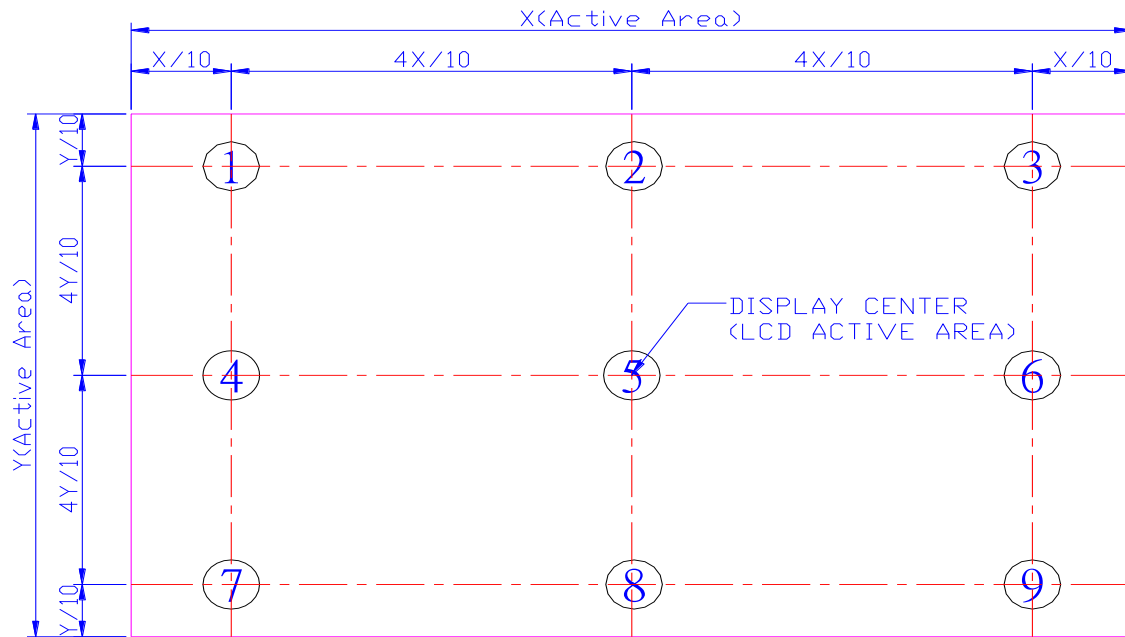
Note 9: Brightness is measured at the center of the display.

Note 10: The viewing angles are measured at the center area of the panel when all the input terminals of LCD panel are electrically opened.

Note 11: Luminance Uniformity of these 9 points is defined as below: (1 : 4 : 4 : 1)

Note 12: Data for reference only, will not measure during ORT(Ongoing Reliability Test).

Note 13: Measured by Konica Minolta CM-2600d, SCI method. Illuminant: D65, Observer: CIE 1964/10°, Illumination system: d/8 (diffuse illumination, 8-degree viewing)



$$\text{Uniformity} = \frac{\text{minimum luminance in 9 points (1-9)}}{\text{maximum luminance in 9 points (1-9)}}$$

G. Reliability Test Items(Note 1~3)

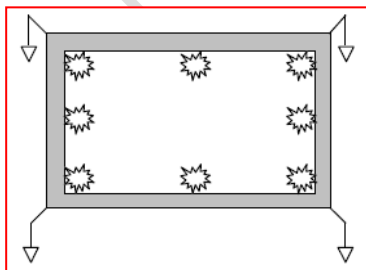
No.	Test items	Conditions		Remark
1	High temperature storage	Ta= 95 °C	240 Hrs	
2	Low temperature storage	Ta= -40 °C	240 Hrs	
3	High temperature operation	Ta= 85 °C	240 Hrs	
4	Low temperature operation	Ta= -30 °C	240 Hrs	
5	High temperature and high humidity	Ta= 60 °C , 90 % RH	240 Hrs	
6	Heat shock	-30 °C ~ 85 °C / 100 cycles 1 Hrs/cycle		
7	Shock	100 G, 6 ms, ±X, ±Y, ±Z 3 times for each direction		
8	Electrostatic Discharge	Contact = ± 8 kV, 1sec, 8 point, 10 times/point class B (R=330Ω,C=150pF) Air = ± 15 kV, 1sec, 8 point, 10 times/point class B (R=330Ω,C=150pF)		Operation (Note 4)
9	Vibration	Frequency range	8 ~ 33.3 Hz	
		Stoke	1.3 mm	
		Sweep	2.9 G, 33.3 ~ 400Hz	
		Cycle	15 min.	
		2 hours for each direction of X, Z 4 hours for Y direction		
10	Vibration (with carton)	Random vibration: 0.015 G ² /Hz from 5 ~ 200 Hz -6dB/Octave from 200~500Hz, 30min/direction		
11	Drop (with carton)	Height: 60 cm 1 corner, 3 edges, 6 surfaces		

Note 1: Ta: Ambient temperature

Note 2: In the standard condition, there is no display function NG issue occurred. All the cosmetic specification is judged before the reliability stress.

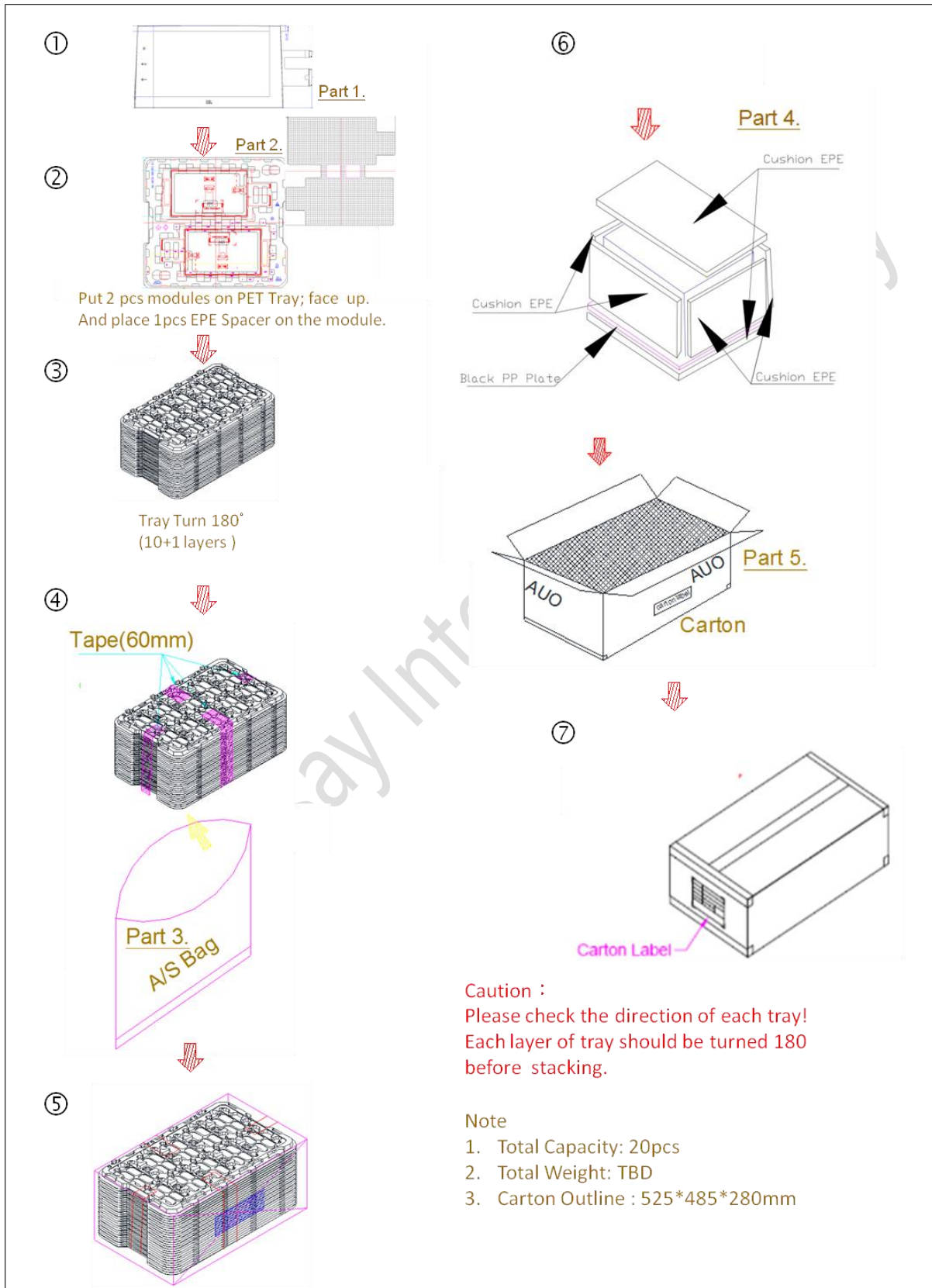
Note 3: I_L = 80mA

Note 4: Test techniques follow IEC61000-4-2 standard.Class B – Some performance degradation allowed.
No data lost. Self-recoverable. No hardware failures.



H. Packing and Marking

1. Packing Form



2. Module/Panel Label Information

The module/panel (collectively called as the "Product") will be attached with a label of Shipping Number which represents the identification of the Product at a specific location. Refer to the Product outline drawing for detailed location and size of the label. The label is composed of a 22-digit serial number with the following definition:

ABCDEFGHIJKLMNOPQRSTUV

- For internal system usage and production serial numbers.
- AUO Module or Panel factory code, represents the final production factory to complete the Product
- Product version code, ranging from 0~9 or A~Z (for Version after 9)
- Week Code, the production week when the product is finished at its production process

Example:

501M06ZL06123456781Z05:

Product Manufacturing Week Code: WK50

Product Version: Version 1

Product Manufacturing Factory: M06

3. Carton Label Information

The packing carton will be attached with a carton label where packing Q'ty, AUO Model Name, AUO Part Number, Customer Part Number (Optional) and a series of Carton Number in 13 or 14 digits are printed. The Carton Number is appearing in the following format:

ABC-DEFG-HIJK-LMN

- DEFG appear after first "-" represents the packing date of the carton
- Date from 01 to 31
- Month, ranging from 1~9, A~C. A for Oct, B for Nov and C for Dec.
- A.D. year, ranging from 1~9 and 0. The single digit code represents the last number of the year

Refer to the drawing of packing format for the location and size of the carton label.

4. Warehouse storage condition:

When storing modules as spares for a period, the following precautions are necessary

(1) Store them in a dark place. Do not expose the module to sunlight or fluorescent light.

- a) Keep the temperature between 20℃ and 30℃ at normal humidity(30%~70%) with a period no longer than 3 months as recommended condition.
- b) Keep the temperature at 60℃ and 60%RH with a period no longer than 1 month as recommended condition.

Application Note:

Input testing for Toyota

- I. TL1010 under checking with plastic suppliers.
- II. PV3964 done (with deviation and provided in file separately).
- III. VW8000 done (with deviation and provided in file separately).
- IV. ASF Chemical test of surface AUO only commit what Toyota required as the report as TG1J020M Chemical & ASTM D3363 test report which AUO provided in developing stage.

IIS SPEC as attachment

Input Timing Diagram for Toyota

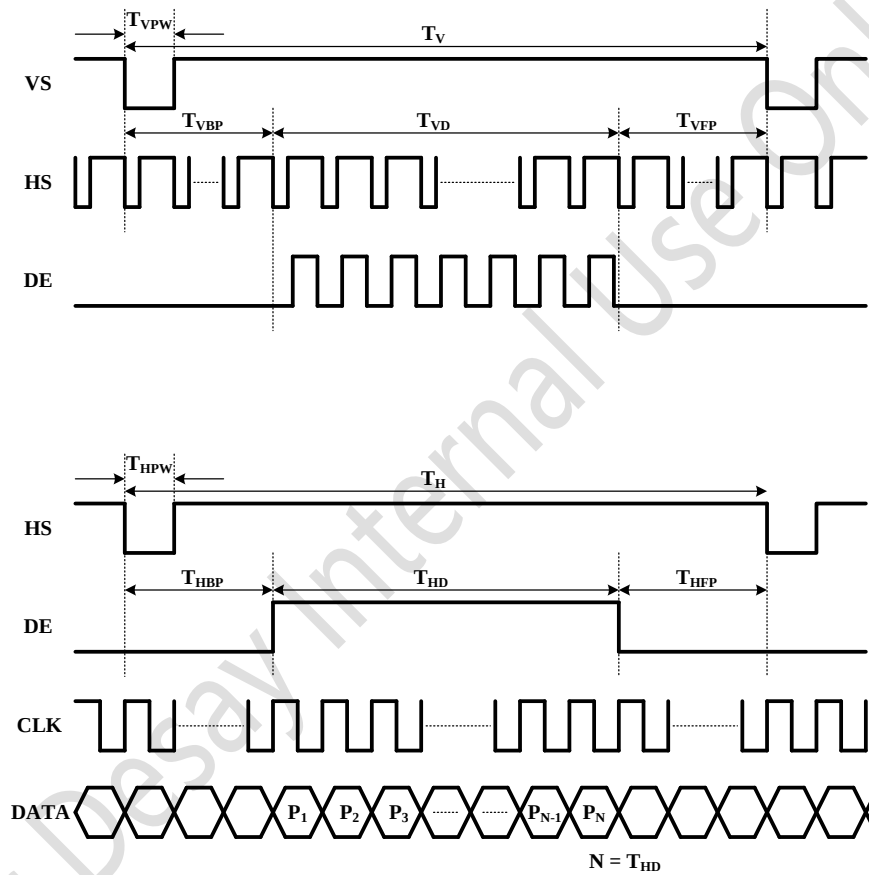


Fig. 1. Input Timing Diagram

Parameter		Symbol	Min.	Unit.	Remark
CLK Frequency		F_{CLK}	66	MHz	
HSYNC	Period	T_H	1524	CLK	
	Horizontal display area	T_{HD}	1280	CLK	
	Blanking	$T_{HBP} + T_{HFP}$	180	CLK	
VSYNC	Period	T_V	760	HS	
	Vertical display area	T_{VD}	720	CLK	
	Blanking	$T_{VBP} + T_{VFP}$	40	HS	