晶采光電科技股份有限公司
AMPIRE CO., LTD.

/SIMPLEPLUS Touch Displays

SPECIFICATIONS FOR LCD MODULE

CUSTOMER	
CUSTOMER PART NO.	
AMPIRE PART NO.	AMA-104B01-DU2511-G010
APPROVED BY	
DATE	

☑ **Approved For Specifications**

☐ Approved For Specifications & Sample

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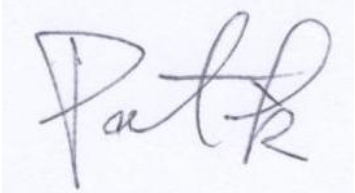
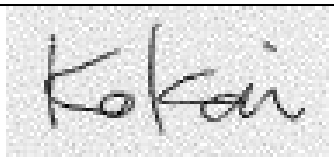
APPROVED BY	CHECKED BY	ORGANIZED BY
		

RECORD OF REVISION

Revision Date	Page	Contents	Editor
2018/4/11	-	New Release.	Emil

1. GENERAL DESCRIPTION

1.1 Overview

This is a 10.4” TFT Liquid Crystal Display module with LED backlight unit and 30-pin-and-1ch LVDS interface. This product supports 1024 x 768 XGA format and can display true 16.2M colors (6-bits colors with FRC). The converter module for LED backlight is built-in.

1.2 Features

- Excellent brightness (425 nits)
- Ultra high contrast ratio (1000:1)
- Fast response time (Ton+Toff average 25 ms)
- XGA (1024 x 768 pixels) resolution
- DE (Data Enable) only mode
- LVDS (Low Voltage Differential Signaling) interface
- Ultra wide viewing angle: 176(H)/ 176(V) (CR>10) Super MVA technology
-180 degree rotation display option
-Wide operation temperature
- Projected Capacitive Touch Screen.
  a. Interface : USB
  b. Touch Controller: ILI2511
  c. Cover Lens :
     - Heat Strengthened Glass: T=1.1mm

1.3 Application

-TFT LCD monitor
- Industrial applications

1.4 General specification

Item	Specification	Unit	Note
Active Area	210.4 (H) x 157.8 (V) (10.4” diagonal)	mm	(1)
Bezel Opening Area	215.4 (H) x 161.8 (V)	mm	
Driver Element	a-si TFT active matrix	-	-
Pixel Number	1024 x R.G.B. x 768	pixel	-
Pixel Pitch (Sub Pixel)	0.0685 (H) x 0.2055 (V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	16.2 M	color	-
Display Operation Mode	Transmissive mode / Normally black	-	-
Total power consumption(typ)	7.9	W	Typ. Exclude TP

2. ABSOLUTE MAXIMUM RATINGS

2.1 ABSOLUTE RATINGS OF ENVIRONMENT

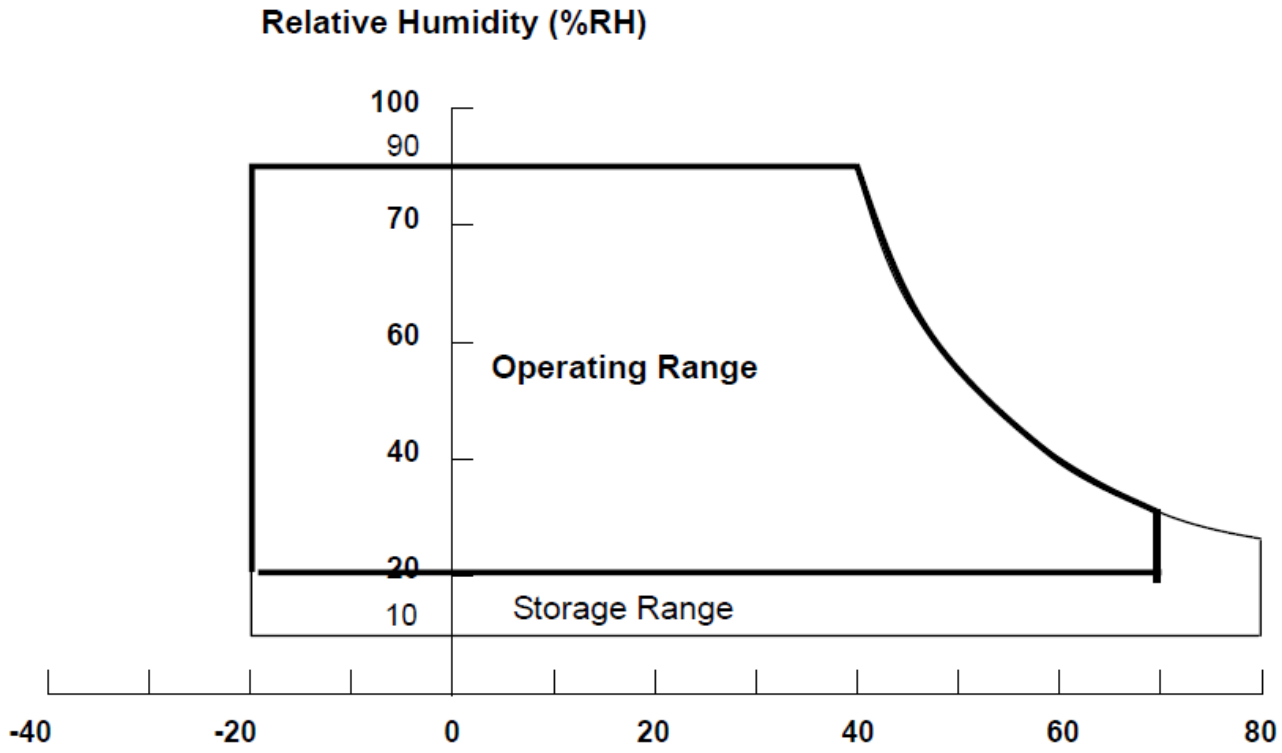
Item	Symbol	Value		Unit	Note
		Min.	Max		
Operating Ambient Temperature	TOP	-30	+70	ºC	
Storage Temperature	TST	-30	+80	ºC	

Note (1) Temperature and relative humidity range is shown in the figure below.

(a) 90 %RH Max. (Ta ≦ 40 ºC).

(b) Wet-bulb temperature should be 39 ºC Max. (Ta > 40 ºC).

(c) No condensation



2.2 ELECTRICAL ABSOLUTE RATINGS

2.2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max		
Power Supply Voltage of LCM	VCC	-0.3	7	V	(1)
Power Supply Voltage of TP module	VCC 5V	-0.3	6	V	

2.2.2 LED CONVERTER

Item	Symbol	Value		Unit	Note
		Min.	Max		
Converter Voltage	V_i	-0.3	18	V	(1)(2)
Enable Voltage	EN	--	5.5	V	
Backlight Adjust	ADJ	--	5.5	V	

Note (1) Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.

Note (2) Specified values are for LED light bar (Refer to 3.2 for further information).

3. ELECTRICAL CHARACTERISTICS

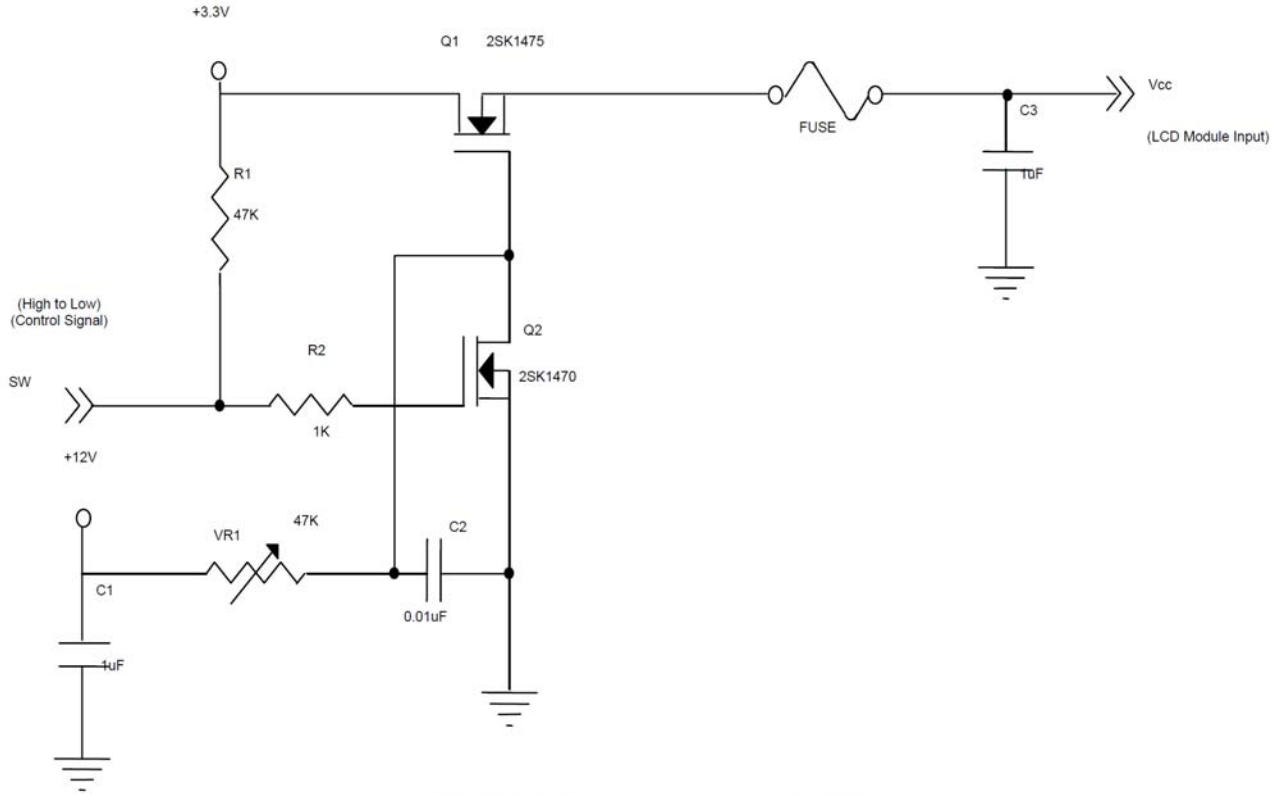
3.1 TFT LCD MODULE

Ta = 25 ± 2 ºC

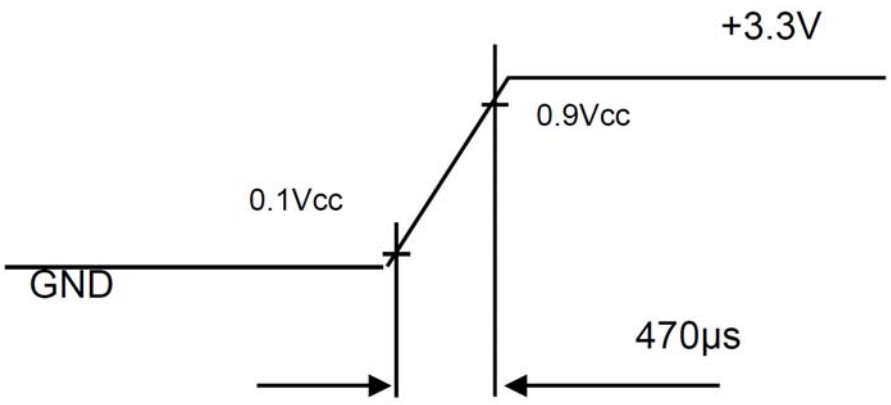
Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Power Supply Voltage		V_{CC}	3.0	3.3	3.6	V	(1)
Rush Current		I_{RUSH}	-	-	4.0	A	(2)
Power Supply Current	White	-	-	570	620	mA	(3)
	Black		-	420	460	mA	
Power Consumption		P_L	-	1.9	2.1-	W	
LVDS differential input voltage		|VID|	100	-	600	mV	-
LVDS common input voltage		VICM	0.7	-	1.6	V	-

Note (1) The assembly should be always operated within above ranges.

Note (2) Measurement Conditions:



VCC rising time is 470us



Note (3) The specified power supply current is under the conditions at Vcc = 3.3 V, Ta = 25 ± 2 ºC, fv = 60 Hz, whereas power dissipation check pattern below is displayed.

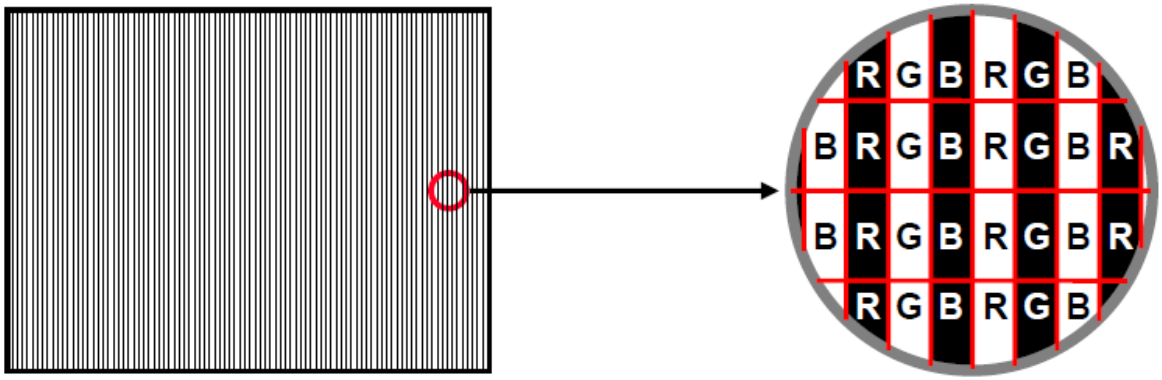
a. White Pattern

Active Area

b. Black Pattern

Active Area

c. Vertical Stripe Pattern



Active Area

3.2 LED CONVERTER

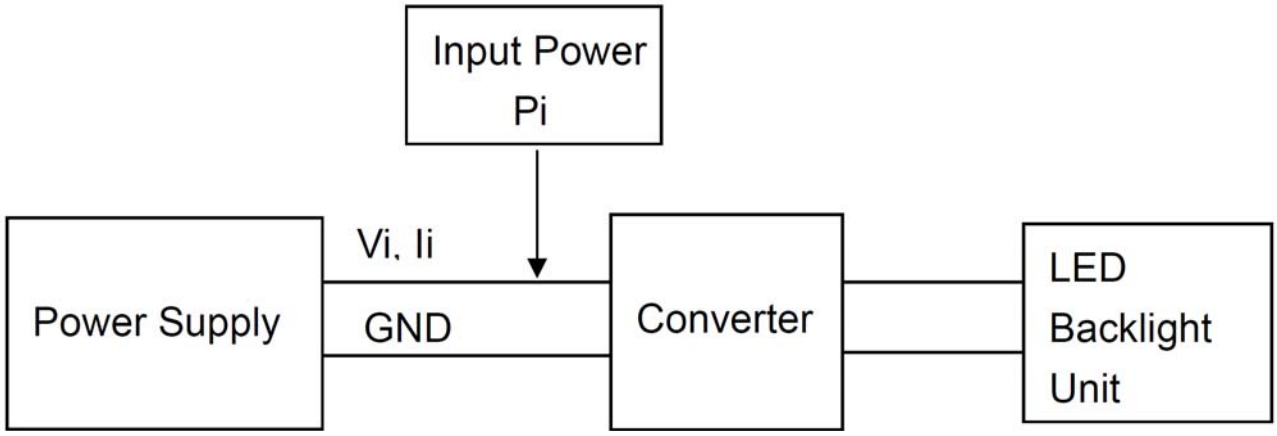
Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Converter Power Supply Voltage		V_i	10.8	12.0	13.2	V	(Duty 100%)
Converter Power Supply Current		I_i	-	0.5	0.6	A	@ Vi = 12V (Duty 100%)
LED Power Consumption		P_{LED}	-	6	7.2	W	@ Vi = 12V (Duty 100%)
EN Control Level	Backlight on		2.0	-	5	V	
	Backlight off		0	-	0.8	V	
PWM Control Level	PWM High Level		2.0	-	5	V	
	PWM Low Level		0	-	0.15	V	
PWM Control Duty Ratio			2		100	%	
PWM Control Frequency		f_{PWM}	190	200	20k	Hz	
LED Life Time		L_L	50,000			Hrs	(2)

Note (1) LED current is measured by utilizing a high frequency current meter as shown below:

Note (2) At 190 ~1KHz PWM control frequency, duty ratio range is restricted from 2% to 100%. 1K ~20KHz PWM control frequency，minimum duty on-time ≧ 20 us.

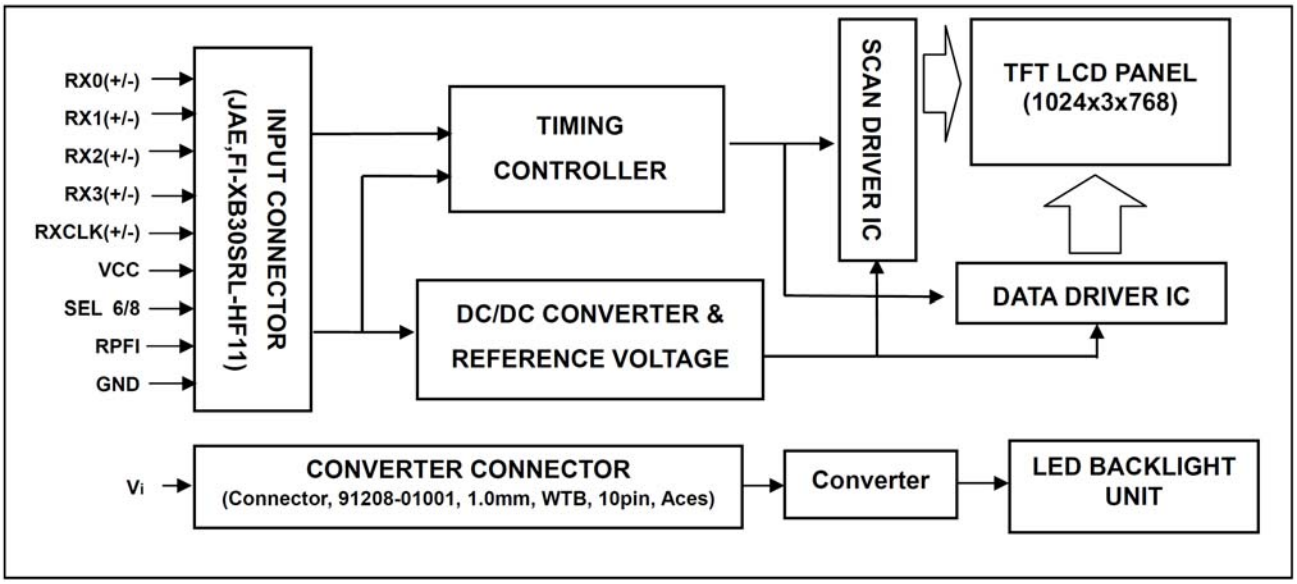
Note (3) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 25 ±2 ℃ and ILED = 60m ADC(LED forward current) until the brightness becomes ≦ 50% of its original value. And minimum LED lifetime is estimated and provided by Nichia in Japan.

Operating LED under high temperature environment will reduce life time and lead to color shift.



4. BLOCK DIAGRAM

4.1 TFT LCD MODULE



5. PIN ASSIGNMENT

5.1 TFT LCD MODULE

CN1 Connector Pin Assignment

Pin No.	Symbol	Description	Note
1	VCC	Power supply: +3.3V	
2	VCC	Power supply: +3.3V	
3	VCC	Power supply: +3.3V	
4	GND	Ground	
5	GND	Ground	
6	GND	Ground	
7	RPFI	Reverse Panel Function (Display Rotation)	(2)
8	NC	No Connection	
9	NC	No Connection	
10	NC	No Connection	
11	SEL6/8	LVDS 6/8 bit select function control, Low or NC→8 bit Input Mode High→ 6bit Input Mode	(2)
12	GND	Ground	
13	NC	No Connection	
14	GND	Ground	
15	RX0-	Negative transmission data of pixel 0	
16	RX0+	Positive transmission data of pixel 0	
17	GND	Ground	
18	RX1-	Negative transmission data of pixel 1	
19	RX1+	Positive transmission data of pixel 1	
20	GND	Ground	
21	RX2-	Negative transmission data of pixel 2	
22	RX2+	Positive transmission data of pixel 2	
23	GND	Ground	
24	RXCLK-	Negative of clock	
25	RXCLK+	Positive of clock	
26	GND	Ground	
27	RX3-	Negative transmission data of pixel 3	
28	RX3+	Positive transmission data of pixel 3	
29	GND	Ground	
30	NC	No Connection	(2)

Note (1) Connector Part No.: STM, MSCK2407P30.D or compatible connector

Note (2) “Low” stands for 0V. “High” stands for 3.3V. “NC” stands for “No Connected”.

5.2 BACKLIGHT UNIT (Converter connector pin)

Pin	Symbol	Description	Remark
1	V_i	Converter input voltage	12V
2	V_i	Converter input voltage	12V
3	V_i	Converter input voltage	12V
4	V_i	Converter input voltage	12V
5	V_{GND}	Converter ground	Ground
6	V_{GND}	Converter ground	Ground
7	V_{GND}	Converter ground	Ground
8	V_{GND}	Converter ground	Ground
9	EN	Enable pin	3.3V
10	ADJ	Backlight Adjust	PWM Dimming

Note (1) Connector Part No.: 91208-01001(ACES) or equivalent

Note (2) User's connector Part No.: 91209-01011(ACES) or equivalent

5.3 COLOR DATA INPUT ASSIGNMENT

The brightness of each primary color (red, green and blue) is based on the 8-bit gray scale data input for the color. The higher the binary input, the brighter the color. The table below provides the assignment of color versus data input.

Color		Data Signal																							
		Red								Green								Blue							
		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	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
	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
	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
	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
	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	Red(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(1)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(2)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Red(253)	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(254)	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(255)	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	Green(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Green(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Green(253)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0
	Green(254)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	Green(255)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Gray Scale Of Blue	Blue(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
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	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Blue(253)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1
	Blue(254)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0
	Blue(255)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

Note (1) 0: Low Level Voltage, 1: High Level Voltage

6. INTERFACE TIMING

6.1 INPUT SIGNAL TIMING SPECIFICATIONS

The input signal timing specifications are shown as the following table and timing diagram.

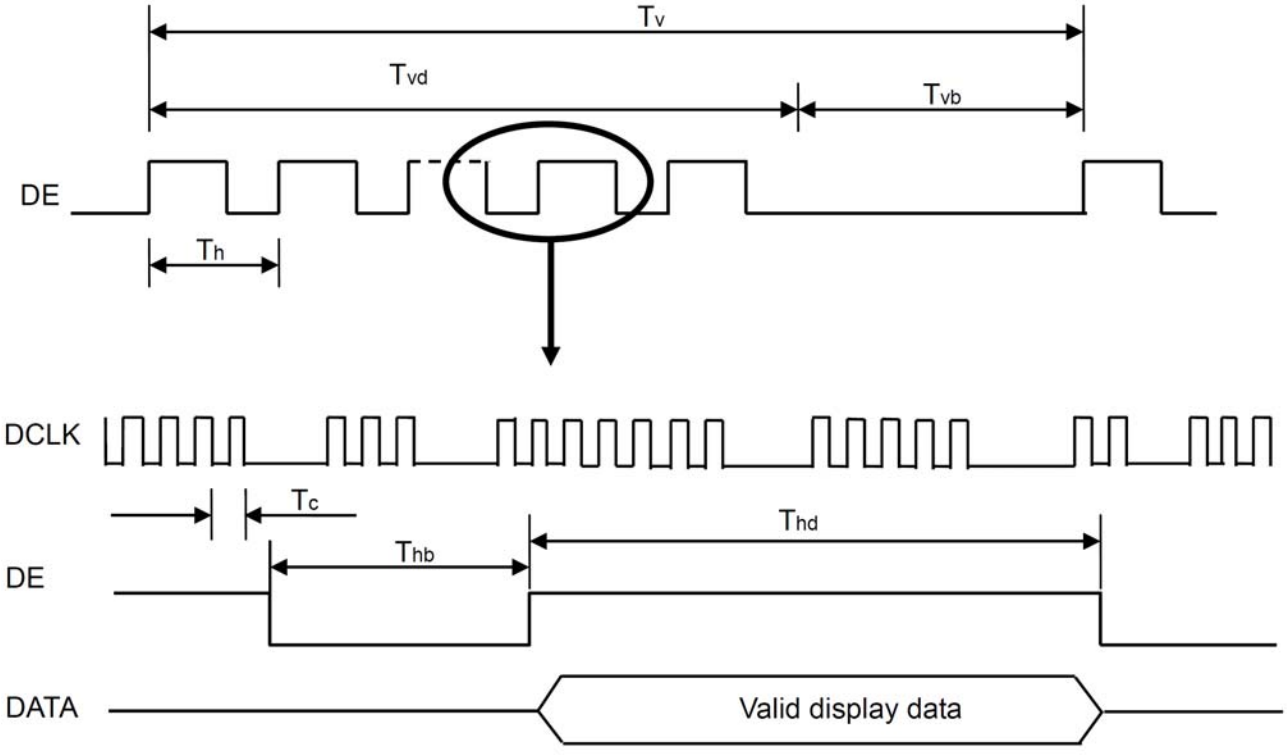
Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Note
DCLK	Frequency	Fc	55	65	75	MHZ	
Vertical Active Display Term	Total	Tv	770	806	950	Th	Tv=Tvd+Tvb
	Display	Tvd	768	768	768	Th	
	Blank	Tvb	2	38	182	Th	
Horizontal Active Display Term	Total	Th	1104	1344	1800	Tc	Th=Thd+Thb
	Display	Thd	1024	1024	1024	Tc	
	Blank	Thb	76	320	776	Tc	

Note (1) Since this assembly is operated in DE only mode, Hsync and Vsync input signals should be set to low logic level. Otherwise, this assembly would operate abnormally.

(2) Frame rate is 60Hz

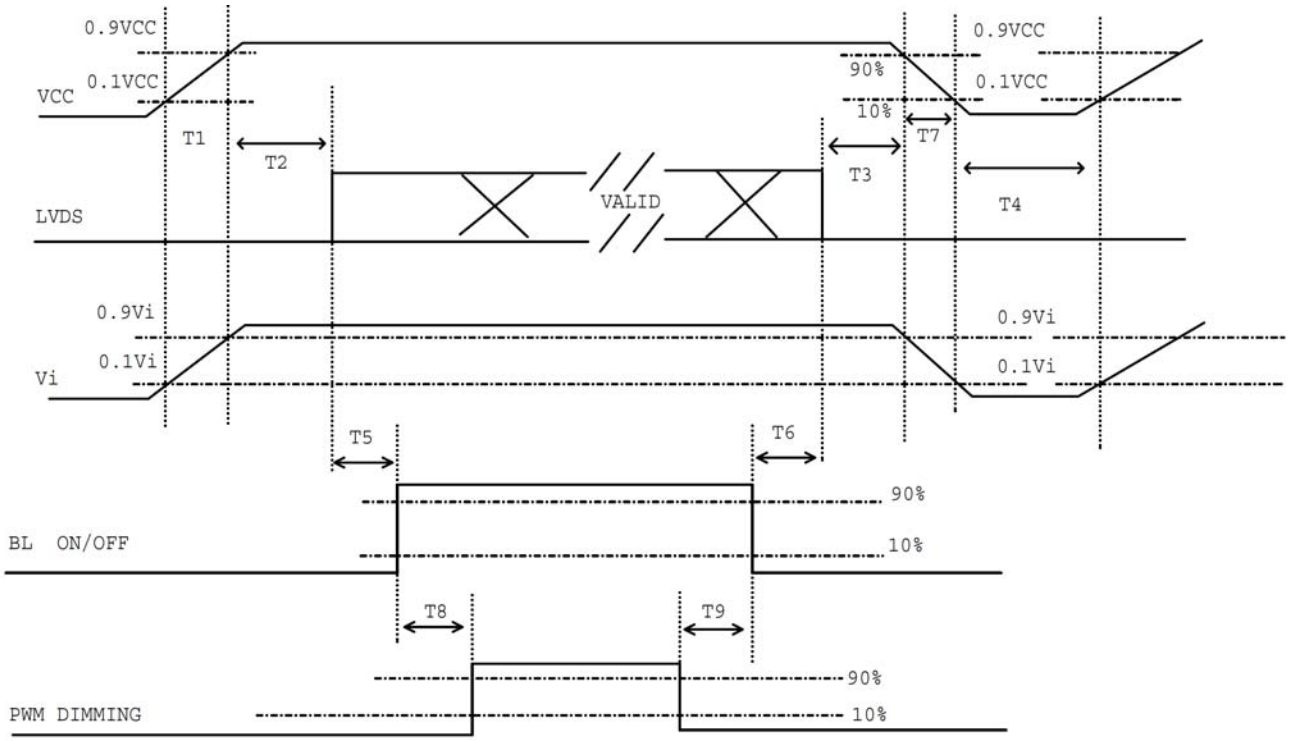
(3) The Tv(Tvd+Tvb) must be integer, otherwise, this module would operate abnormally.

INPUT SIGNAL TIMING DIAGRAM



6.2 POWER ON/OFF SEQUENCE

To prevent a latch-up or DC operation of LCD assembly, the power on/off sequence should be as the diagram below.



Power ON/OFF sequence

Note (1) Please avoid floating state of interface signal at invalid period.

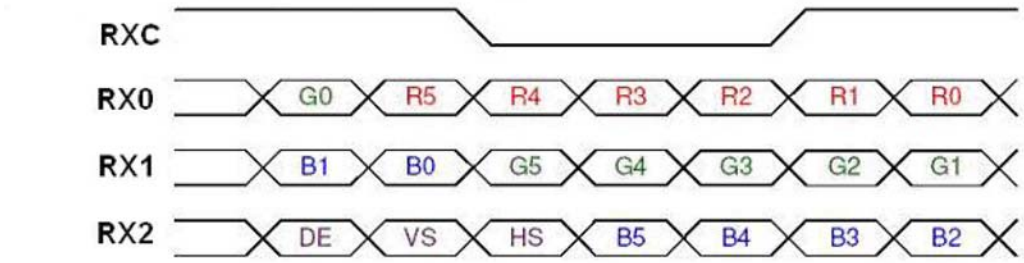
Note (2) When the interface signal is invalid, be sure to pull down the power supply of LCD VCC to 0 V.

Note (3) The Backlight converter power must be turned on after the power supply for the logic and the interface signal is valid. The Backlight converter power must be turned off before the power supply for the logic and the interface signal is invalid.

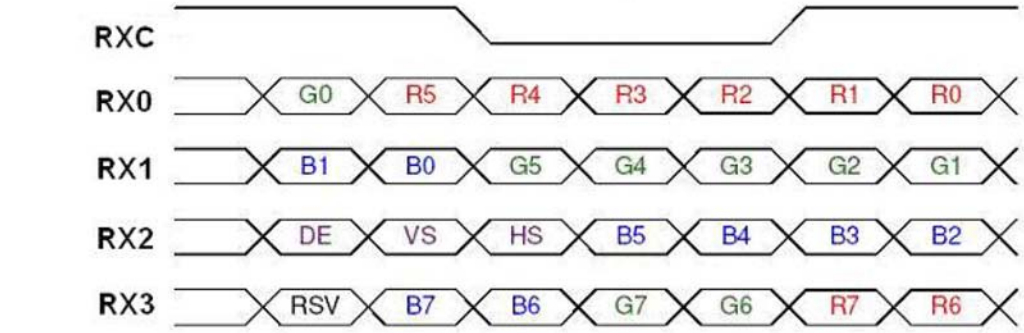
Parameter	Value			Units
	Min	Typ	Max	
T1	0.5	-	10	ms
T2	0	-	50	ms
T3	0	-	50	ms
T4	500	-	-	ms
T5	200	-	-	ms
T6	20	-	-	ms
T7	5	-	300	ms
T8	10	-	-	ms
T9	10	-	-	ms

6.3 The Input Data Format

SEL 6/8 = "High" for 6 bits LVDS Input



SEL 6/8 = "Low" or "NC" for 8 bits LVDS Input



Note (1) R/G/B data 7: MSB, R/G/B data 0: LSB

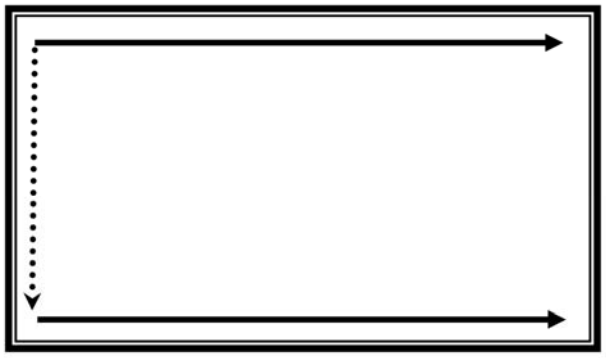
Note (2) Please follow PSWG

Signal Name	Description	Remark
R7	Red Data 7 (MSB)	Red-pixel Data
R6	Red Data 6	Each red pixel's brightness data consists of these 8bits pixel data.
R5	Red Data 5	
R4	Red Data 4	
R3	Red Data 3	
R2	Red Data 2	
R1	Red Data 1	
R0	Red Data 0 (LSB)	
G7	Green Data 7 (MSB)	Green-pixel Data
G6	Green Data 6	Each red pixel's brightness data consists of these 8bits pixel data.
G5	Green Data 5	
G4	Green Data 4	
G3	Green Data 3	
G2	Green Data 2	
G1	Green Data 1	
G0	Green Data 0 (LSB)	Blue-pixel Data
B7	Blue Data 7 (MSB)	Each red pixel's brightness data consists of these 8bits pixel data.
B6	Blue Data 6	
B5	Blue Data 5	
B4	Blue Data 4	
B3	Blue Data 3	
B2	Blue Data 2	
B1	Blue Data 1	
B0	Blue Data 0	
RXCLKIN+	LVDS Clock Input	
RXCLKIN-	LVDS Clock Input	
DE	Display Sync	
VS	Vertical Sync	
HS	Horizontal Sync	

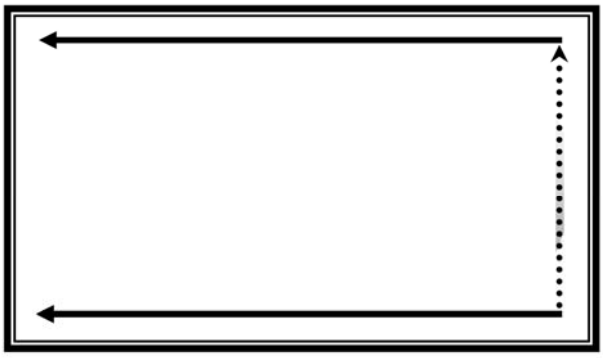
Note (3) Output signals from any system shall be low or Hi-Z state when VCC is off

6.4 Scanning Direction

The following figures show the image see from the front view. The arrow indicates the direction of scan.



RPFI = Low/floating; normal display (default)



RPFI = high: display with 180degree rotation

7. OPTICAL CHARACTERISTICS

7.1 TEST CONDITIONS

Item	Value	Unit
Ambient Temperature (Ta)	25±2	ºC
Ambient Humidity (Ha)	50±10	%RH
Supply Voltage	According to typical value in "ELECTRICAL HARACTERISTICS"	
Input Signal		
LED Light Bar Input Current Per Input Pin		

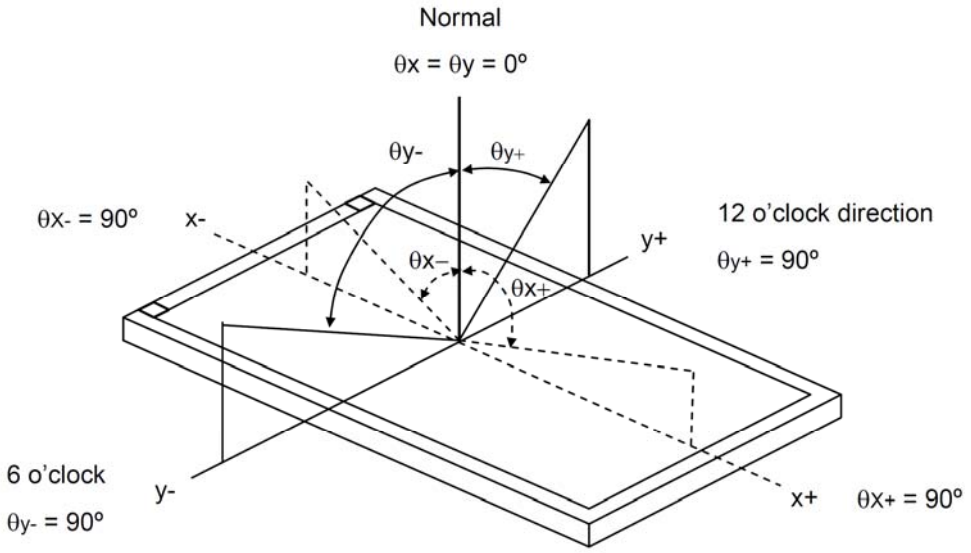
7.2 OPTICAL SPECIFICATIONS

The relative measurement methods of optical characteristics are shown in 7.2 and all items are measured at the center point of screen except white variation. The following items should be measured under the test conditions described in 7.1 and stable environment shown in Note (5).

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio		CR	θx=0°, θY=0° Viewing angle at normal direction	700	1000	-	-	(2)
Response Time		T_R		-	14	19	ms	(3)
		T_F		-	11	16	ms	
Center Luminance of White		L_C		340	425	-	cd/m^2	(4)
White Variation		δW		-	1.25	1.4	-	(6)
Chromaticity	Red	Rx		Typ. -0.05	0.617	Typ. +0.05	-	(1) (5)
		Ry			0.357		-	
	Green	Gx			0.336		-	
		Gy			0.567		-	
	Blue	Bx			0.147		-	
		By			0.087		-	
	White	Wx			0.313		-	
		Wy			0.329		-	
Viewing Angle	Horizontal	θx+	CR≥10	80	88	-	Deg	(1)
		Θx-		80	88	-		
	Vertical	θY+		80	88	-		
		θY-		80	88	-		

Note (1) Definition of Viewing Angle (θx, θy):

Viewing angles are measured by BM5A



Note (2) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.

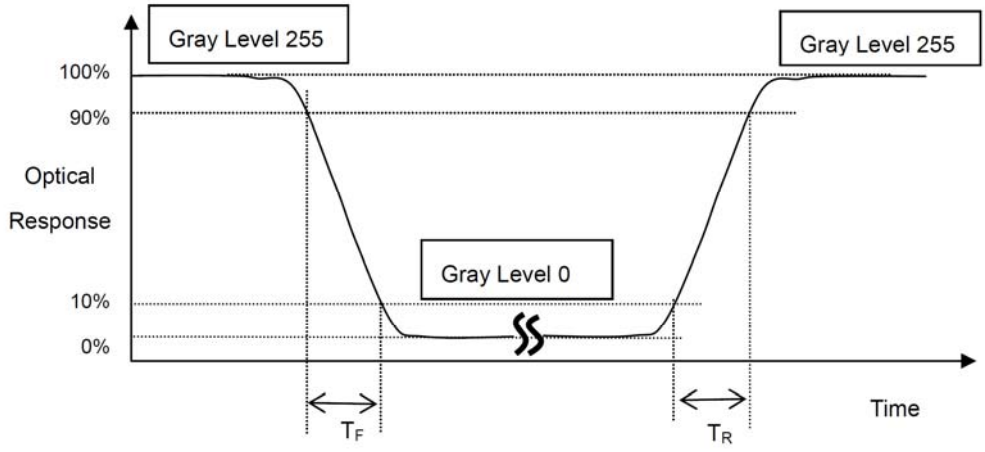
Contrast Ratio (CR) = L255 / L0

L255: Luminance of gray level 255

L 0: Luminance of gray level 0

CR = CR (5), where CR (X) is corresponding to the Contrast Ratio of the point X at the figure in Note (6).

Note (3) Definition of Response Time (T_R, T_F):



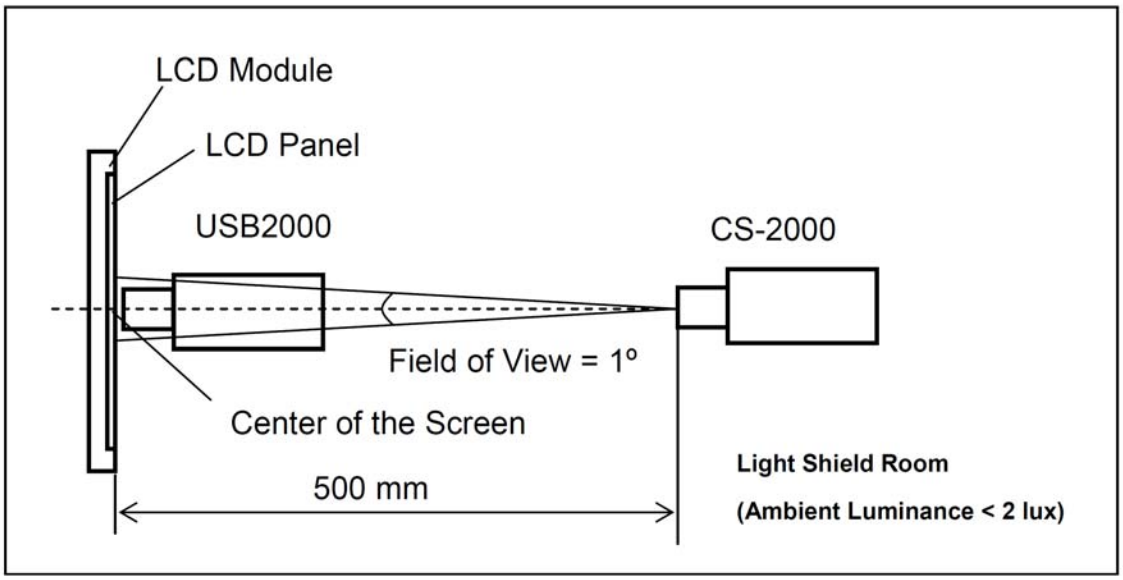
Note (4) Definition of Luminance of White (L_C):

Measure the luminance of gray level 255 at center point and 5 points

L_C = L (5), where L (X) is corresponding to the luminance of the point X at the figure in Note (6).

Note (5) Measurement Setup:

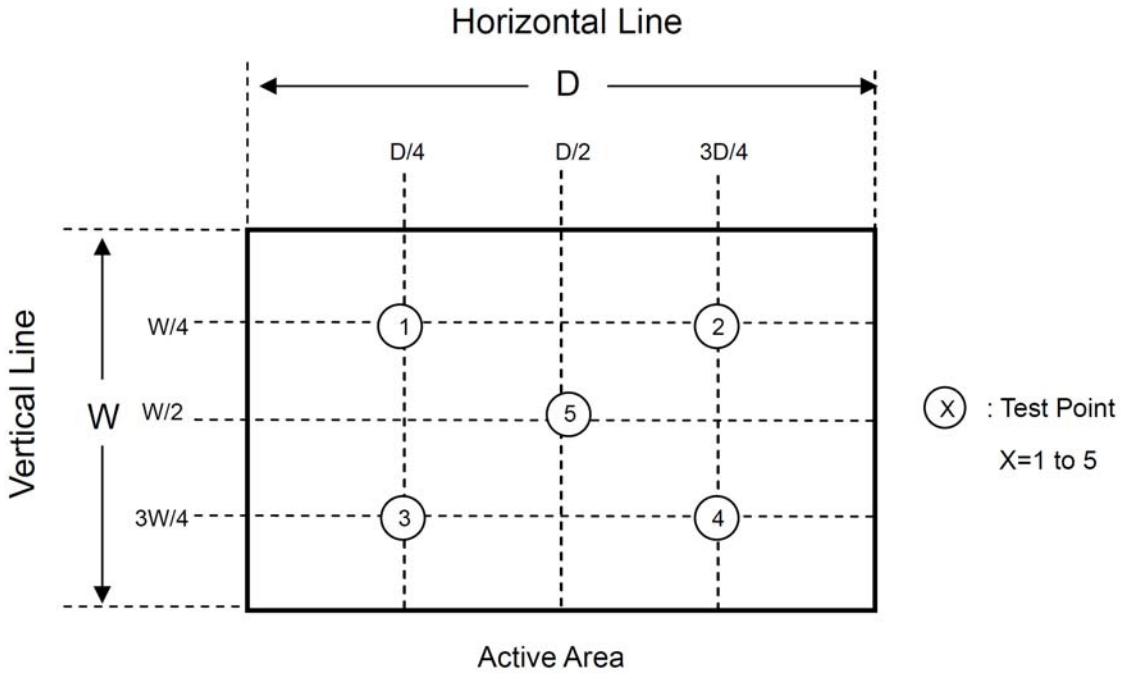
The LCD assembly should be stabilized at given temperature for 30 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 30 minutes in a windless room.



Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 63 (255) at 5 points

$$\delta W = \frac{\text{Maximum [L (1), L (2), L (3), L (4), L (5)]}}{\text{Minimum [L (1), L (2), L (3), L (4), L (5)]}}$$



8. TOUCH PANEL ELECTRICAL SPECIFICATION

ITEM	SPECIFICATION
Type	Projective Capacitive Touch Panel
Activation	Multi-touch
X/Y Position Reporting	Absolute Position
Touch Force	No contact pressure required
Calibration	No need for calibration
Report Rate	Approx 100 points/sec
Interface	USB
Control IC	ILI2511
Conductive Susceptibility IEC/EN61000-4-6	10Vrms
Radiated Susceptibility IEC/EN61000-4-3	30V/m

Specify the normal operating condition

(GND=0V)

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Power Supply Voltage	VCC 5V	4.75	5.0	5.25	V	
Power Consumption	$I_{VCC\ 5V}$		T.B.D		mA	

Interface

Pin No.	Symbol	Function
1	VCC 5V	USB power input 5V
2	D+	USB Data+
3	D-	USB Data-
4	NC	No connection
5	GND	POWER GND
6	GND	POWER GND

9. RELIABILITY TEST CRITERIA

Test Item	Test Condition	Note
High Temperature Storage Test	80ºC, 240 hours	(1) (2) (3) (4)
Low Temperature Storage Test	-30ºC, 240 hours	
Thermal Shock Storage Test	-20ºC, 0.5hour⟷70℃, 0.5hour; 100cycles, 1hour/cycle	
High Temperature Operation Test	70ºC, 240 hours	
Low Temperature Operation Test	-30ºC, 240 hours	
High Temperature & High Humidity Operation Test	60ºC, 90%RH, 240hours	(1) (2) (3) (5)

Note (1) There should be no condensation on the surface of panel during test.

Note (2) Temperature of panel display surface area should be 80 ºC Max.

Note (3) In the standard conditions, there is no function failure issue occurred. All the cosmetic specification is judged before reliability test.

Note (4) Before cosmetic and function test, the product must have enough recovery time, at least 2 hours at room temperature.

Note (5) Before cosmetic and function test, the product must have enough recovery time, at least 24 hours at room temperature.

10. USE PRECAUTIONS

10-1 Safety

Liquid crystal is poisonous. Do not put it your month. If liquid crystal touches your skin or clothes, wash it off immediately by using soap and water.

10-2 Handling

1. The LCD panel is plate glass. Do not subject the panel to mechanical shock or to excessive force on its surface.
2. The polarizer attached to the display is easily damaged. Please handle it carefully to avoid scratch or other damages.
3. To avoid contamination on the display surface, do not touch the module surface with bare hands.
4. Keep a space so that the LCD panels do not touch other components.
5. Put cover board such as acrylic board on the surface of LCD panel to protect panel from damages.
6. Transparent electrodes may be disconnected if you use the LCD panel under environmental conditions where the condensation of dew occurs.
7. Do not leave module in direct sunlight to avoid malfunction of the ICs.

10-3 Static Electricity

1. Be sure to ground module before turning on power or operation module.
2. Do not apply voltage which exceeds the absolute maximum rating value.

10-4 Storage

1. Store the module in a dark room where must keep at +25±10℃ and 65%RH or less.
2. Do not store the module in surroundings containing organic solvent or corrosive gas.
3. Store the module in an anti-electrostatic container or bag.

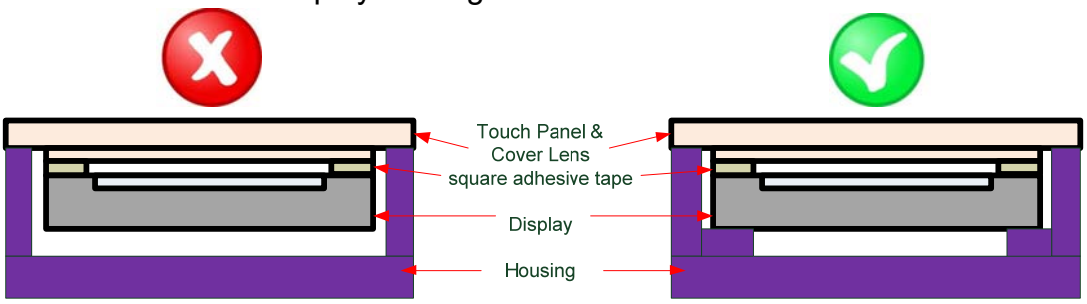
10-5 Cleaning

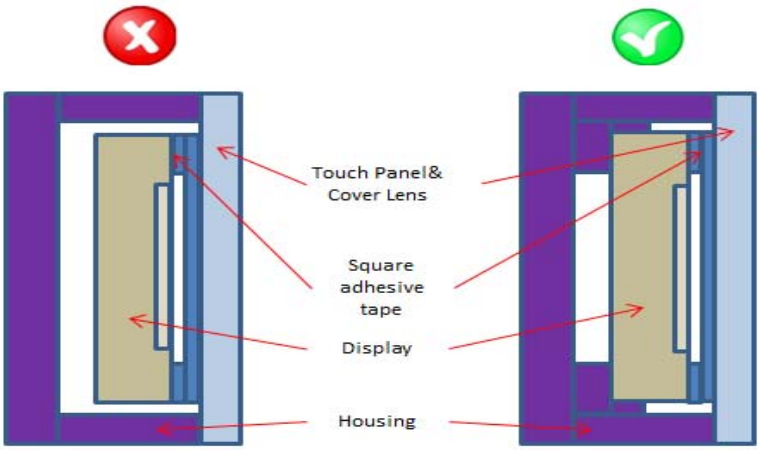
1. Do not wipe the polarizer with dry cloth. It might cause scratch.
2. Only use a soft sloth with IPA to wipe the polarizer, other chemicals might permanent damage to the polarizer.

10-6 Mechanism

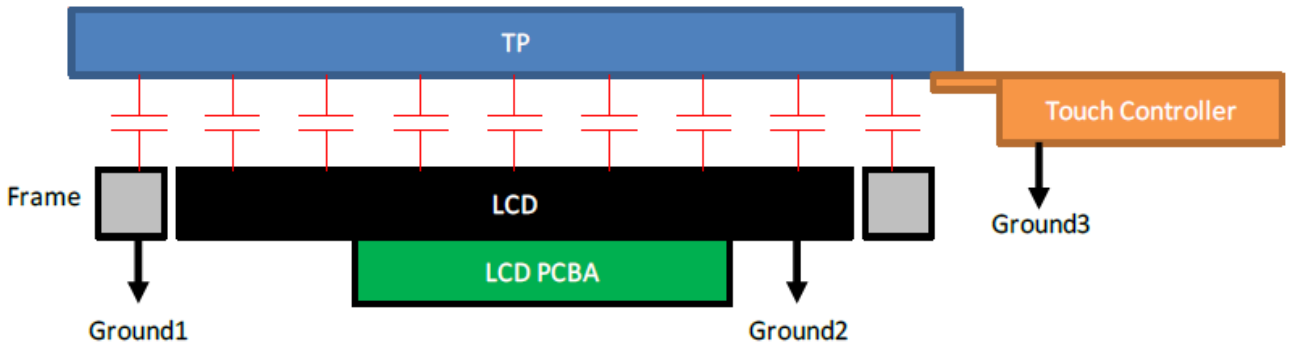
(1) Please mount LCD module by using mounting holes arranged in four corners tightly.

(2) The square adhesive tape which is between the touch panel and display can't provide well supporting in the long term and high ambient temperature condition. Whether upright or horizontal position the support holder which is in the back side of the display is needed. Do not let the display floating.





(3) TP needs to work in environment with stable stray capacitance. In order to minimize the variation in stray capacitance, all conductive mechanical parts must not be floating. Intermittent floating any conductive part around the touch sensor may cause significant stray capacitance change and abnormal touch function. It is recommended to keep all conductive parts having same electrical potential as the GND of the touch controller module.



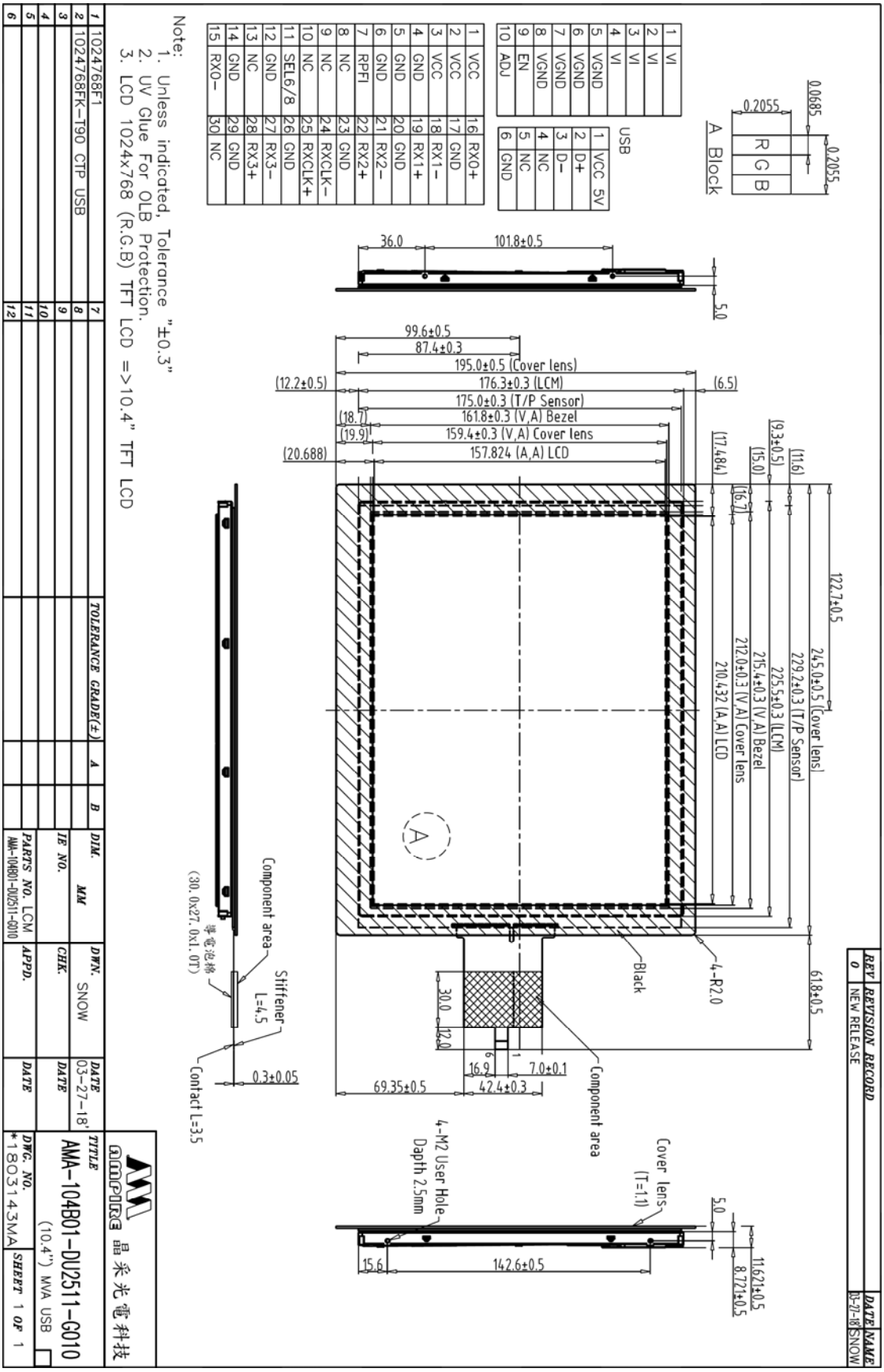
GND1, GND2 and GND3 should be connected together to have the same ground

10-7 Others

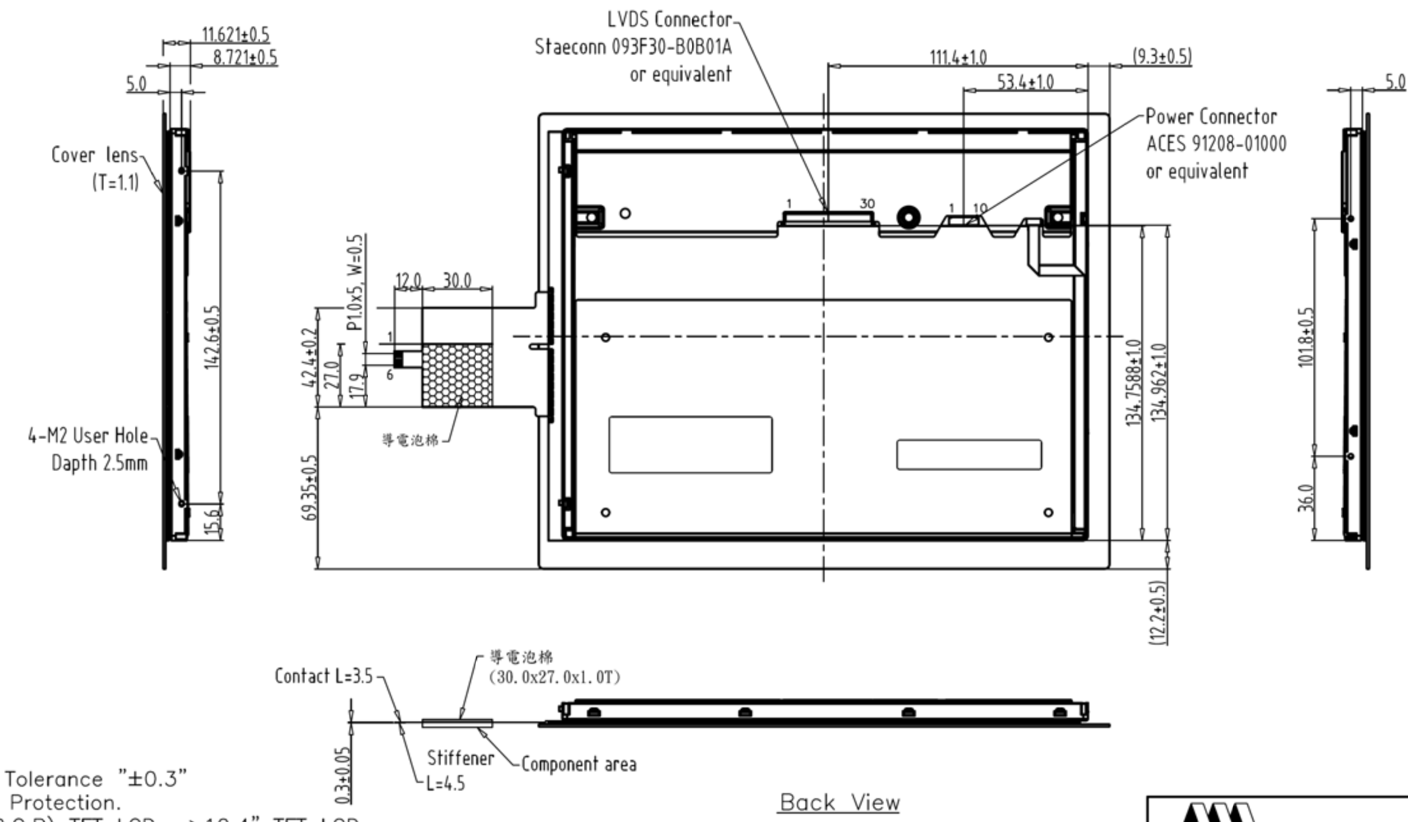
1. AMIPRE will provide one year warrantee for all products and three months warrantee for all repairing products.

2. Do not keep the LCD at the same display pattern continually. The residual image will happen and it will damage the LCD. Please use screen save

11.OUTLINEDIMENSION



REV	REVISION RECORD	DATE	NAME
0	NEW RELEASE	03-27-18	SNOW



1	VI
2	VI
3	VI
4	VI
5	VGND
6	VGND
7	VGND
8	VGND
9	EN
10	ADJ

USB

1	VCC 5V
2	D+
3	D−
4	NC
5	NC
6	GND

1	VCC	16	RX0+
2	VCC	17	GND
3	VCC	18	RX1−
4	GND	19	RX1+
5	GND	20	GND
6	GND	21	RX2−
7	RPFI	22	RX2+
8	NC	23	GND
9	NC	24	RXCLK−
10	NC	25	RXCLK+
11	SEL6/8	26	GND
12	GND	27	RX3−
13	NC	28	RX3+
14	GND	29	GND
15	RX0−	30	NC

Note:

1. Unless indicated, Tolerance "±0.3"
2. UV Glue For OLB Protection.
3. LCD 1024x768 (R.G.B) TFT LCD =>10.4" TFT LCD

AMPIRE 晶采光電科技

				TOLERANCE GRADE(±)	A	B	DIM. MM	DWN. SNOW	DATE 03-27-18'	TITLE AMA-104B01-DU2511-G010 (10.4") MVA USB
1	1024768F1	7								
2	1024768FK-T90 CTP USB	8								
3		9					IE NO.	CHK.	DATE	
4		10								
5		11					PARTS NO. LCM-1 AMA-104B01-DU2511-G010	APPD.	DATE	DWG. NO. *1803144MA
6		12								SHEET 1 OF 1