SPECIFICATION
FOR
APPROVAL

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

Title	9.7" QXGA TFT LCD

Customer	General
MODEL	

SUPPLIER	LG Display Co., Ltd.
*MODEL	LP097QX1
Suffix	SPC1

*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
J. K. Kim / S. Manager	
REVIEWED BY	
J. Y. Park/ Manager	
PREPARED BY	
H. S, Cha/ Engineer	

Product Engineering Dept.
LG Display Co., Ltd

Contents

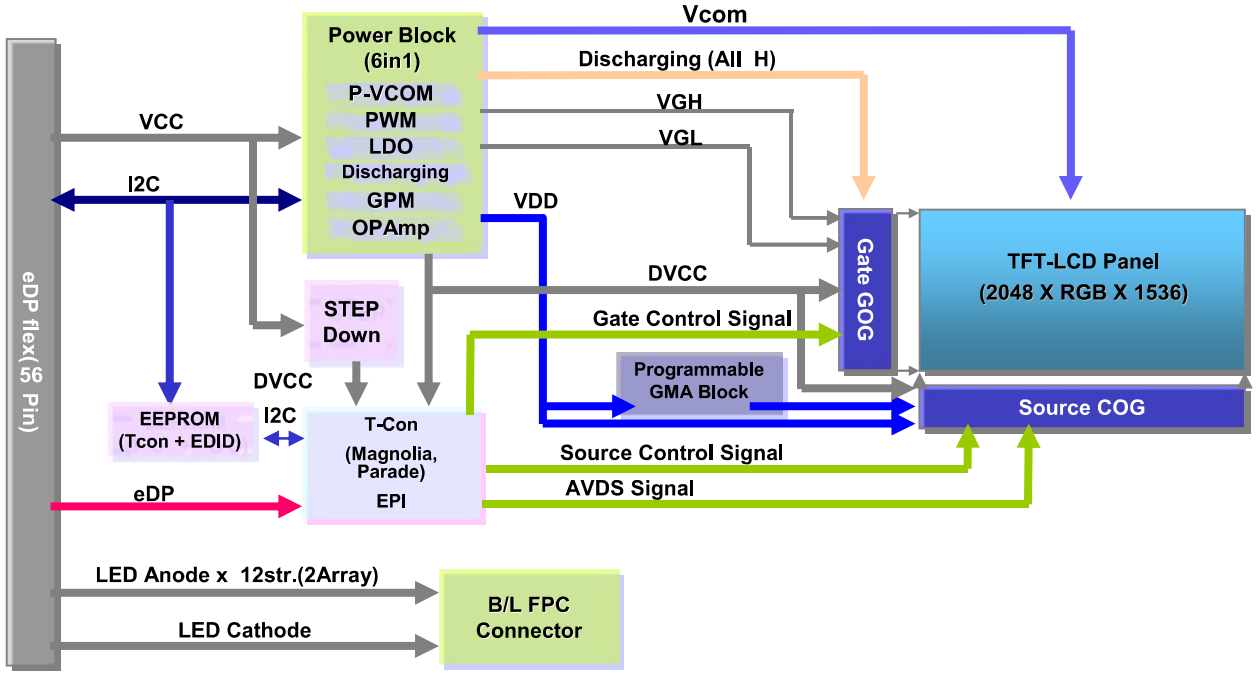
RECORD OF REVISIONS

Revision No	Revision Date	Page	Description	EDID ver
0.1	1. Aug. 2012	-	First Draft	-

1. General Description

The LP097QX1 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 Black mode. This TFT-LCD has 9.7 inches diagonally measured active display area with QXGA resolution(2048 horizontal by 1536 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 8-bit gray scale signal for each dot, thus, presenting a palette of more than 16,772,216 colors. The LP097QX1 has been designed to apply the interface method that enables low power, high speed, low EMI.

The LP097QX1 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 LP097QX1 characteristics provide an excellent flat display for office automation products such as Notebook PC.



General Features

Active Screen Size	9.7 inches diagonal
Outline Dimension	208.88(H) × 167.12 (V) × 2.60(D, Max.) mm PCB area : TBD(Max.)
Pixel Pitch	0.192 mm × 0.192 mm
Pixel Format	2048 horiz. by 1536 vert. Pixels RGB strip arrangement
Color Depth	8-bit, 16,772,216 colors
Luminance, White	440 cd/m^2(Typ., @I_{LED}=18.5mA)
Power Consumption	Logic : 1.07W(typ.@white), Back Light : 4.4W (typ.@ I_{LED}= 18.5mA)
Weight	140g (Max.)
Display Operating Mode	Transmissive mode, normally Black
Surface Treatment	Glare, Anti-reflective treatment of the front polarizer, 3H

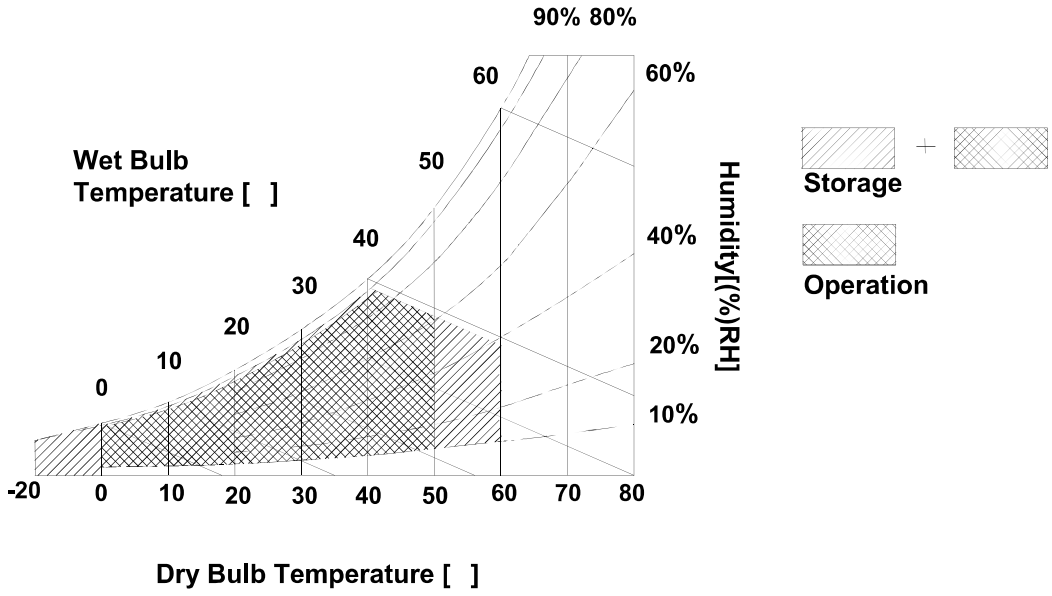
2. Absolute Maximum Ratings

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

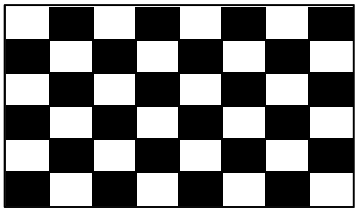
The LP097X02 requires two power inputs. One is employed to power the LCD electronics and to drive the TFT array and liquid crystal. The second input which powers the LED BL.

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} Mosaic	-	326	375	mA	1
Power Consumption	Pc	-	1.07	1.24	Watt	1
Differential Impedance	Zm	90	100	110	Ohm	2
LED Backlight : (Without LED Driver)						
LED Driver input Volatge (on system)	VLED			12	V	3
Operating Current per string	I_{LED}		18.5		mA	4
Life Time		10,000	-	-	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. **LED input voltage must be input below than 12V to operate normally for LED Driver.**
4. The typical operating current is for the typical surface luminance (L_{WH}) in optical characteristics.
5. The LED power consumption shown above does not include power of external LED driver circuit for typical current condition.
6. The life time is determined as the time at which brightness of lamp is 50% compare to that of initial value at the typical lamp current.

3-2. Interface Connections

Table 3. MODULE CONNECTOR PIN CONFIGURATION (CN1)

Pin	Symbol	Description	Pin	Symbol	Description
1	GND	Ground	31	LED Cathode 5B	LED Cathode (Negative)
2	HPD	Hot Plug detect	32	LED Cathode 4B	LED Cathode (Negative)
3	GND	Ground	33	LED Cathode 3B	LED Cathode (Negative)
4	Vin	VCC 3.3V(typ.)	34	LED Cathode 2B	LED Cathode (Negative)
5	Vin	VCC 3.3V(typ.)	35	LED Cathode 1B	LED Cathode (Negative)
6	Vin	VCC 3.3V(typ.)	36	GND	Ground
7	Vin	VCC 3.3V(typ.)	37	LED Cathode 6A	LED Cathode (Negative)
8	GND	Ground	38	LED Cathode 5A	LED Cathode (Negative)
9	AUX_P	True Signal Auxiliary Ch.	39	LED Cathode 4A	LED Cathode (Negative)
10	AUX_N	Complement Signal Auxiliary Ch.	40	LED Cathode 3A	LED Cathode (Negative)
11	GND	Ground	41	LED Cathode 2A	LED Cathode (Negative)
12	LANE0_N	Complement Signal Link Lane 0	42	LED Cathode 1A	LED Cathode (Negative)
13	NC		43	GND	Ground
14	LANE0_P	True Signal Link Lane 0	44	NC	
15	GND	Ground	45	LED Anode 2	LED Cathode (Positive)
16	LANE1_N	Complement Signal Link Lane 1	46	LED Anode 2	LED Cathode (Positive)
17	NC		47	NC	
18	LANE1_P	True Signal Link Lane 1	48	LED Anode 1	LED Cathode (Positive)
19	GND	Ground	49	LED Anode 1	LED Cathode (Positive)
20	LANE2_N	Complement Signal Link Lane 2	50	NC	
21	NC		51	GND	Ground
22	LANE2_P	True Signal Link Lane 2			
23	GND	Ground			
24	LANE3_N	Complement Signal Link Lane 3			
25	NC				
26	LANE3_P	True Signal Link Lane 3			
27	GND	Ground			
28	GND	Ground			
29	GND	Ground			
30	LED Cathode 6B	LED Cathode (Negative)			

[eDP Receiver]
Parade社, Magnolia

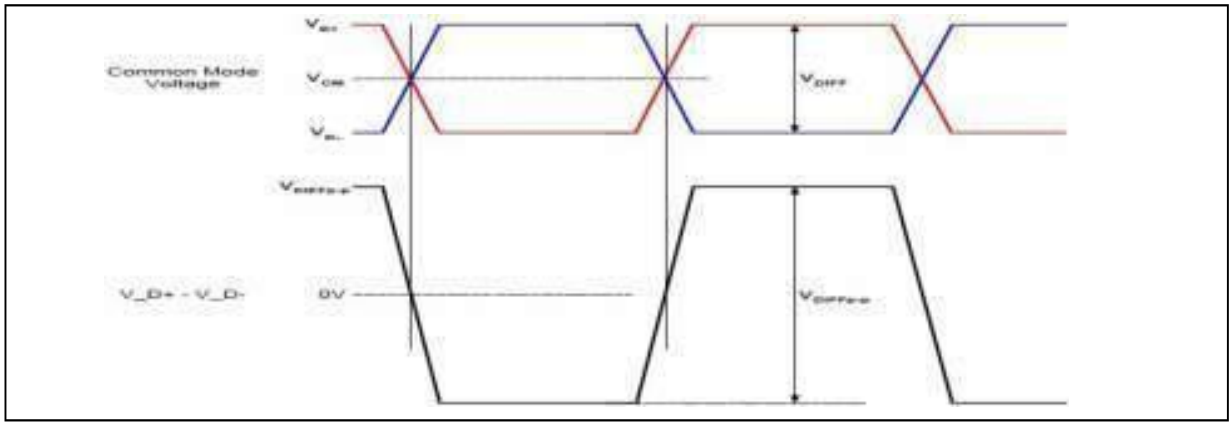
[Connector]
eDP Flex

[Connector pin arrangement]
LCD front view

3-3. LVDS Signal Timing Specifications

3-3-1. DC Specification

The VESA Display Port related AC specification is compliant with the VESA Display Port Standard v1.1a.



Description	Symbol	Min	Max	Unit	Notes
Differential peak-to-peak Input voltage	VDIFF p-p	120	-	mV	For high bit rate
		40	-		For reduced bit rate
Rx DC common mode voltage	VCM	0	2.0	V	-

3-3-2. AC Specification

The VESA Display Port related AC specification is compliant with the VESA Display Port Standard v1.1a.

Description	Symbol	Min	Typ	Max	Unit	Notes
Unit Interval for high bit rate (2.7Gbps/lane)	UI_High_Rate	-	370	-	ps	Range is nominal ±350ppm. DisplayPort Link Rx does not require local crystal for link clock generation
Unit Interval for high bit rate (1.62Gbps/lane)	UI_Low_Rate	-	617	-	ps	
Lane-to-Lane skew	V Rx-SKEW-INTER_PAIR	-	-	5200	ps	-
Lane intra-pair skew	V Rx-SKEW-INTRA_PAIR	-	-	100	ps	For high bit rate
		-	-	300	ps	For reduced bit rate

3-4. Signal Timing Specifications

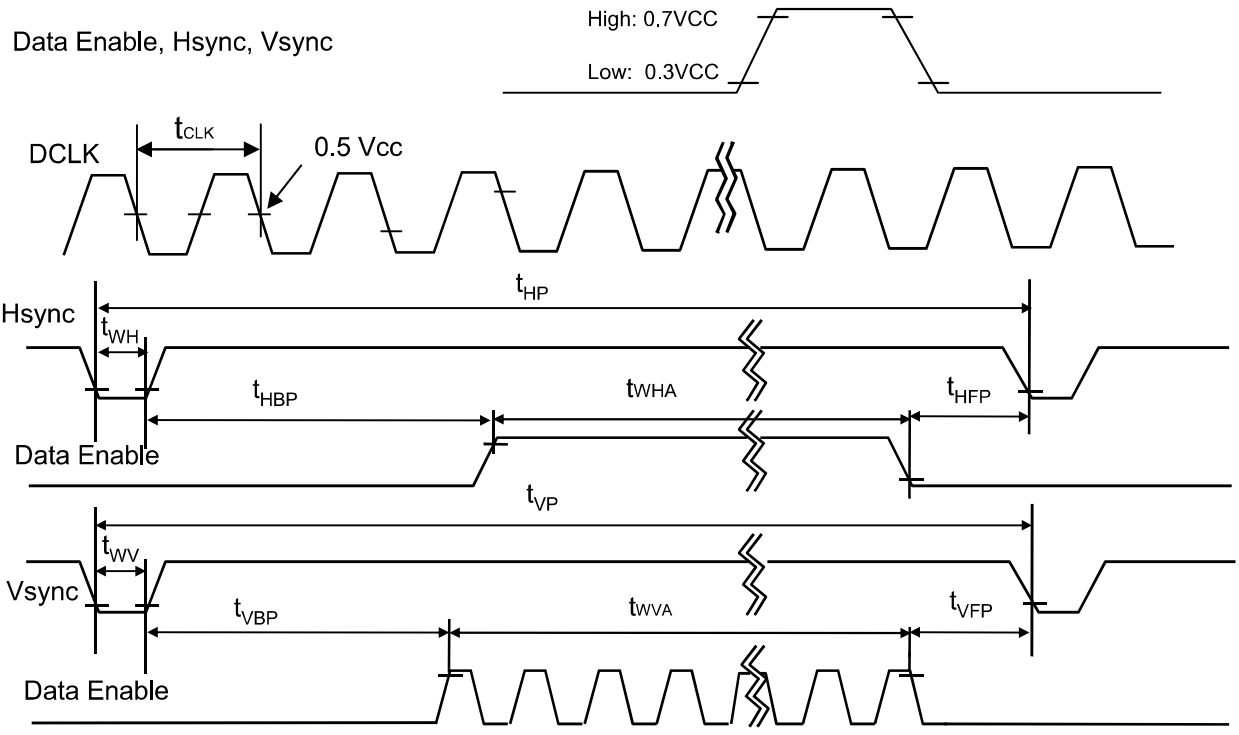
This is the signal timing required at the input of the User connector. All of the interface signal timing should be satisfied with the following specifications and specifications of LVDS Tx/Rx for its proper operation.

Table 6. TIMING TABLE

ITEM	Symbol		Min.	Typ.	Max.	Unit	Note
DCLK	Frequency	f_{CLK}	202	205.21	208	MHz	
Hsync	Active	t_{WHA}	2048	2048	2048	tCLK	
	Period	t_{HP}	2160	2208	2348		
	Width-Active	t_{WH}	3	5	7		
Vsync	Active	t_{WVA}	1536	1536	1536	tHP	
	Period	t_{VP}	1525	1549	1584		
	Width-Active	t_{WV}	1	1	1		
Data Enable	Horizontal back porch	t_{HBP}	3	5	7	tCLK	
	Horizontal front porch	t_{HFP}	100	150	200		
	Vertical back porch	t_{VBP}	7	9	11	tHP	
	Vertical front porch	t_{VFP}	1	3	5		

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 8-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
		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 Color	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 (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
	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
	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
	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
RED	RED (000) 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 (001)	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 (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
GREEN	GREEN (000) 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 (001)	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 (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
BLUE	BLUE (000) 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 (001)	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 (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

3-7. Power Sequence

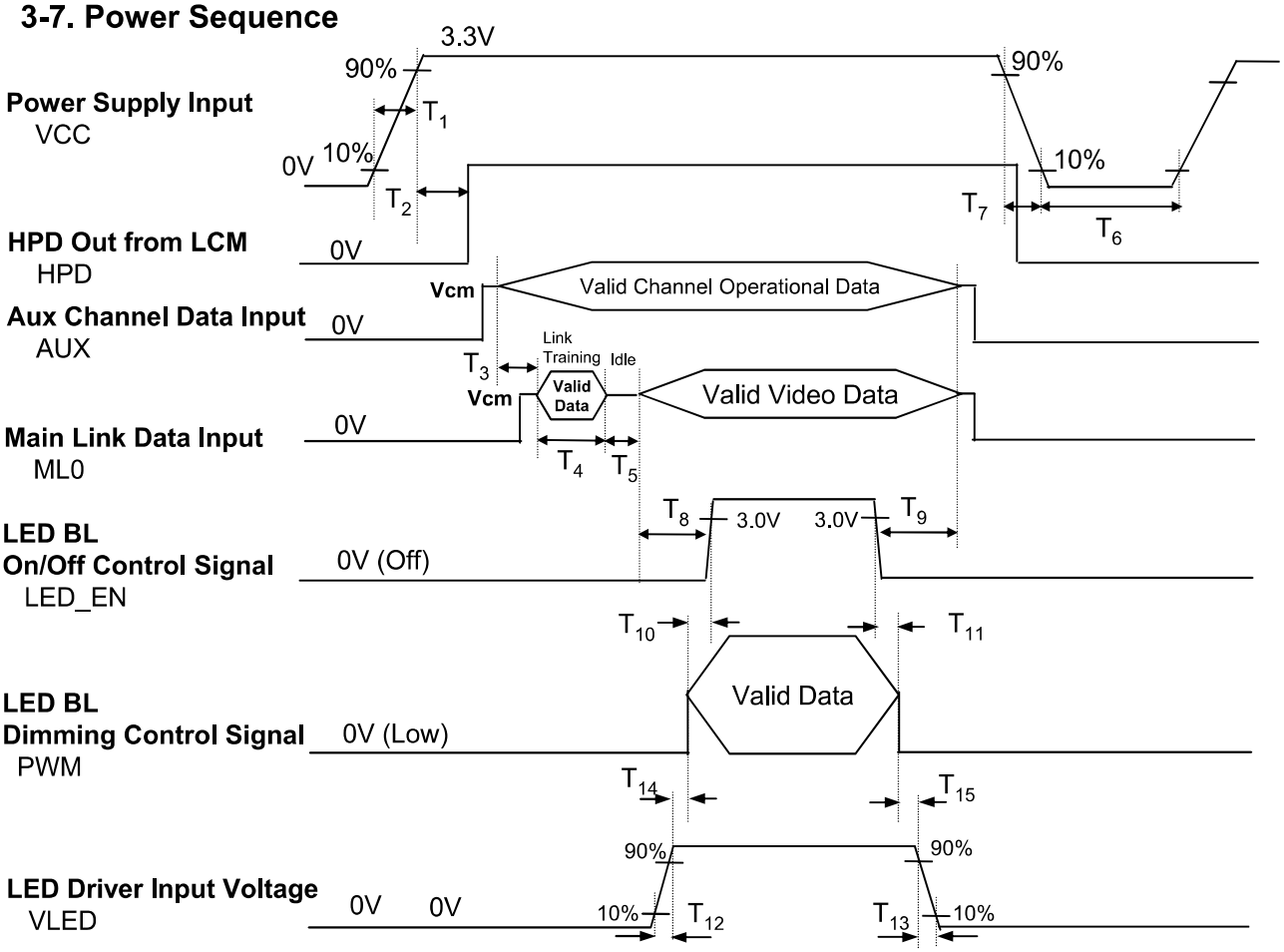


Table 6. POWER SEQUENCE TABLE

Logic Parameter	Value			Units	LED Parameter	Value			Units
	Min.	Typ.	Max.			Min.	Typ.	Max.	
T_1	0.5	-	10	ms	T_9	200	-	-	ms
T_2	0	-	200	ms	T_{10}	0	-	-	ms
T_3	50	75	-	ms	T_{11}	0	-	-	ms
T_4	0	-	-	ms	T_{12}	0.5	-	-	ms
T_5	0	-	-	ms	T_{13}	0	-	5000	ms
T_6	500	-	-	ms	T_{14}	10	-	-	ms
T_7	3	-	10	ms	T_{15}	10	-	-	ms
T_8	200	-	-	ms					

Note)
1. Do not insert the mating cable when system turn on.
2. Valid Data have to meet "3-3. eDP Signal Timing Specifications"
3. LVDS, LED_EN and PWM need to be on pull-down condition on invalid status.
4. LGD recommend the rising sequence of VLED after the Vcc and valid status of LVDS turn on.

4. Optical Specification

Optical characteristics are determined after the unit has been 'ON' and stable for approximately 20 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

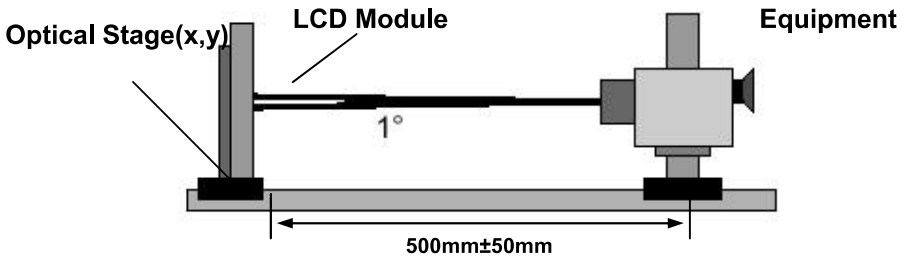


Table 9. OPTICAL CHARACTERISTICS Ta=25°C, VCC=3.3V, fv=60Hz, f_{CLK}= 205.21MHz, ILED = 18.5mA

Parameter		Symbol	Condition	Min	Typ	Max	Units	Notes
Average Luminance		L_{AVE}	5 Points (ILED= 18.5mA)	380	440	-	cd/㎡	2
Luminance variation		δ_{WHITE}	13 points	-	1.4	1.6	%	3
C/R		-	Center 1 Point	500	600	-	-	1
Response time			-	-	30	50	㎳	4
Viewing angle	Horizontal	Θ	φx(Left,Right)	±80	±89	-	°	5
	Vertical	Θ	φyu(Up)	80	89	-		
		Θ	φyd(Down)	80	89	-		
Color Coordinates		RED	RX	0.611	0.641	0.671		
			RY	0.297	0.327	0.357		
		GREEN	GX	0.278	0.308	0.338		
			GY	0.572	0.602	0.632		
		BLUE	BX	0.120	0.150	0.180		
			BY	0.026	0.056	0.086		
		WHITE	WX	0.273	0.303	0.333		
			WY	0.284	0.314	0.344		
Cross Talk		DSHA	-	-	-	4.0	%	Fig.5
Gray Scale		-	-	Gamma 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.

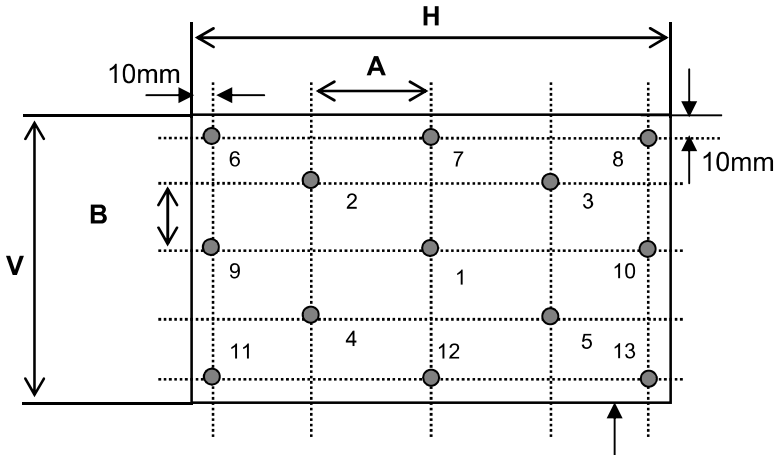
5. Viewing angle is the angle at which the contrast ratio is greater than 10. The angles are determined for the horizontal or x axis and the vertical or y axis with respect to the z axis which is normal to the LCD surface. For more information see FIG 4.

6. Gray scale specification * f_V = 60Hz

Gray Level	Luminance [%] (Typ)
L0	0.12
L7	1.00
L15	4.30
L23	9.80
L31	19.2
L39	34.2
L47	53.5
L55	74.5
L63	100

FIG. 2 Luminance

<Measuring point for Average Luminance & measuring point for Luminance variation>



H,V : ACTIVE AREA

A : H/4 mm
B : V/4 mm
H : 196.608 mm
V : 147.456 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”.

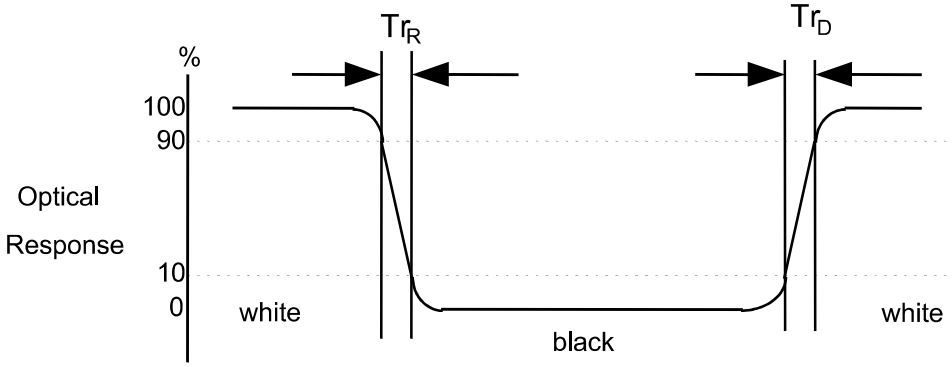


FIG. 4 Viewing angle

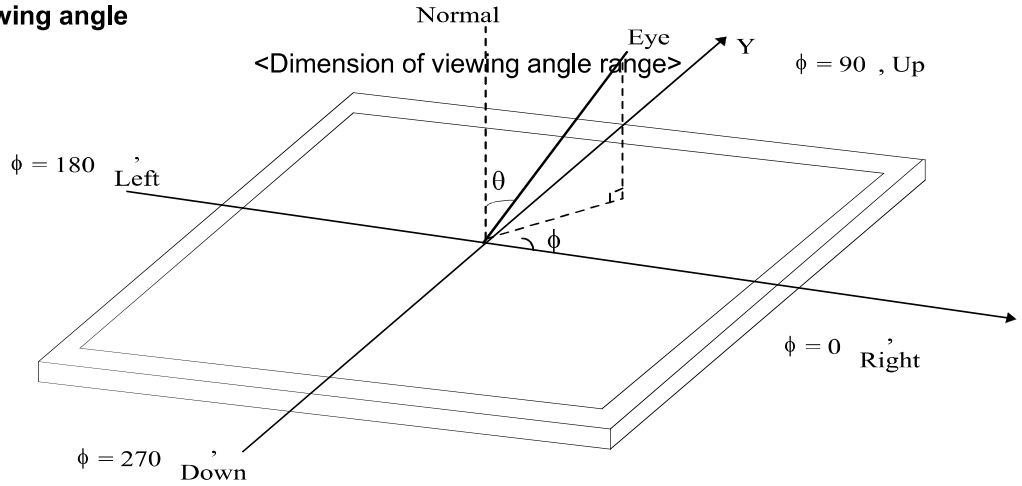


FIG. 5 Cross talk

No visual cross-talk will be allowed. Two luminance values are measured at center spot with 50 x 50 pixels. The cross-talk, D_{SHA}, is defined as,

$$D_{SHA} = (L_B - L_A)/L_B \cdot 100\%,$$

Where, L_A = Luminance in Pattern A

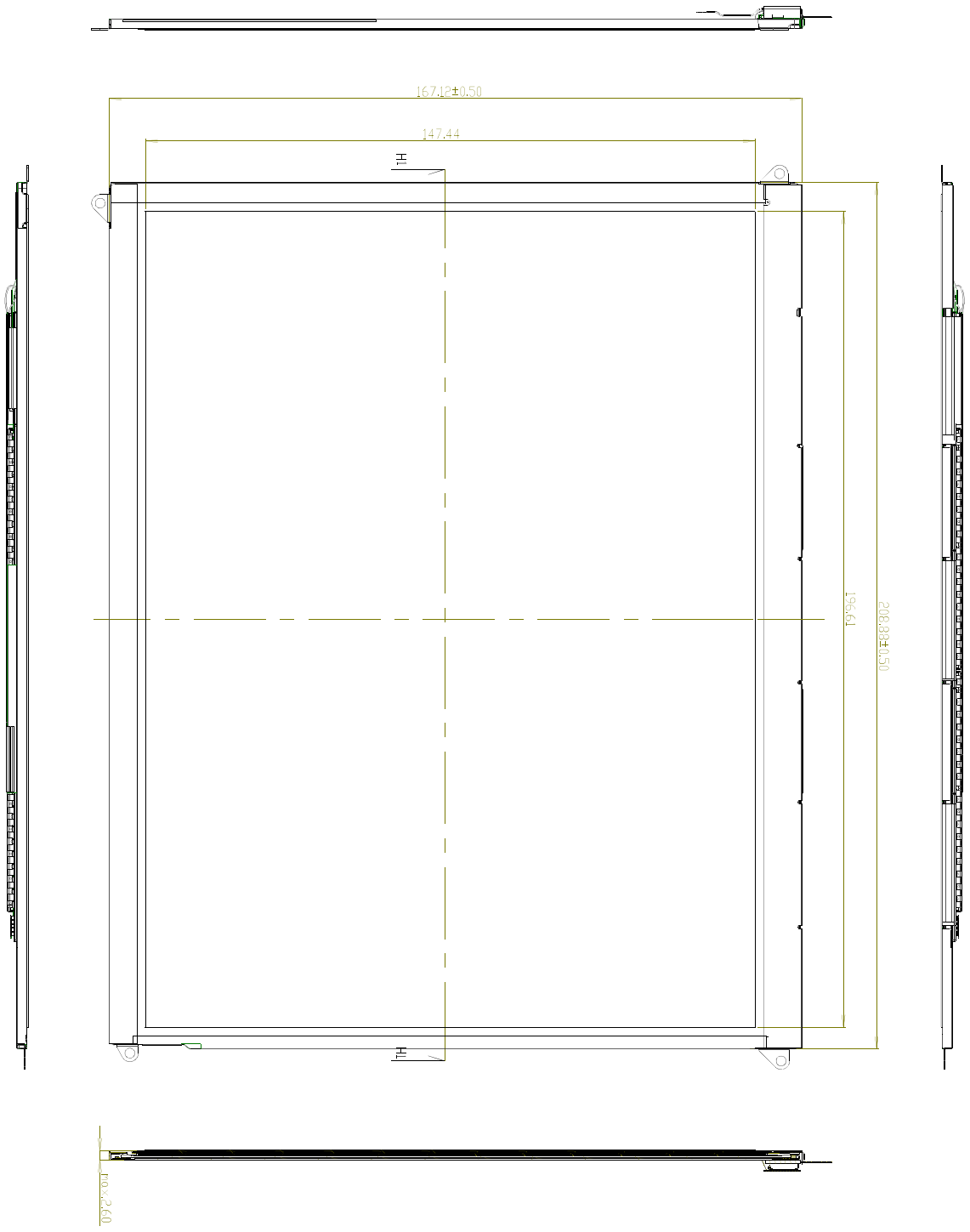
L_B = Luminance in Pattern B.

5. Mechanical Characteristics

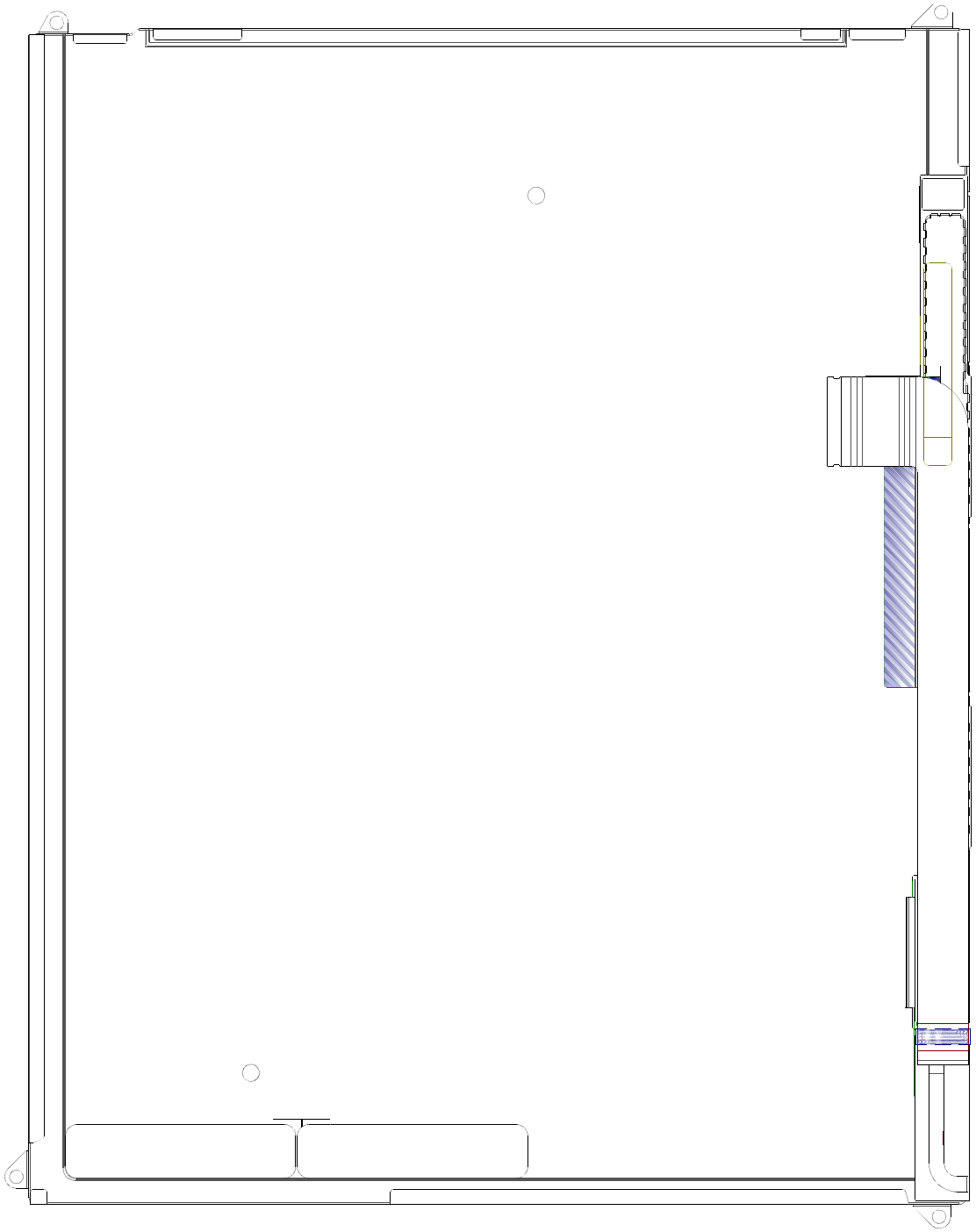
The contents provide general mechanical characteristics for the model LP097X02. In addition the figures in the next page are detailed mechanical drawing of the LCD.

Outline Dimension	Horizontal	208.88 ± 0.50mm
	Vertical	167.12 ± 0.50mm
	Thickness	2.60mm(Max.) PCB area : TBD(Max.)
Bezel Area	Horizontal	201.01mm(POL)
	Vertical	151.86mm(POL)
Active Display Area	Horizontal	196.608mm
	Vertical	147.456mm
Weight	140g (Max.)	
Surface Treatment	Hard coating(2H), Glare treatment of the front Polarizer (Haze 0%)	

<FRONT VIEW>



<REAR VIEW>



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 : 478mm × 365mm × 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

TBD

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

TBD

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

TBD