SPECIFICATION
FOR
APPROVAL

( ) **Preliminary Specification**
(◆) **Final Specification**

Title	14.1” WXGA TFT LCD

Customer	
MODEL	

SUPPLIER	LG Display Co., Ltd.
*MODEL	LP141WX5
Suffix	TLA1

*When you obtain standard approval,
please use the above model name without suffix

APPROVED BY	SIGNATURE
/	
/	
/	

Please return 1 copy for your confirmation with your signature and comments.

APPROVED BY	SIGNATURE
K. J. Kwon / G. Manager	
REVIEWED BY	
S. R. Kim / Manager	
PREPARED BY	
K. T. Moon / Engineer	

Products Engineering Dept.
LG Display Co., Ltd

Contents

RECORD OF REVISIONS

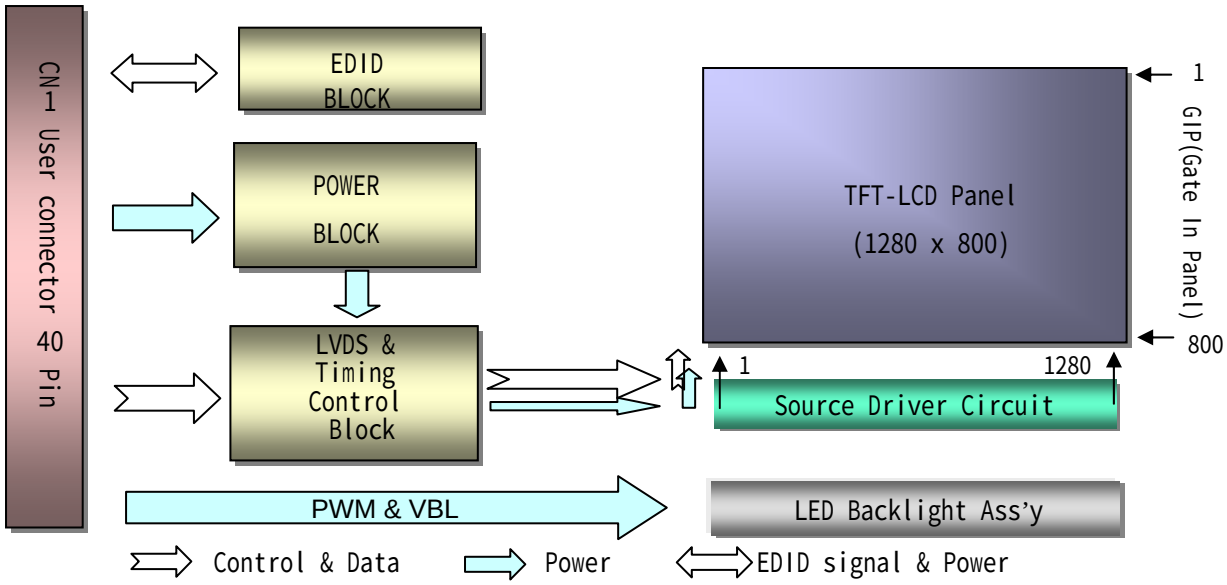
Revision No	Revision Date	Page	Description	EDID ver
0.0	Jan. 23. 2008	All	First Draft (Preliminary Specification)	-
0.1	Mar. 17. 2008	6	Update the “Electrical characteristic”	
		10	Update the [Table5. Timing table.]	
		14	Update the “Gray scale specification”	
		13	Update the “Optical characteristic”	
		17 - 19	Update the Mechanical Drawing	
1.0	May 09. 2008	All	Final specification	

1. General Description

The LP141WX5 is a Color Active Matrix Liquid Crystal Display with an integral LED backlight system. The matrix employs a-Si Thin Film Transistor as the active element. It is a transmissive type display operating in the normally white mode. This TFT-LCD has 14.1 inches diagonally measured active display area with WXGA resolution(1280 horizontal by 800 vertical pixel array). Each pixel is divided into Red, Green and Blue sub-pixels or dots which are arranged in vertical stripes. Gray scale or the brightness of the sub-pixel color is determined with a 6-bit gray scale signal for each dot, thus, presenting a palette of more than 262,144 colors.

The LP141WX5 has been designed to apply the interface method that enables low power, high speed, low EMI.

The LP141WX5 is intended to support applications where thin thickness, low power are critical factors and graphic displays are important. In combination with the vertical arrangement of the sub-pixels, the LP141WX5 characteristics provide an excellent flat display for office automation products such as Notebook PC.



General Features

Active Screen Size	14.1 inches diagonal
Outline Dimension	319.5(H) × 206.5(V) × .5.5(D,Max.) [mm]
Pixel Pitch	0.2373mm × 0.2373 mm
Pixel Format	1280 horiz. By 800 vert. Pixels RGB strip arrangement
Color Depth	6-bit, 262,144 colors
Luminance, White	220 cd/m^2(Typ.5 point)
Power Consumption	Total 4.2 Watt(Typ.) @ LCM circuit 1.2 Watt (Typ.), LED B/L 3.0 Watt (Typ.)
Weight	360g (Max.)
Display Operating Mode	Transmissive mode, normally white
Surface Treatment	Anti-glare treatment of the front polarizer
RoHS Comply	Yes

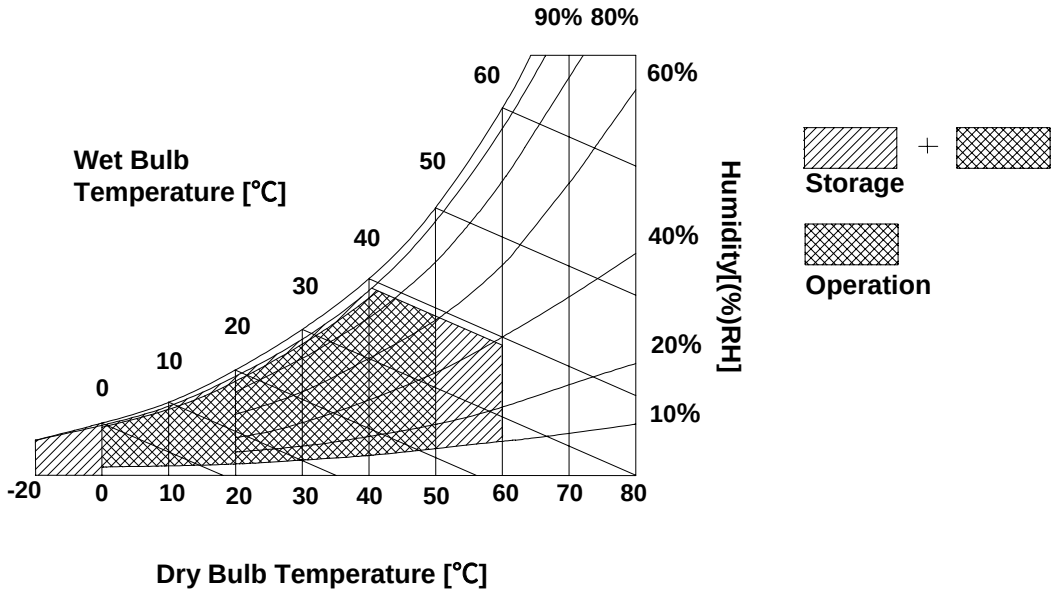
2. Absolute Maximum Ratings

The following are maximum values which, if exceeded, may cause faulty operation or damage to the unit.

Table 1. ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Values		Units	Notes
		Min	Max		
Power Input Voltage	VCC	-0.3	4.0	Vdc	at 25 ± 5°C
Operating Temperature	TOP	0	50	°C	1
Storage Temperature	HST	-20	60	°C	1
Operating Ambient Humidity	HOP	10	90	%RH	1
Storage Humidity	HST	10	90	%RH	1

Note : 1. Temperature and relative humidity range are shown in the figure below.
Wet bulb temperature should be 39°C Max, and no condensation of water.



3. Electrical Specifications

3-1. Electrical Characteristics

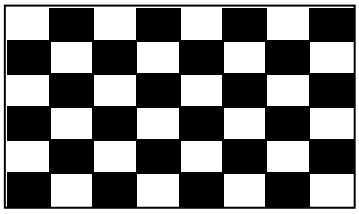
The LP141WX5 requires two power inputs. One is employed to power the LCD electronics and to drive the TFT array and liquid crystal. The second input which powers the LED BL.

Table 2. ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Values			Unit	Notes
		Min	Typ	Max		
MODULE :						
Power Supply Input Voltage	VCC	3.0	3.3	3.6	V_{DC}	
Power Supply Input Current	I_{CC}	315	370	425	mA	1
Power Consumption	Pc	1.04	1.22	1.40	Watt	1
Differential Impedance	Zm	90	100	110	Ohm	2
LED Backlight (With LED Driver) :						
LED Driver voltage	V_{DRIVER}	-	12	-	V	
Operating Voltage	V_{LED}	-	25.6	27.2	V	
Power Consumption	P_{BL}	-	3.0	3.3	Watt	4
PWM frequency of LED Driver	-		200		Hz	
Life Time		12,000	-	-	Hrs	5

Note)

1. The specified current and power consumption are under the Vcc = 3.3V , 25℃, fv = 60Hz condition whereas Mosaic pattern is displayed and fv is the frame frequency.

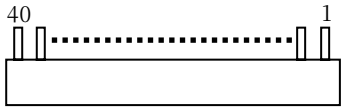


2. This impedance value is needed to proper display and measured form LVDS Tx to the mating connector.
3. The typical operating current is for the typical surface luminance (L_{WH}) in optical characteristics. I_{LED} is the current of each LED's string, LED backlight has 6 strings on it.
4. The LED power consumption shown above does not include power of external LED driver circuit for typical current condition.
5. The life time is determined as the time at which brightness of LED is 50% compare to that of initial value at the typical LED current.

3-2. Interface Connection

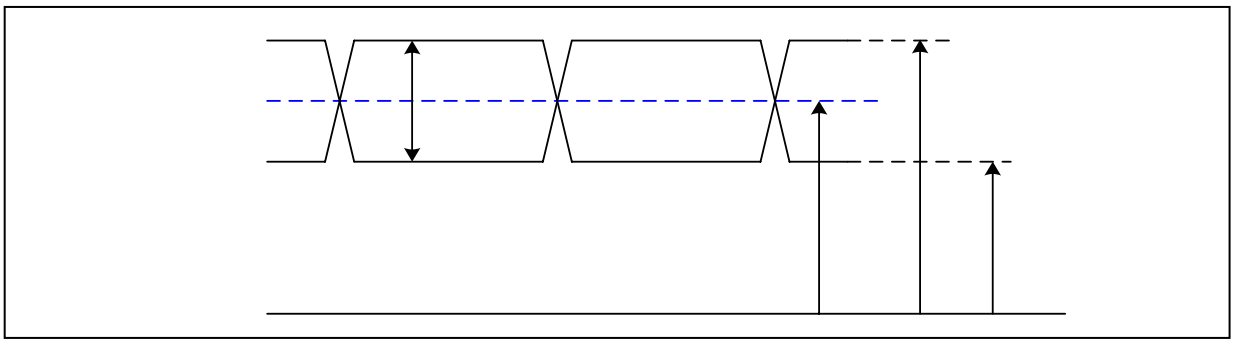
This LCD employs one interface connection, a 40 pin connector is used for the module electronics interface. The electronics interface connector is a model 20347-340E-12 manufactured by I-PEX.

Table 3. MODULE CONNECTOR PIN CONFIGURATION (CN1)

Pin	Symbol	Description	Notes
1	BIST/CT1	BIST/ Connector Test	1, Interface chips 1.1 LCD : SW, SW0612 (LCD Controller) including LVDS Receiver 1.2 System : * Pin to Pin compatible with LVDS 2. Connector 2.1 LCD :I-PEX 20347-340E-12 (Locking type) or equivalent 2.2 Mating : 20345-#40T-## 2.3 Connector pin arrangement  [LCD Module Rear View]
2	VCC	Power Supply, 3.3V Typ.	
3	VCC	Power Supply, 3.3V Typ.	
4	V EEDID	DDC 3.3V power	
5	Clk EEDID	DDC Clock	
6	DATA EEDID	DDC Data	
7	R_{IN} 0-	Negative LVDS differential data input	
8	R_{IN} 0+	Positive LVDS differential data input	
9	GND	Ground	
10	R_{IN} 1-	Negative LVDS differential data input	
11	R_{IN} 1+	Positive LVDS differential data input	
12	GND	Ground	
13	R_{IN} 2-	Negative LVDS differential data input	
14	R_{IN} 2+	Positive LVDS differential data input	
15	GND	Ground	
16	CLKIN-	Negative LVDS differential clock input	
17	CLKIN+	Positive LVDS differential clock input	
18	GND	Ground	
19	NC	No Connect	
20	NC	No Connect	
21	NC	No Connect	
22	NC	No Connect	
23	NC	No Connect	
24	NC	No Connect	
25	NC	No Connect	
26	NC	No Connect	
27	NC	No Connect	
28	NC	No Connect	
29	NC	No Connect	
30	VBL-	LED Power return	
31	VBL-	LED Power return	
32	VBL-	LED Power return	
33	VBL-	LED Power return	
34	BLIM	PWM for luminance control	
35	NC	No Connect	
36	VBL+	7V ~ 20V LED power	
37	VBL+	7V ~ 20V LED power	
38	VBL+	7V ~ 20V LED power	
39	VBL+	7V ~ 20V LED power	
40	BIST/CT2	BIST/ Connector Test	

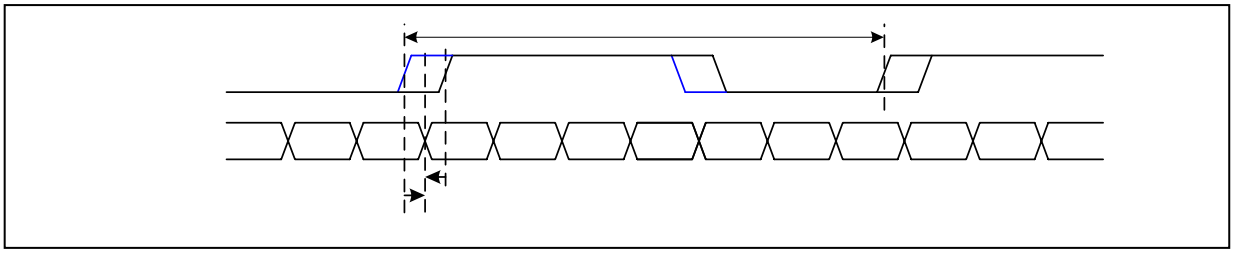
3-3. LVDS Signal Timing Specifications

3-3-1. DC Specification



Description	Symbol	Min	Max	Unit	Notes
LVDS Differential Voltage	$\|V_{ID}\|$	100	600	mV	-
LVDS Common mode Voltage	V_{CM}	0.6	1.8	V	-
LVDS Input Voltage Range	V_{IN}	0.3	2.1	V	-

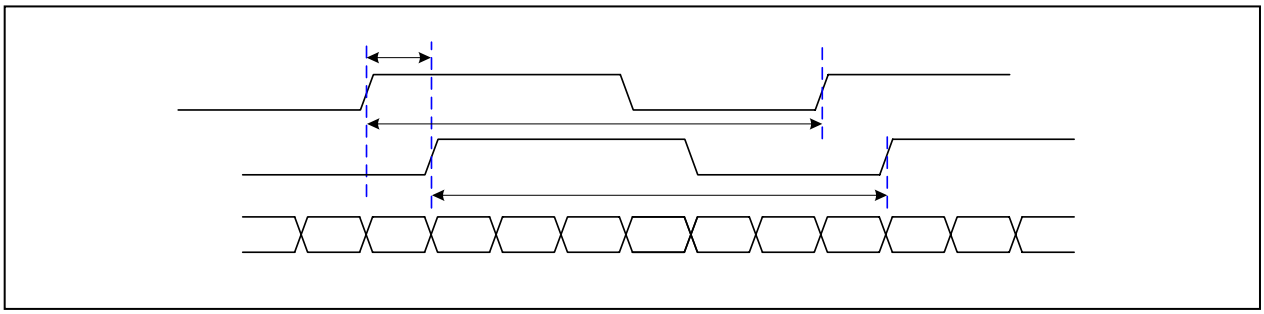
3-3-2. AC Specification



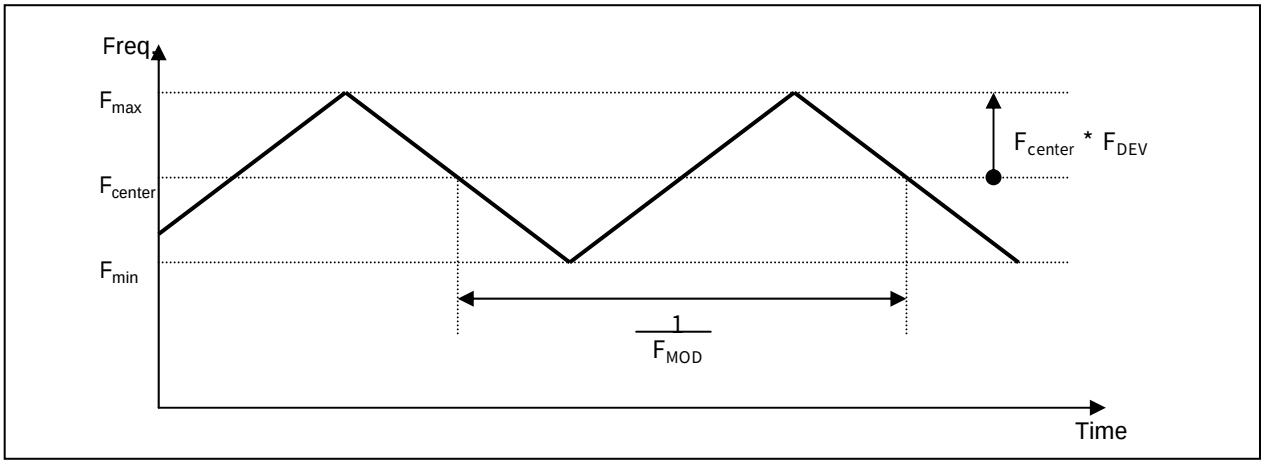
Description	Symbol	Min	Max	Unit	Notes
LVDS Clock to Data Skew Margin	t_{SKEW}	- 400	+ 400	ps	85MHz > Fclk ≥ 65MHz
	t_{SKEW}	- 600	+ 600	ps	65MHz > Fclk ≥ 25MHz
LVDS Clock to Clock Skew Margin (Even to Odd)	t_{SKEW_EO}	- 1/7	+ 1/7	T_{clk}	-
Maximum deviation of input clock frequency during SSC	F_{DEV}	-	± 3	%	-
Maximum modulation frequency of input clock during SSC	F_{MOD}	-	200	KHz	-

LVDS -

LVDS +



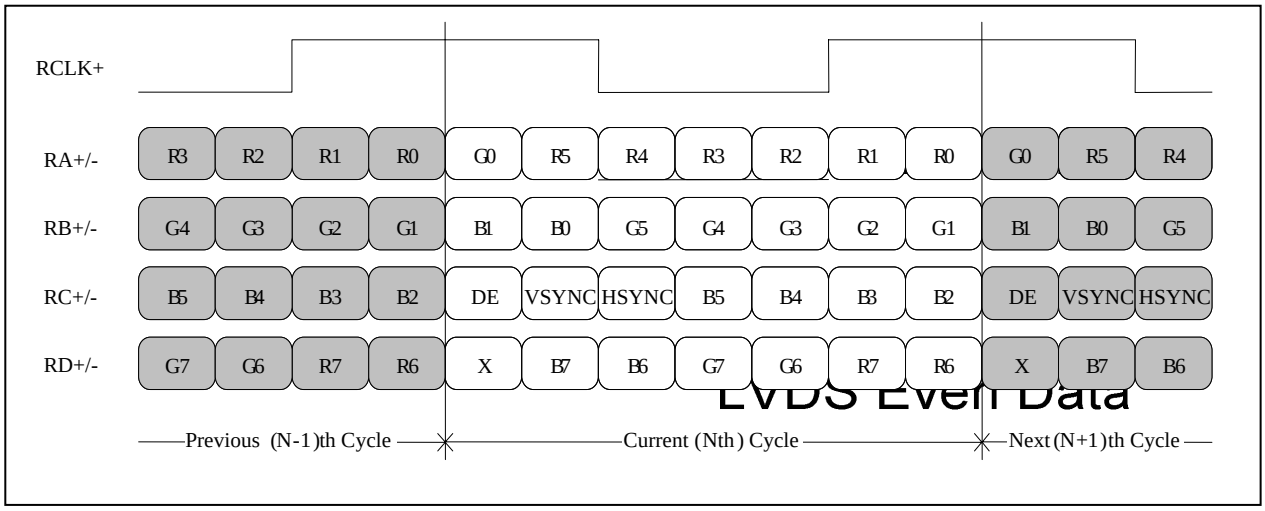
< Clock skew margin between channel >



< Spread Spectrum >

3-3-3. Data Format

- LVDS 1 Port



< LVDS Data Format >

3-4. Signal Timing Specifications

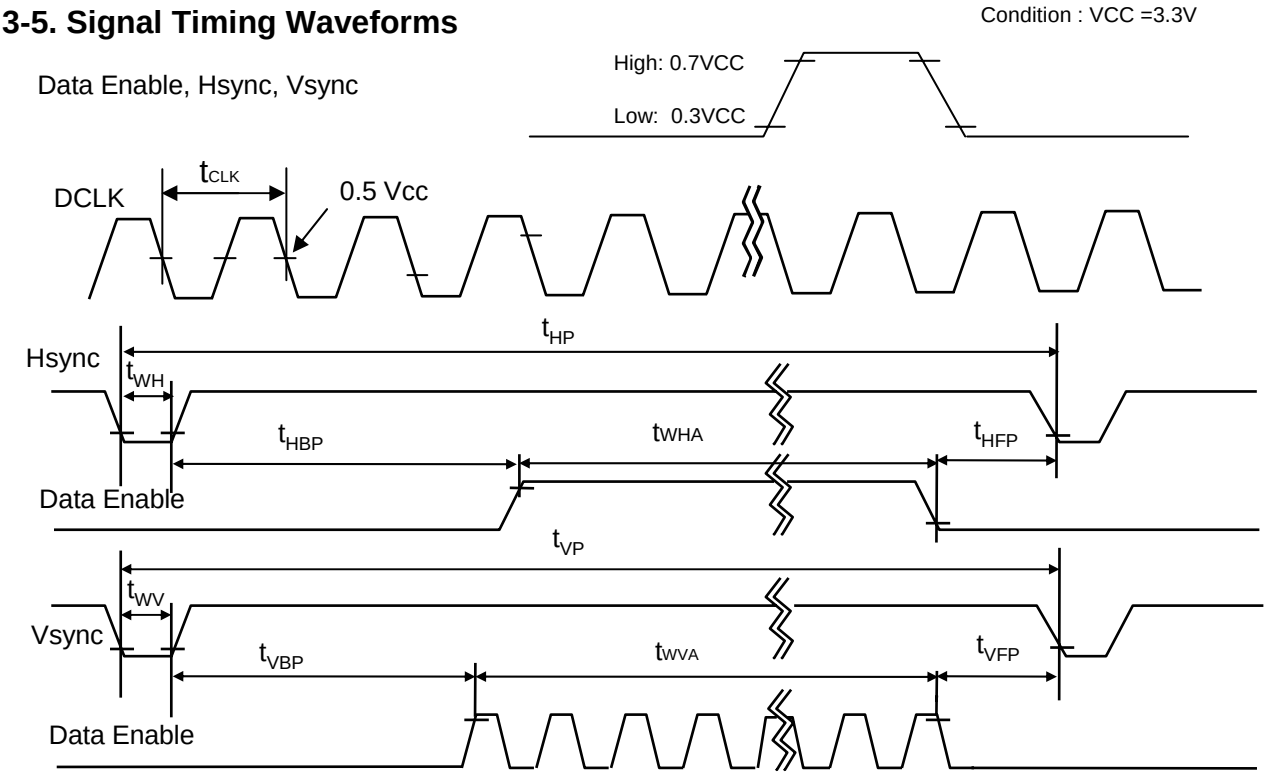
This is the signal timing required at the input of the User connector. All of the interface signal timing should be satisfied with the following specifications and specifications of LVDS Tx/Rx for its proper operation.

Table 5. TIMING TABLE

ITEM	Symbol		Min	Typ	Max	Unit	Note
DCLK	Frequency	f_{CLK}	-	69.3	-	MHz	
Hsync	Period	Thp	1280	1280	1280	tCLK	
	Width	t_{WH}	1360	1406	1480		
	Width-Active	t_{WHA}	16	32	48		
Vsync	Period	t_{VP}	800	800	800	tHP	
	Width	t_{WV}	809	822	860		
	Width-Active	t_{WVA}	2	6	10		
Data Enable	Horizontal back porch	t_{HBP}	40	48	96	tCLK	
	Horizontal front porch	t_{HFP}	24	46	56		
	Vertical back porch	t_{VBP}	6	13	32	tHP	
	Vertical front porch	t_{VFP}	1	3	18		

3-5. Signal Timing Waveforms

Condition : VCC =3.3V



3-6. Color Input Data Reference

The brightness of each primary color (red,green and blue) is based on the 6-bit gray scale data input for the color ; the higher the binary input, the brighter the color. The table below provides a reference for color versus data input.

Table 7. COLOR DATA REFERENCE

Color		Input Color Data																	
		RED						GREEN						BLUE					
		MSB					LSB	MSB					LSB	MSB					LSB
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
Basic Color	Black	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	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	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
RED	RED (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED (01)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	…			…						…						…			
	RED (62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED (63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
GREEN	GREEN (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GREEN (01)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	...			...						...						...			
	GREEN (62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	GREEN (63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
BLUE	BLUE (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BLUE (01)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	…			…						…						…			
	BLUE (62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	BLUE (63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

3-7. Power Sequence

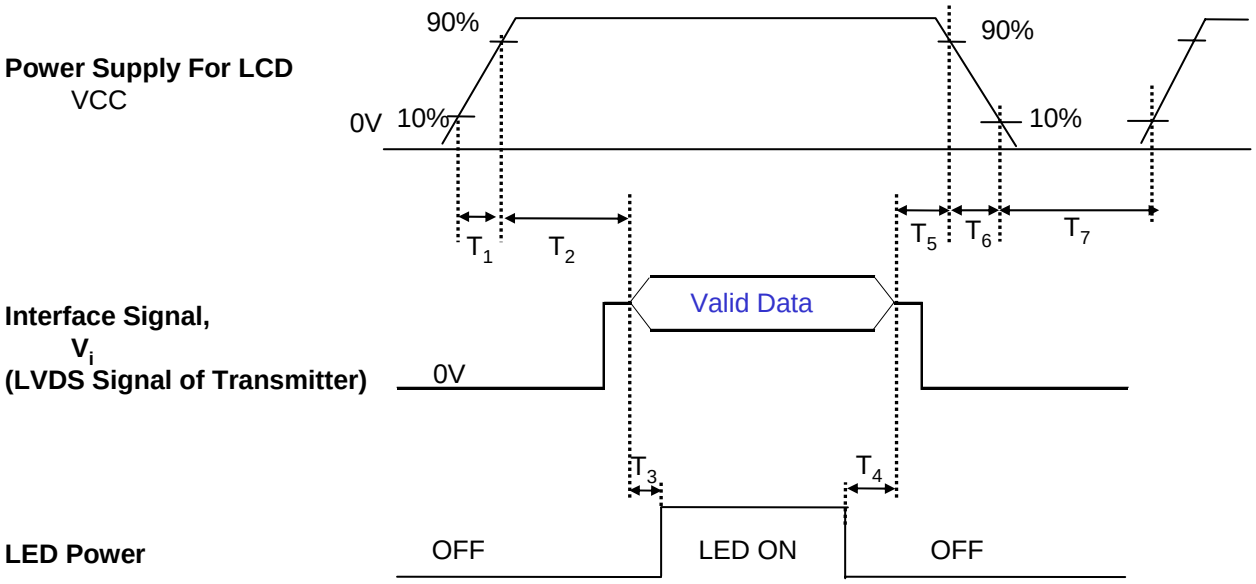


Table 7. POWER SEQUENCE TABLE

Parameter	Value			Units
	Min.	Typ.	Max.	
T_1	0.5	-	10	(ms)
T_2	0	-	50	(ms)
T_3	200	-	-	(ms)
T_4	200	-	-	(ms)
T_5	0	-	50	(ms)
T_6	0	-	10	(ms)
T_7	400	-	-	(ms)

Note)
1. Valid Data is Data to meet “3-3. LVDS Signal Timing Specifications”
2. Please avoid floating state of interface signal at invalid period.
3. When the interface signal is invalid, be sure to pull down the power supply for LCD VCC to 0V.
4. LED power must be turn on after power supply for LCD and interface signal are valid.

4. Optical Specification

Optical characteristics are determined after the unit has been 'ON' and stable for approximately 30 minutes in a dark environment at 25°C. The values specified are at an approximate distance 50cm from the LCD surface at a viewing angle of Φ and Θ equal to 0°.
FIG. 1 presents additional information concerning the measurement equipment and method.

FIG. 1 Optical Characteristic Measurement Equipment and Method

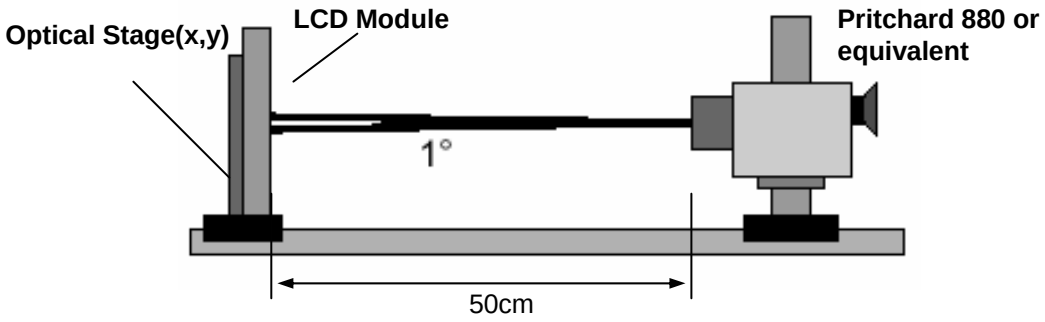


Table 8. OPTICAL CHARACTERISTICS

Ta=25°C, VCC=3.3V, f_V=60Hz, f_{CLK}= 69.3MHz

Parameter	Symbol	Values			Units	Notes
		Min	Typ	Max		
Contrast Ratio	CR	300	400	-		1
Surface Luminance, white	L_{WH}	190	220	-	cd/m^2	2
Luminance Variation	δ_{WHITE}	-	1.4	1.6		3
Response Time	Tr_R+ Tr_D		16		ms	4
Color Coordinates						
RED	RX	0.538	0.568	0.598		
	RY	0.311	0.341	0.371		
GREEN	GX	0.307	0.337	0.367		
	GY	0.518	0.548	0.578		
BLUE	BX	0.129	0.159	0.189		
	BY	0.090	0.120	0.150		
WHITE	WX	0.283	0.313	0.343		
	WY	0.299	0.329	0.359		
Viewing Angle						5
x axis, right(Φ=0°)	Θr	40	45	-	degree	
x axis, left (Φ=180°)	Θl	40	45	-	degree	
y axis, up (Φ=90°)	Θu	10	15	-	degree	
y axis, down (Φ=270°)	Θd	30	35	-	degree	
Gray Scale			2.2			6

Note)

1. Contrast Ratio(CR) is defined mathematically as

$$\text{Contrast Ratio} = \frac{\text{Surface Luminance with all white pixels}}{\text{Surface Luminance with all black pixels}}$$

2. Surface luminance is the average of 5 point across the LCD surface 50cm from the surface with all pixels displaying white. For more information see FIG 1.

$$L_{WH} = \text{Average}(L_1, L_2, \ldots L_5)$$

3. The variation in surface luminance , The panel total variation (δ_{WHITE}) is determined by measuring L_N at each test position 1 through 13 and then defined as followed numerical formula.
For more information see FIG 2.

$$\delta_{WHITE} = \frac{\text{Maximum}(L_1, L_2, \ldots L_{13})}{\text{Minimum}(L_1, L_2, \ldots L_{13})}$$

4. Response time is the time required for the display to transition from white to black (rise time, Tr_R) and from black to white(Decay Time, Tr_D). For additional information see FIG 3.

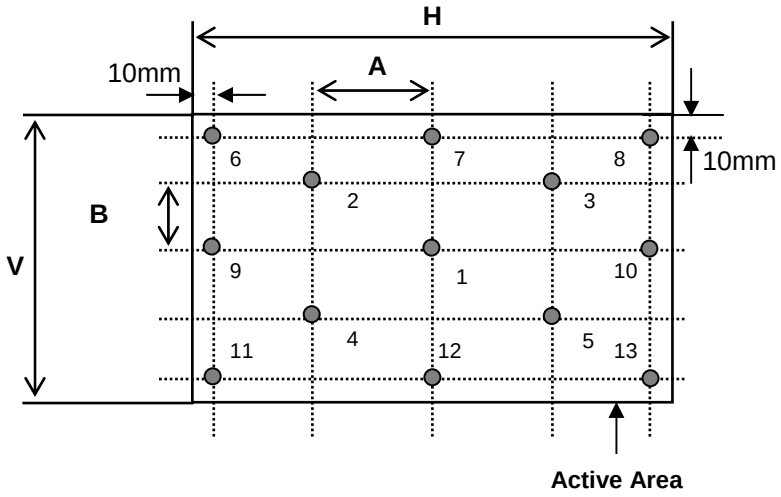
5. Viewing angle is the angle at which the contrast ratio is greater than 10. The angles are determined for the horizontal or x axis and the vertical or y axis with respect to the z axis which is normal to the LCD surface. For more information see FIG 4.

6. Gray scale specification * f_V = 60Hz

Gray Level	Luminance [%] (Typ)
L0	0.2
L7	1.96
L15	6.4
L23	12.6
L31	20.4
L39	34.9
L47	55.2
L55	78.8
L63	100

FIG. 2 Luminance

<measuring point for surface luminance & measuring point for luminance variation>



H,V : ACTIVE AREA
A : H/4 mm
B : V/4 mm
POINTS: 13 POINTS

FIG. 3 Response Time

The response time is defined as the following figure and shall be measured by switching the input signal for “black” and “white”.

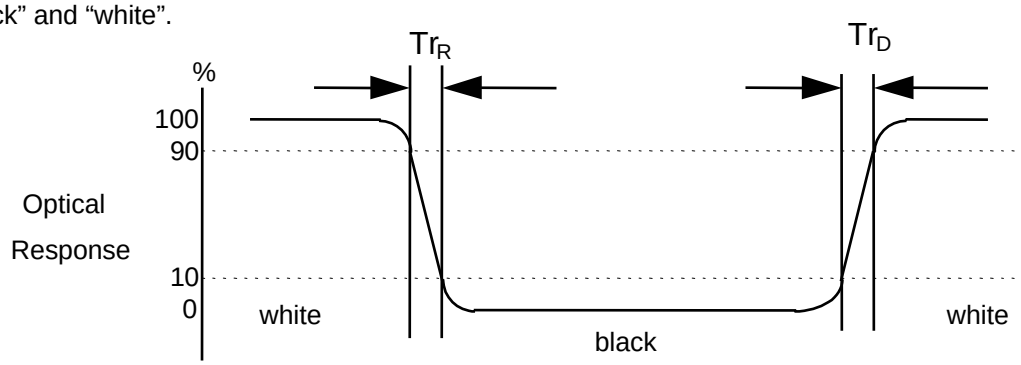
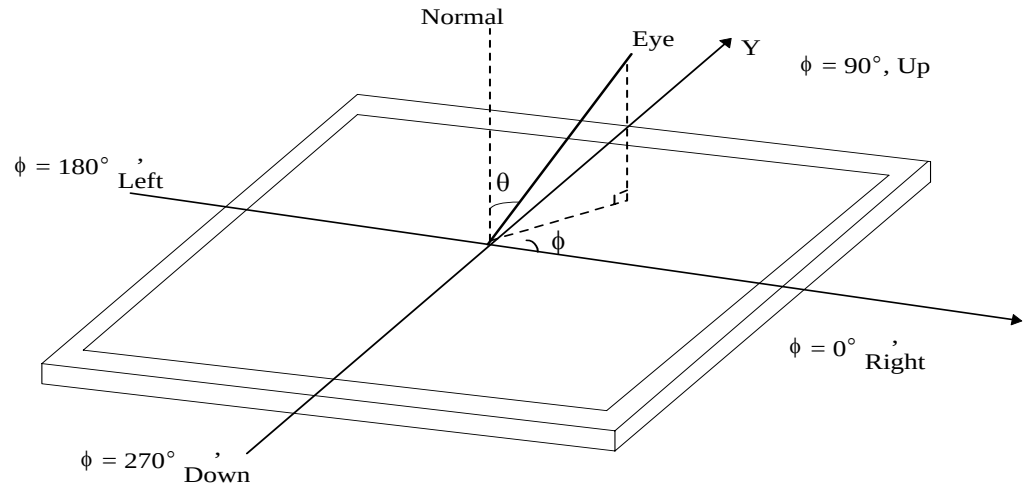


FIG. 4 Viewing angle



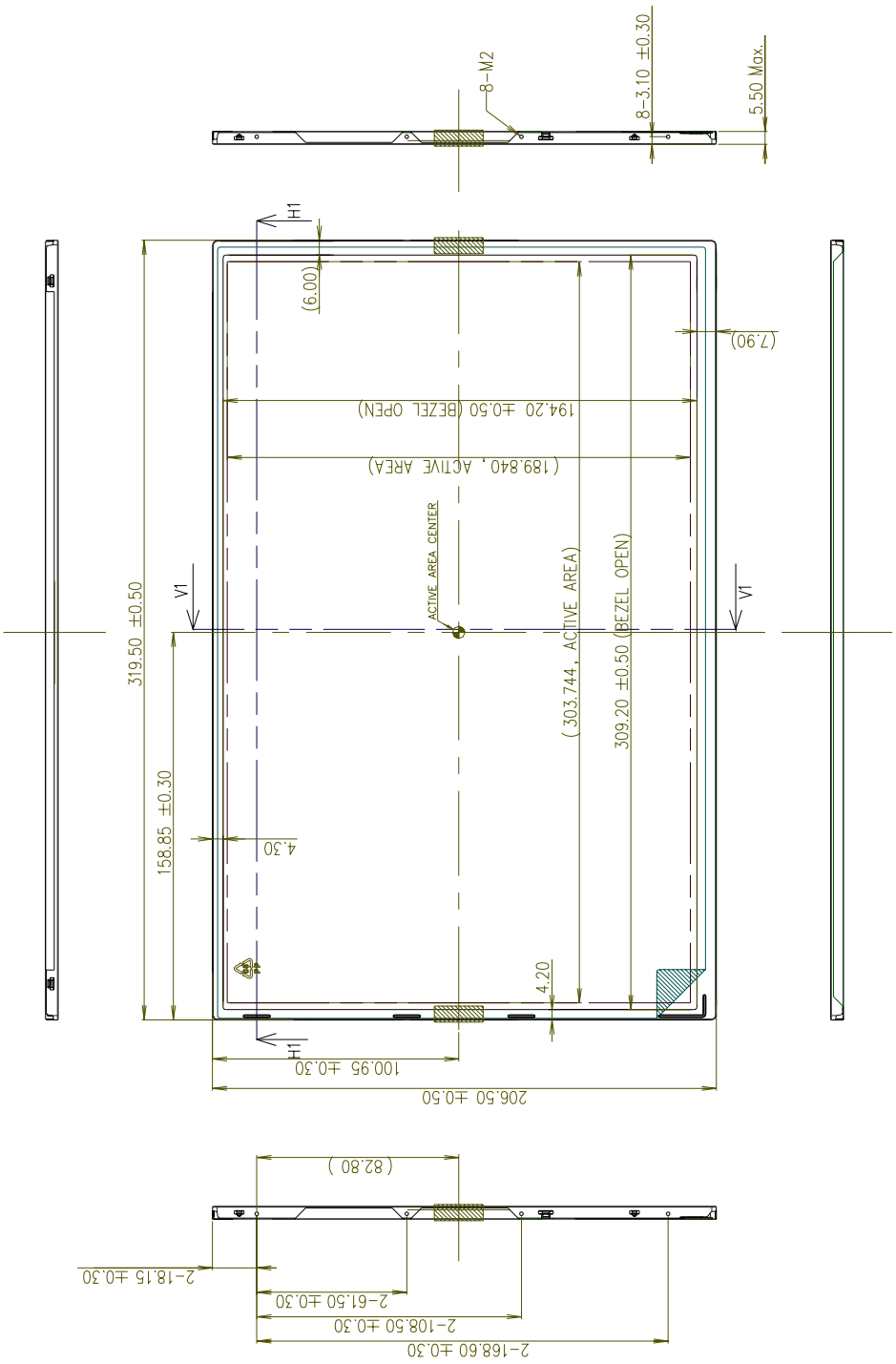
5. Mechanical Characteristics

The contents provide general mechanical characteristics for the model LP141WX5. In addition the figures in the next page are detailed mechanical drawing of the LCD.

Outline Dimension	Horizontal	319.5 ± 0.5mm
	Vertical	206.5 ± 0.5mm
	Thickness	5.5mm (max.)
Bezel Area	Horizontal	309.2 ± 0.5mm
	Vertical	194.2 ± 0.5mm
Active Display Area	Horizontal	303.74 mm
	Vertical	189.84 mm
Weight	360g (Max.)	
Surface Treatment	Anti-glare treatment of the front polarizer	

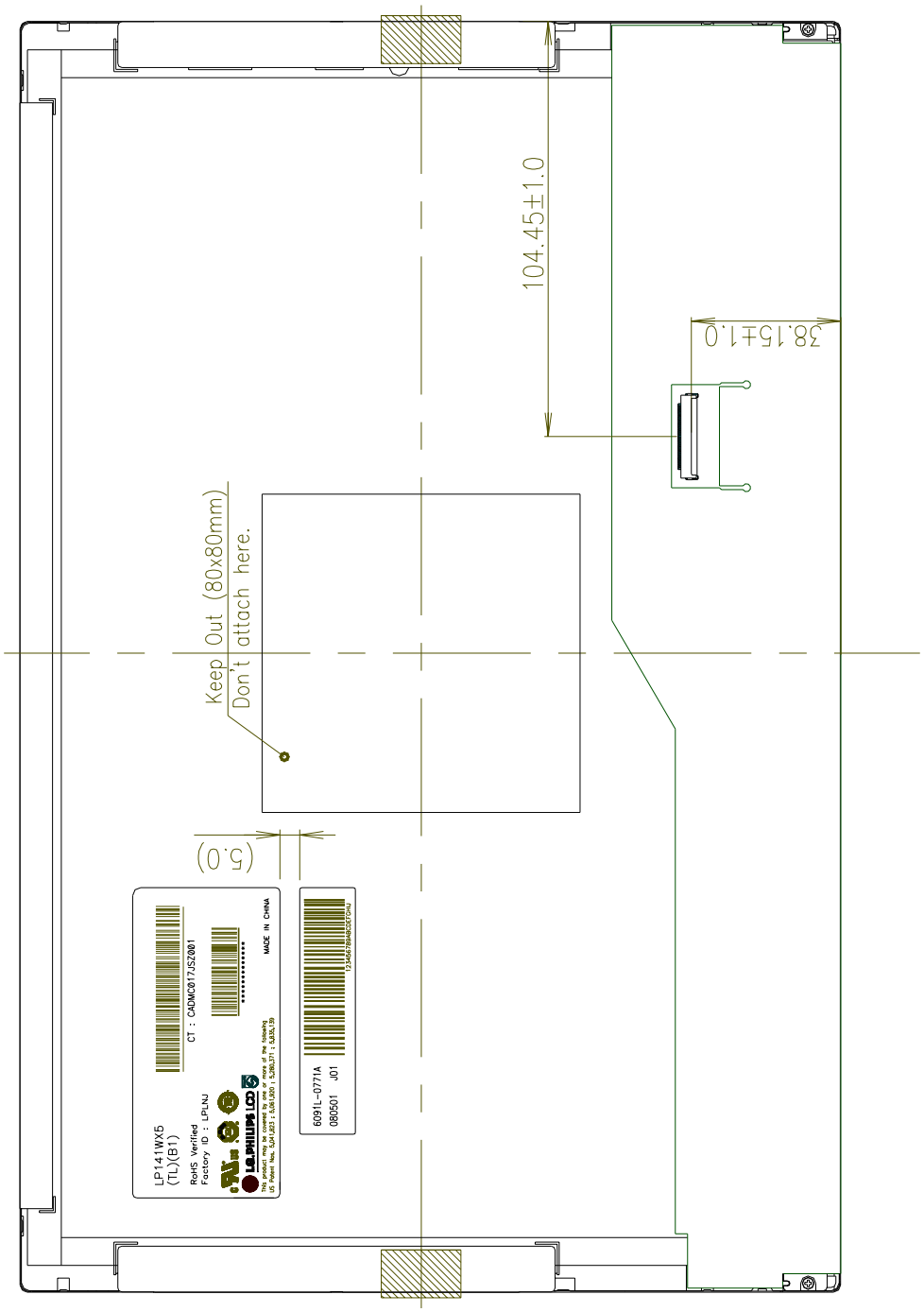
<FRONT VIEW>

Note) Unit:[mm], General tolerance: ± 0.5mm

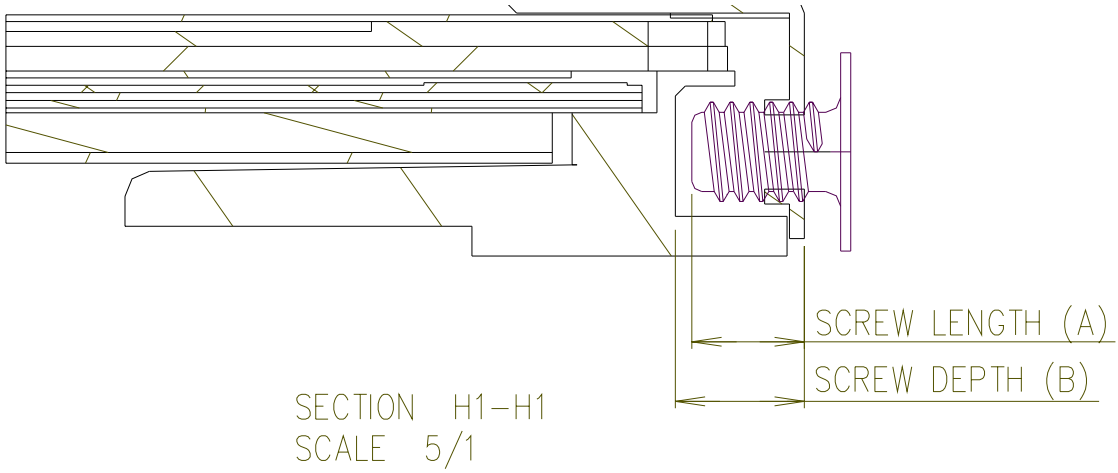


<REAR VIEW>

Note) Unit:[mm], General tolerance: ± 0.5mm



[DETAIL DESCRIPTION OF SIDE MOUNTING SCREW]



* Mounting Screw Length (A)
  = 2.0(Min) / 2.5(Max)
* Mounting Screw Hole Depth (B)
  = 2.5(Min)
* Mounting hole location : 3.7(typ.)
* Torque : 2.5 kgf.cm(Max)
  (Measurement gauge : torque meter)

6. Reliability

Environment test condition

No.	Test Item	Conditions
1	High temperature storage test	Ta= 60°C, 240h
2	Low temperature storage test	Ta= -20°C, 240h
3	High temperature operation test	Ta= 50°C, 50%RH, 240h
4	Low temperature operation test	Ta= 0°C, 240h
5	Vibration test (non-operating)	Sine wave, 10 ~ 500 ~ 10Hz, 1.5G, 0.37oct/min 3 axis, 1hour/axis
6	Shock test (non-operating)	Half sine wave, 180G, 2ms one shock of each six faces(I.e. run 180G 6ms for all six faces)
7	Altitude operating storage / shipment	0 ~ 10,000 feet (3,048m) 24Hr 0 ~ 40,000 feet (12,192m) 24Hr

{ Result Evaluation Criteria }
There should be no change which might affect the practical display function when the display quality test is conducted under normal operating condition.

7. International Standards

7-1. Safety

a) UL 60950-1:2003, First Edition, Underwriters Laboratories, Inc.,
Standard for Safety of Information Technology Equipment.
b) CAN/CSA C22.2, No. 60950-1-03 1st Ed. April 1, 2003, Canadian Standards Association,
Standard for Safety of Information Technology Equipment.
c) EN 60950-1:2001, First Edition,
European Committee for Electrotechnical Standardization(CENELEC)
European Standard for Safety of Information Technology Equipment.

7-2. EMC

a) ANSI C63.4 “Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electrical Equipment in the Range of 9kHZ to 40GHz. “American National Standards Institute(ANSI), 1992
b) C.I.S.P.R “Limits and Methods of Measurement of Radio Interface Characteristics of Information Technology Equipment.“ International Special Committee on Radio Interference.
c) EN 55022 “Limits and Methods of Measurement of Radio Interface Characteristics of Information Technology Equipment.“ European Committee for Electrotechnical Standardization.(CENELEC), 1998
(Including A1: 2000)

8. Packing

8-1. Designation of Lot Mark

a) Lot Mark

A	B	C	D	E	F	G	H	I	J	K	L	M

A,B,C : SIZE(INCH)
D : YEAR
E : MONTH
F ~ M : SERIAL NO.

Note

1. YEAR

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Mark	1	2	3	4	5	6	7	8	9	0

2. MONTH

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mark	1	2	3	4	5	6	7	8	9	A	B	C

b) Location of Lot Mark

Serial No. is printed on the label. The label is attached to the backside of the LCD module.
This is subject to change without prior notice.

8-2. Packing Form

a) Package quantity in one box : 30 pcs

b) Box Size : 484mm × 372mm × 288mm

9. PRECAUTIONS

Please pay attention to the followings when you use this TFT LCD module.

9-1. MOUNTING PRECAUTIONS

(1) You must mount a module using holes arranged in four corners or four sides.
(2) You should consider the mounting structure so that uneven force (ex. Twisted stress) is not applied to the module. And the case on which a module is mounted should have sufficient strength so that external force is not transmitted directly to the module.
(3) Please attach the surface transparent protective plate to the surface in order to protect the polarizer. Transparent protective plate should have sufficient strength in order to the resist external force.
(4) You should adopt radiation structure to satisfy the temperature specification.
(5) Acetic acid type and chlorine type materials for the cover case are not desirable because the former generates corrosive gas of attacking the polarizer at high temperature and the latter causes circuit break by electro-chemical reaction.
(6) Do not touch, push or rub the exposed polarizers with glass, tweezers or anything harder than HB pencil lead. And please do not rub with dust clothes with chemical treatment.
Do not touch the surface of polarizer for bare hand or greasy cloth.(Some cosmetics are detrimental to the polarizer.)
(7) When the surface becomes dusty, please wipe gently with absorbent cotton or other soft materials like chamois soaks with petroleum benzene. Normal-hexane is recommended for cleaning the adhesives used to attach front / rear polarizers. Do not use acetone, toluene and alcohol because they cause chemical damage to the polarizer.
(8) Wipe off saliva or water drops as soon as possible. Their long time contact with polarizer causes deformations and color fading.
(9) Do not open the case because inside circuits do not have sufficient strength.

9-2. OPERATING PRECAUTIONS

(1) The spike noise causes the mis-operation of circuits. It should be lower than following voltage :
V=± 200mV(Over and under shoot voltage)

(2) Response time depends on the temperature.(In lower temperature, it becomes longer.)
(3) Brightness depends on the temperature. (In lower temperature, it becomes lower.)
And in lower temperature, response time(required time that brightness is stable after turned on) becomes longer.
(4) Be careful for condensation at sudden temperature change. Condensation makes damage to polarizer or electrical contacted parts. And after fading condensation, smear or spot will occur.
(5) When fixed patterns are displayed for a long time, remnant image is likely to occur.
(6) Module has high frequency circuits. Sufficient suppression to the electromagnetic interference shall be done by system manufacturers. Grounding and shielding methods may be important to minimized the interference.

9-3. ELECTROSTATIC DISCHARGE CONTROL

Since a module is composed of electronic circuits, it is not strong to electrostatic discharge. Make certain that treatment persons are connected to ground through wrist band etc. And don't touch interface pin directly.

9-4. PRECAUTIONS FOR STRONG LIGHT EXPOSURE

Strong light exposure causes degradation of polarizer and color filter.

9-5. STORAGE

When storing modules as spares for a long time, the following precautions are necessary.

(1) Store them in a dark place. Do not expose the module to sunlight or fluorescent light. Keep the temperature between 5°C and 35°C at normal humidity.
(2) The polarizer surface should not come in contact with any other object.
It is recommended that they be stored in the container in which they were shipped.

9-6. HANDLING PRECAUTIONS FOR PROTECTION FILM

(1) When the protection film is peeled off, static electricity is generated between the film and polarizer. This should be peeled off slowly and carefully by people who are electrically grounded and with well ion-blown equipment or in such a condition, etc.
(2) The protection film is attached to the polarizer with a small amount of glue. If some stress is applied to rub the protection film against the polarizer during the time you peel off the film, the glue is apt to remain on the polarizer.
Please carefully peel off the protection film without rubbing it against the polarizer.
(3) When the module with protection film attached is stored for a long time, sometimes there remains a very small amount of glue still on the polarizer after the protection film is peeled off.
(4) You can remove the glue easily. When the glue remains on the polarizer surface or its vestige is recognized, please wipe them off with absorbent cotton waste or other soft material like chamois soaked with normal-hexane.

APPENDIX A. Enhanced Extended Display Identification Data (EEDID™) 1/3

	Byte (Dec)	Byte (Hex)	Field Name and Comments	Value (Hex)
Header	0	00	Header	00
	1	01	Header	FF
	2	02	Header	FF
	3	03	Header	FF
	4	04	Header	FF
	5	05	Header	FF
	6	06	Header	FF
	7	07	Header	00
Vendor / Product EDID Version	8	08	EISA manufacture code (3 Character ID) LGD	30
	9	09	EISA manufacture code (Compressed ASCII)	E4
	10	0A	Panel Supplier Reserved - Product Code 0164h	64
	11	0B	(Hex. LSB first)	01
	12	0C	LCD Module Serial No - Preferred but Optional ("0" If not used)	00
	13	0D	LCD Module Serial No - Preferred but Optional ("0" If not used)	00
	14	0E	LCD Module Serial No - Preferred but Optional ("0" If not used)	00
	15	0F	LCD Module Serial No - Preferred but Optional ("0" If not used)	00
	16	10	Week of Manufacture 00 weeks	00
	17	11	Year of Manufacture 2008 years	12
	18	12	EDID structure version # = 1	01
	19	13	EDID revision # = 3	03
Display Parameters	20	14	Video input Definition = Digital signal	80
	21	15	Max H image size (Rounded cm) = 30 cm	1E
	22	16	Max V image size (Rounded cm) = 19 cm	13
	23	17	Display gamma = (gamma*100)-100 = Example:(2.2*100)-100=120 = 2.2 Gamma	78
	24	18	Feature Support (no_DPMS, no_Active Off/Very Low Power, RGB color display, Timing BLK 1,no_GTF)	0A
Panel Color Coordinates	25	19	Red/Green Low Bits (RxRy/GxGy)	95
	26	1A	Blue/White Low Bits (BxBy/WxWy)	F5
	27	1B	Red X Rx = 0.568	91
	28	1C	Red Y Ry = 0.341	57
	29	1D	Green X Gx = 0.337	56
	30	1E	Green Y Gy = 0.548	8C
	31	1F	Blue X Bx = 0.159	28
	32	20	Blue Y By = 0.120	1E
	33	21	White X Wx = 0.313	50
	34	22	White Y Wy = 0.329	54
Established Timings	35	23	Established timing 1 (00h if not used)	00
	36	24	Established timing 2 (00h if not used)	00
	37	25	Manufacturer's timings (00h if not used)	00
Standard Timing ID	38	26	Standard timing ID1 (01h if not used)	01
	39	27	Standard timing ID1 (01h if not used)	01
	40	28	Standard timing ID2 (01h if not used)	01
	41	29	Standard timing ID2 (01h if not used)	01
	42	2A	Standard timing ID3 (01h if not used)	01
	43	2B	Standard timing ID3 (01h if not used)	01
	44	2C	Standard timing ID4 (01h if not used)	01
	45	2D	Standard timing ID4 (01h if not used)	01
	46	2E	Standard timing ID5 (01h if not used)	01
	47	2F	Standard timing ID5 (01h if not used)	01
	48	30	Standard timing ID6 (01h if not used)	01
	49	31	Standard timing ID6 (01h if not used)	01
	50	32	Standard timing ID7 (01h if not used)	01
	51	33	Standard timing ID7 (01h if not used)	01
	52	34	Standard timing ID8 (01h if not used)	01
	53	35	Standard timing ID8 (01h if not used)	01

APPENDIX A. Enhanced Extended Display Identification Data (EEDID™) 2/3

	Byte (Dec)	Byte (Hex)	Field Name and Comments		Value (Hex)
Timing Descriptor #1	54	36	Pixel Clock/10,000 (LSB)	69.3 MHz @ 60Hz	12
	55	37	Pixel Clock/10,000 (MSB)		1B
	56	38	Horizontal Active (lower 8 bits)	1280 Pixels	00
	57	39	Horizontal Blanking(Thp-HA) (lower 8 bits)	126 Pixels	7E
	58	3A	Horizontal Active / Horizontal Blanking(Thp-HA) (upper 4:4bits)		50
	59	3B	Vertical Avtive	800 Lines	20
	60	3C	Vertical Blanking (Tvp-HA) (DE Blanking typ.for DE only panels)	22 Lines	16
	61	3D	Vertical Active : Vertical Blanking (Tvp-HA) (upper 4:4bits)		30
	62	3E	Horizontal Sync. Offset (Thfp)	48 Pixels	30
	63	3F	Horizontal Sync Pulse Width (HSPW)	32 Pixels	20
	64	40	Vertical Sync Offset(Tvfp) : Sync Width (VSPW)	3 Lines : 6 Lines	36
	65	41	Horizontal Vertical Sync Offset/Width (upper 2bits)		00
	66	42	Horizontal Image Size (mm)	304 mm	30
	67	43	Vertical Image Size (mm)	190 mm	BE
	68	44	Horizontal Image Size / Vertical Image Size		10
	69	45	Horizontal Border = 0 (Zero for Notebook LCD)		00
	70	46	Vertical Border = 0 (Zero for Notebook LCD)		00
	71	47	Non-Interlace, Normal display, no stereo, Digital Separate (Vsync_NEG, Hsync_NEG), DE only note : LSB is set to '1' if panel is DE-timing only. H/V can be ignored.		19
Timing Descriptor #2	72	48	Flag		00
	73	49	Flag		00
	74	4A	Flag		00
	75	4B	Data Type Tag (Descriptor Defined by manufacturer)		00
	76	4C	Flag		00
	77	4D	Descriptor Defined by manufacturer		00
	78	4E	Descriptor Defined by manufacturer		00
	79	4F	Descriptor Defined by manufacturer		00
	80	50	Descriptor Defined by manufacturer		00
	81	51	Descriptor Defined by manufacturer		00
	82	52	Descriptor Defined by manufacturer		00
	83	53	Descriptor Defined by manufacturer		00
	84	54	Descriptor Defined by manufacturer		00
	85	55	Descriptor Defined by manufacturer		00
	86	56	Descriptor Defined by manufacturer		00
	87	57	Descriptor Defined by manufacturer		00
	88	58	Descriptor Defined by manufacturer		00
	89	59	Descriptor Defined by manufacturer		00
Timing Descriptor #3	90	5A	Flag		00
	91	5B	Flag		00
	92	5C	Flag		00
	93	5D	Data Type Tag (ASCII String)		FE
	94	5E	Flag		00
	95	5F	ASCII String	L	4C
	96	60	ASCII String	G	47
	97	61	ASCII String		20
	98	62	ASCII String	D	44
	99	63	ASCII String	i	69
	100	64	ASCII String	s	73
	101	65	ASCII String	p	70
	102	66	ASCII String	l	6C
	103	67	ASCII String	a	61
	104	68	ASCII String	y	79
	105	69	Manufacturer P/N(If<13 char--> 0Ah, then terminate with ASCII code 0Ah,set remaining char = 20h)		0A
	106	6A	Manufacturer P/N(If<13 char--> 0Ah, then terminate with ASCII code 0Ah,set remaining char = 20h)		20
	107	6B	Manufacturer P/N(If<13 char--> 0Ah, then terminate with ASCII code 0Ah,set remaining char = 20h)		20

APPENDIX A. Enhanced Extended Display Identification Data (EEDID™) 3/3

	Byte (Dec)	Byte (Hex)	Field Name and Comments		Value (Hex)
Timing Descriptor #4	108	**6C**	Flag		**00**
	109	**6D**	Flag		**00**
	110	**6E**	Flag		**00**
	111	**6F**	Data Type Tag (ASCII String)		**FE**
	112	**70**	Flag		**00**
	113	**71**	ASCII String	L	**4C**
	114	**72**	ASCII String	P	**50**
	115	**73**	ASCII String	1	**31**
	116	**74**	ASCII String	4	**34**
	117	**75**	ASCII String	1	**31**
	118	**76**	ASCII String	W	**57**
	119	**77**	ASCII String	X	**58**
	120	**78**	ASCII String	5	**35**
	121	**79**	ASCII String	-	**2D**
	122	**7A**	ASCII String	T	**54**
	123	**7B**	ASCII String	L	**4C**
	124	**7C**	ASCII String	A	**41**
	125	**7D**	ASCII String	1	**31**
Checksum	126	**7E**	Extension flag (# of optional 128 panel ID extension block to follow, Typ = 0)		**00**
	127	**7F**	Check Sum (The 1-byte sum of all 128 bytes in this panel ID block shall = 0)		**D4**