( ) Preliminary Specifications
(v) Final Specifications

Module	27.0 Inch Color TFT-LCD
Model Name	G270ZAN01.0

Customer	Date

Checked & Approved by	Date

Customer's sign back page

Approved by	Date
Jason Pan	2017. 12. 21

Prepared by	Date
HsinYin Lee	2017. 12. 21

General Display Business Division /
AU Optronics corporation

2. General Description

This specification applies to the Color Active Matrix Liquid Crystal Display G270ZAN01.0 composed of a TFT-LCD display, a driver and power supply circuit, and a LED backlight system. The screen format is intended to support the UHD (3840(H) x 2160(V)) screen and 1.07B colors.

LED driving board for backlight unit is included. All input signals are 8 lanes eDP interface compatible.

2.1 Display Characteristics

The following items are characteristics summary on the table under 25 ^{o}C condition:

Items	Unit	Specifications
Screen Diagonal	[inch]	26.93" (684mm)
Active Area	[mm]	596.16 (H) x 335.34 (V)
Resolution		3840(x3) x 2160
Pixel Pitch	[mm]	0.15525 (per one triad) x 0.15525
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		AHVA mode, Normally Black
Nominal Input Voltage VDD	[Volt]	+12V (Typ)
Power Consumption	[Watt]	Total = 60.0W (Typ) (LCD =10.8W, BLU =49.2W)
Weight	[Grams]	3400 (Typ)
Physical Size	[mm]	630.0 (H) x 368.2 (V) x 22.9 (D) (Typ)
Electrical Interface		8-lanes eDP , 8bits RGB data input
Surface Treatment		Anti-Glare treatment
Support Color		1.07B colors (8bit+Hi FRC)

Temperature Range
    Operating
    Storage (Non-Operating)
	[^{o}C]
	[^{o}C]
		0 to +50
		-20 to +60

RoHS Compliance		

2.2 Optical Characteristics

The optical characteristics are measured under stable conditions at 25 ^{o}C (Room Temperature):

| Item	Unit	Conditions		Min.	Typ.	Max.	Note
White Luminance	cd/m^2	I$_{LED}$=70mA(center point)		640	800		1
Uniformity	%	9 points		80	85		2,3
Contrast Ratio	--			700	1000		4
Response Time	msec	Rising					5
		Falling					
		Rising + Falling			16	25	
Viewing Angle	degree	Horizontal CR >= 10	(Right)	75	89		6
			(Left)	75	89		
		Vertical CR >= 10	(Upper)	70	89		
			(Lower)	70	89		
Color / Chromaticity Coordinates (CIE 1931)	--	Red x		0.653	0.683	0.713	
		Red y		0.272	0.302	0.332	
		Green x		0.239	0.269	0.299	
		Green y		0.625	0.655	0.685	
		Blue x		0.119	0.149	0.179	
		Blue y		0.012	0.042	0.072	
		White x		0.283	0.313	0.343	
		White y		0.299	0.329	0.359	

Note 1: Measurement method

Equipment Pattern Generator, Power Supply, Digital Voltmeter, Luminance meter (SR_3 or equivalent)
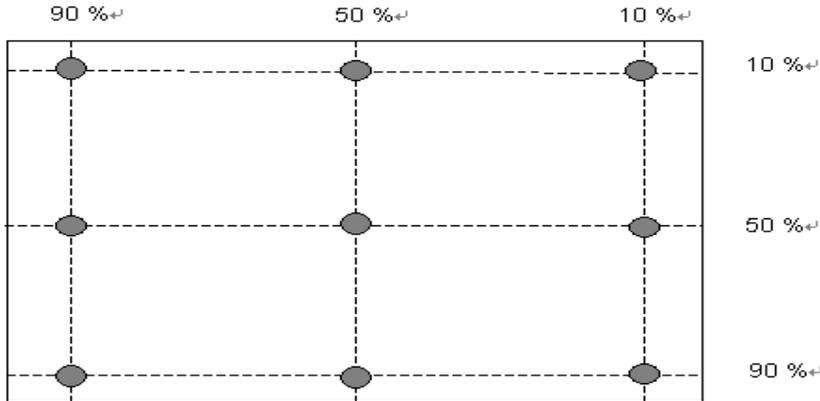
Aperture   1° with 50cm viewing distance

Test Point   Center

Environment   *< 1 lux*

LCD Module

SR_3 or equivalent

Measuring distance

Module Driving Equipment
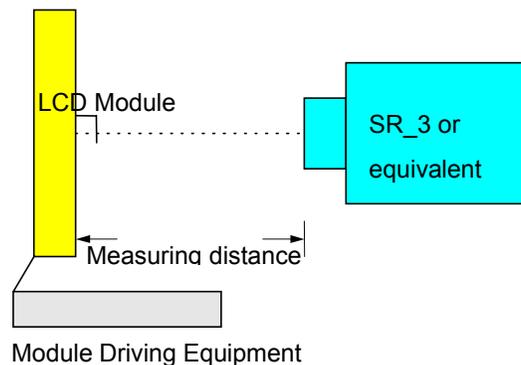
Note 2: Definition of 9 points position

Note 3: The luminance uniformity of 9 points is defined by dividing the minimum luminance values by the maximum test point luminance

$$\delta_{W9} = \frac{\text{Minimum Brightness of nine points}}{\text{Maximum Brightness of nine points}}$$

Note 4: Definition of contrast ratio (CR):

$$\text{Contrast ratio (CR)} = \frac{\text{Brightness on the "White" state}}{\text{Brightness on the "Black" state}}$$

Note 5: Definition of response time:

The output signals of photo detector are measured when the input signals are changed from "White" to "Black" (falling time) and from "Black" to "White" (rising time), respectively. The response time interval is between 10% and 90% of amplitudes. Please refer to the figure as below.
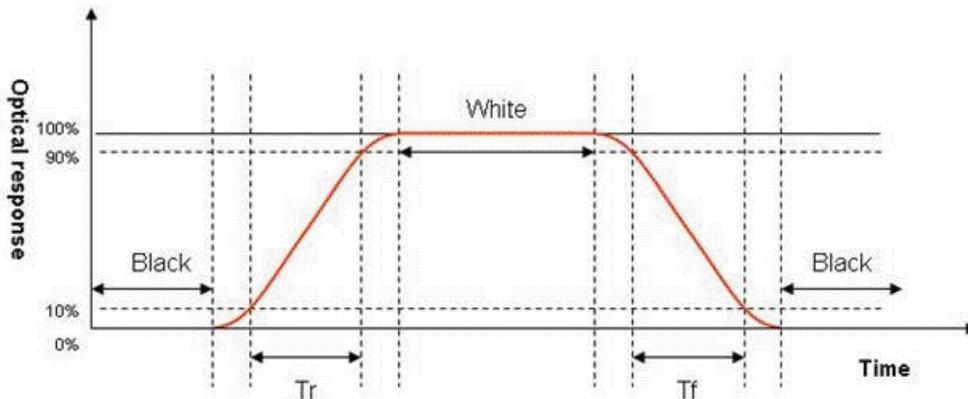
Note 6: Definition of viewing angle

Viewing angle is the measurement of contrast ratio ≥ 10, at the screen center, over a 180° horizontal and 180° vertical range (off-normal viewing angles). The 180° viewing angle range is broken down as below: 90° (θ) horizontal left and right, and 90° (Φ) vertical high (up) and low (down). The measurement direction is typically

perpendicular to the display surface with the screen rotated to its center to develop the desired measurement viewing angle.
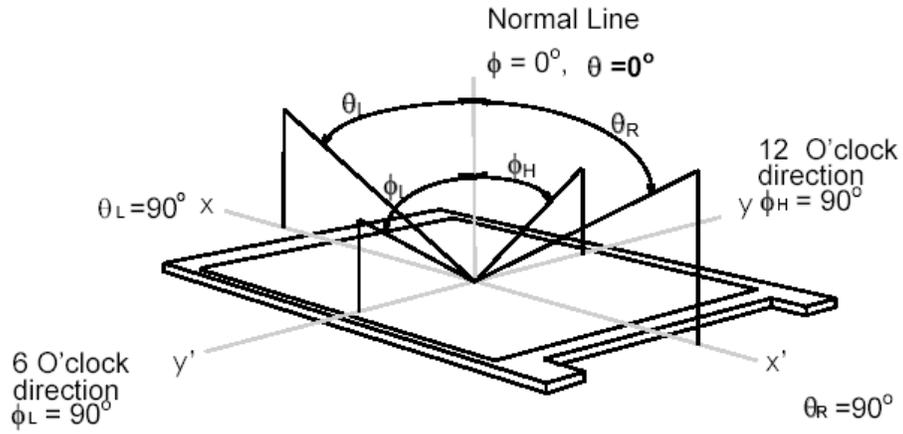
3. Functional Block Diagram

The following diagram shows the functional block of the 27.0 inch color TFT/LCD module:
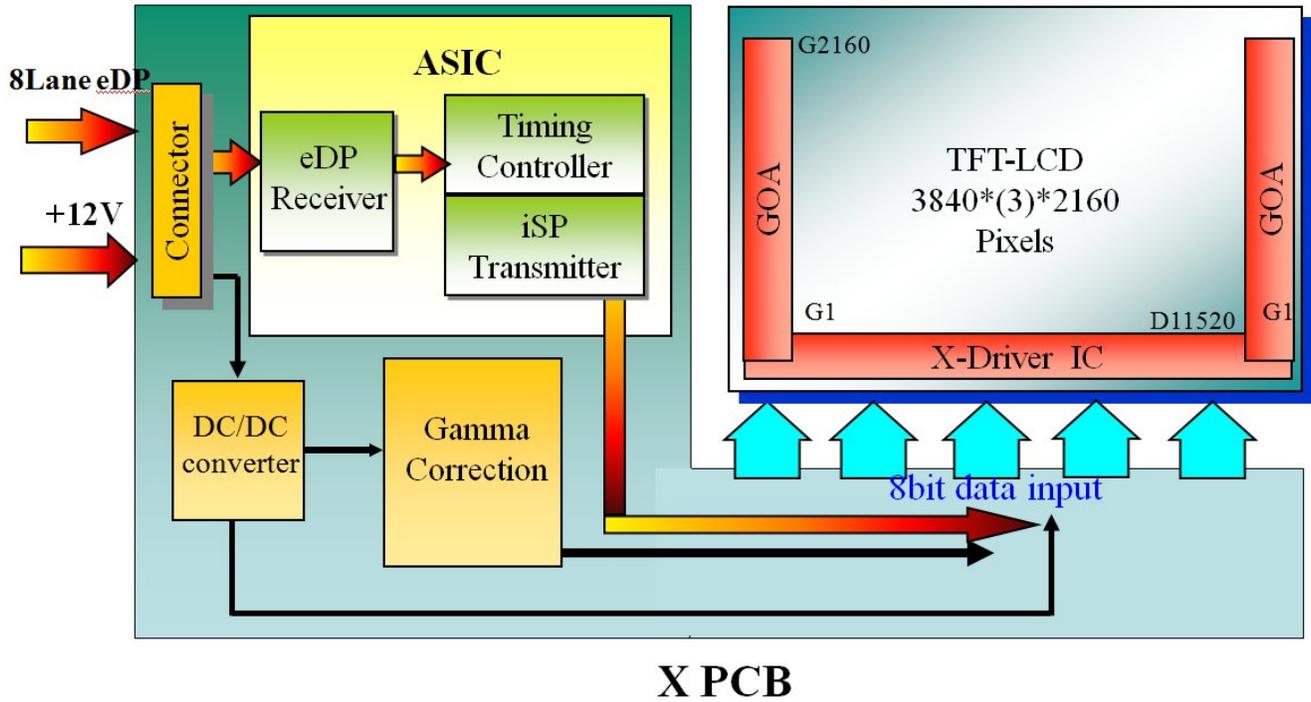
4. Absolute Maximum Ratings

4.1 Absolute Ratings of TFT LCD Module

Item	Symbol	Min	Max	Unit
Logic/LCD drive Voltage	Vin	GND-0.3	14	[Volt]

4.2 Absolute Ratings of Environment

Item	Symbol	Min	Max	Unit
Operating Temperature	TOP	0	+50	[^{o}C]
Operation Humidity	HOP	5	90	[%RH]
Storage Temperature	TST	-20	+60	[^{o}C]
Storage Humidity	HST	5	90	[%RH]

Note: Maximum Wet-Bulb should be 39 ^{o}C and no condensation.

Operating Range (cross-hatched)   Storage Range (cross-hatched) + (diagonal)
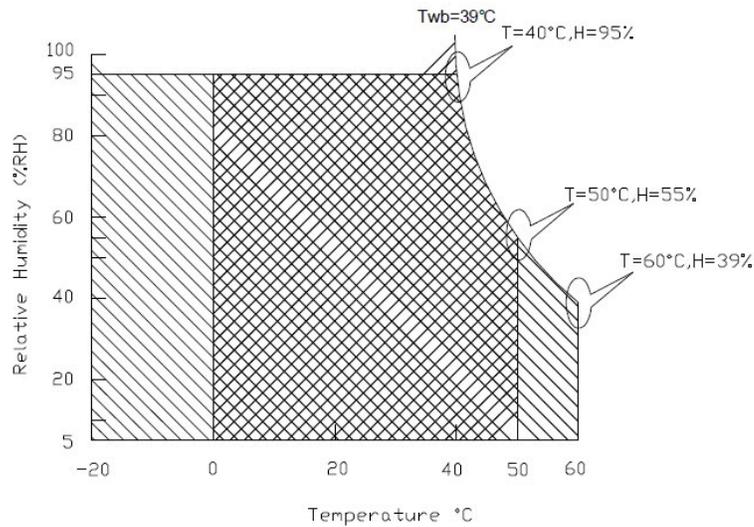
5. Electrical Characteristics

5.1 TFT LCD Module

5.1.1 Power Specification

Input power specifications are shown as follows;

Symbol	Parameter	Min	Typ	Max	Units	Remark
VDD	Power supply Input voltage	10.8	12.0	13.2	[Volt]	
IDD	Power supply Input Current (RMS)	-	0.90	1.08	[A]	VDD= 12.0V, White pattern, Fv=60Hz
IRush	Inrush Current	-	-	3.0	[A]	**Note 1**
PDD	VDD Power Consumption	-	10.8	11.88	[Watt]	VDD= 12.0V , White pattern, Fv=60Hz
VDDrp	Allowable VDD Ripple Voltage	-	-	VDD* 5%	[mV]	VDD= 12.0V, White pattern, Fv=60Hz

Note 1: Measurement condition:
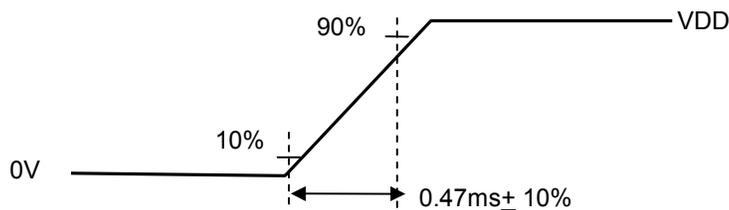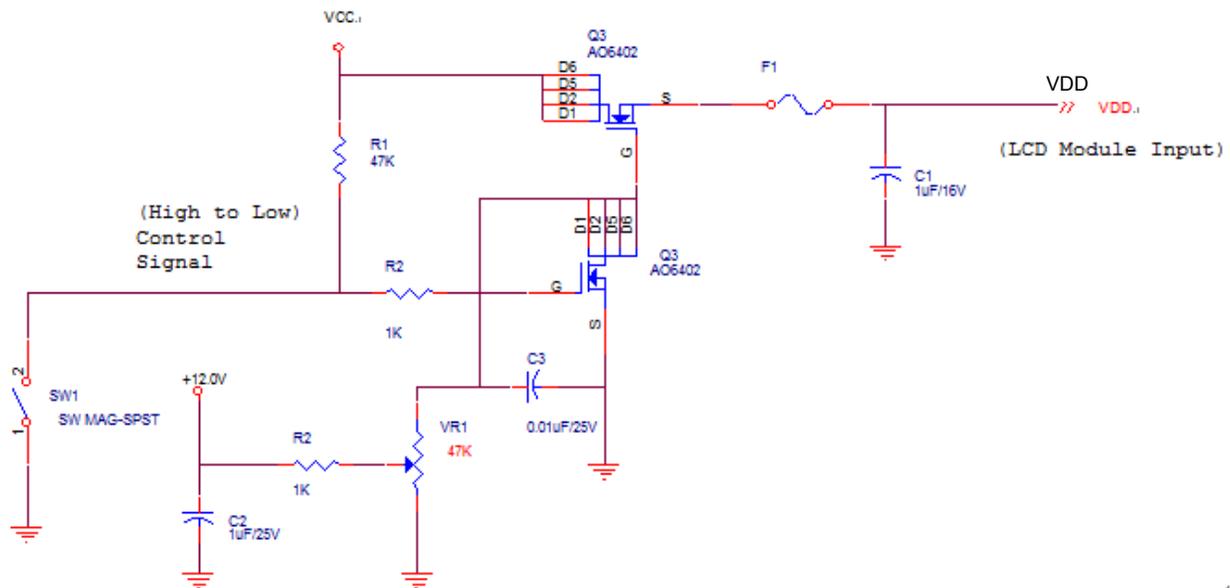
VDD rising time

5.1.2 eDP Electrical Characteristics

Follow as VESA DisplayPort Standard Version 1.2

a.   DisplayPort main link signal:

DisplayPort main link		Min	Typ	Max	unit
VCM	RX input DC Common Mode Voltage	0	-	2.0	V
VDiff$_{P-P}$	Peak-to-peak Voltage at a receiving Device	150	-	-	mV
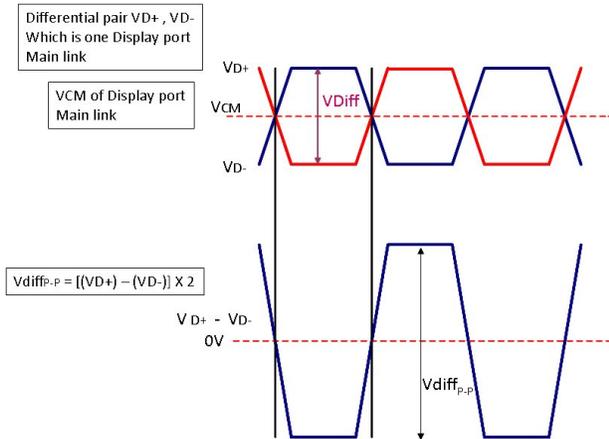
b.   DisplayPort AUX_CH signal:

DisplayPort AUX_CH		Min	Typ	Max	unit
VCM	AUX DC Common Mode Voltage	0	-	2.0	V
VDiff$_{P-P}$	AUX Peak-to-peak voltage at a receiving device	0.27	-	1.36	V
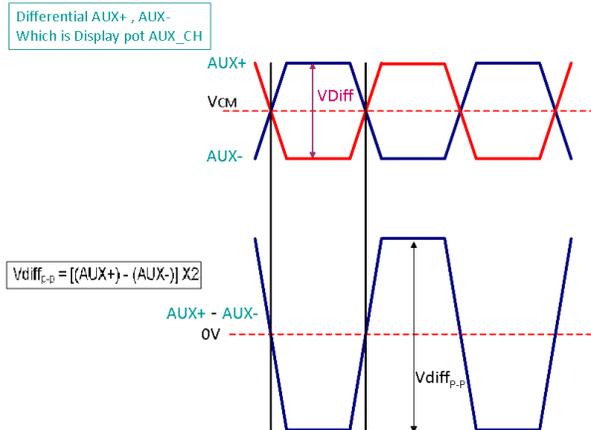
c.   DisplayPort VHPD signal:

DisplayPort VHPD		Min	Typ	Max	unit
VHPD	HPD Voltage	2.25	-	3.6	V

5.2 Backlight Unit

5.2.1 LED Backlight Unit : Driver Connector

Backlight	manufacturer	JST
	part number	S14B-PH-SM6-K-TB(HF)
Mating	manufacturer	JST
	part number	PHR-14

Signal for LED connector

Pin #	Symbol	Pin Description
1	VDD	Power +24V
2	VDD	Power +24V
3	VDD	Power +24V
4	VDD	Power +24V
5	VDD	Power +24V
6	GND	GND
7	GND	GND
8	GND	GND
9	GND	GND
10	GND	GND
11	NC	Do not connect
12	EN	Enable(0V:disable, 2.5~5V:Enable)
13	Dimming	PWM; duty 10%~ 100%
14	NC	Do not connect

5.2.3 Backlight input signal characteristics

Following characteristics are measured under a stable condition using an inverter at 25℃ (Room Temperature):

Symbol	Parameter	Min.	Typ.	Max.	Unit	Remark
VDD	Input Voltage	21.6	24.0	26.4	[Volt]	
I_{VDD}	Input Current		2.05	2.46	[A]	100% PWM Duty
P_{VDD}	Power Consumption		49.20	59.04	[Watt]	100% PWM Duty
Irush LED	Inrush Current	-	-	6	[A]	at rising time=470us
F_{PWM}	Dimming Frequency		0.2	20	[kHz]	
	Swing Voltage	3	3.3	5	V	
	Dimming Duty Cycle	10	-	100	%	
$I_{F (one channel)}$	LED Forward Current		70		mA	Ta = 25°C
$V_{F (one channel)}$	LED Forward Voltage	-	-	-	Volt	
		-	33	37.4	Volt	I_F =70 mA, Ta = 25°C 10 channel/LB & 2 LB/Panel
		-	3	3.4		
$P_{LED (One LB)}$	LED Power Consumption	-	23.1	26.18	Watt	I_F =70 mA, Ta = 25°C LBx2 : 28.05x2=56.1(Max)
LED Lifetime		50,000			Hrs	I_F=70 mA, Ta= 25°C

Note 1: Ta means ambient temperature of TFT-LCD module.

Note 2: VDD, P_{VDD}, P_{VDD}, Irush LED are defined for LED B/L.(100% duty of PWM dimming)

Note 3: I_F, V_F are defined for one channel LED. There are ten LED channels in one light bar. P_{LED} is defined for one light bar. For G270ZAN01.0, there are two light bars in back light unit.

Note 4: If G270ZAN01.0 module is driven by high current or at high ambient temperature & humidity condition. The operating life will be reduced.

Note 5: The LED life-time is estimated data. And is defined when a single LED operated in room temperature, the estimated time to 50% degradation of initial luminous.

Note 6: Only one kind types for adjusting brightness: PWM .

6. Signal Characteristic

6.1 Pixel Format Image

Following figure shows the relationship between input signal and LCD pixel format.
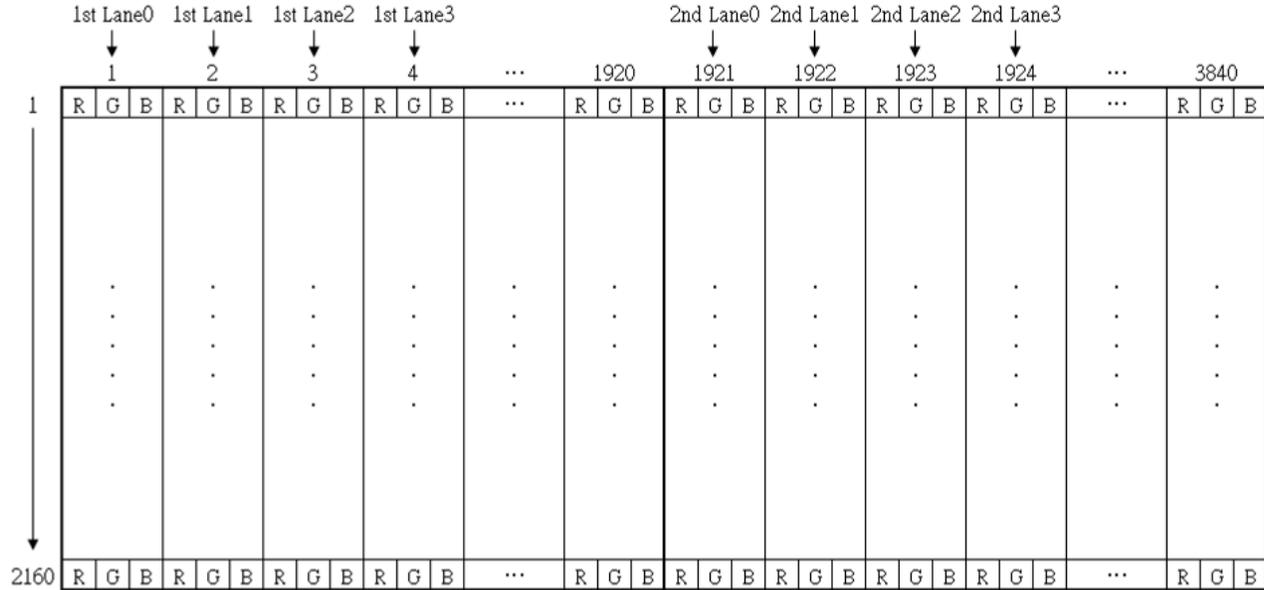
Note: The module use 8-Lanes eDP interface.

1st port:

1st Lane0：1+4n pixel

1st Lane1：2+4n pixel

1st Lane2：3+4n pixel

1st Lane3：4+4n pixel

2nd port:

2nd Lane0：1921+4n pixel

2nd Lane1：1922+4n pixel

2nd Lane2：1923+4n pixel

2nd Lane3：1924+4n pixel

n=0~479

6.2 Scanning Direction

The following figures show the image seen from the front view. The arrow indicates the direction of scan.
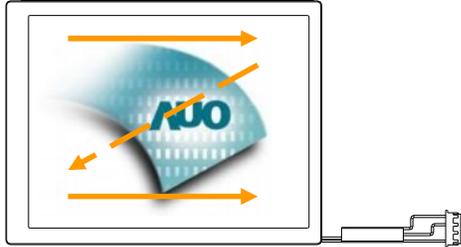
6.3 Signal Description

The module uses a LVDS receiver embedded in AUO's ASIC. LVDS is a differential signal technology for LCD interface and a high-speed data transfer device.

6.3.1 TFT LCD Module: LVDS Connector

Connector Name / Designation	Signal Connector
Manufacturer	JAE
Connector Model Number	FI-RTE51SZ-HF
Adaptable Plug	FI-RE51CL

PIN #	Symbol	Description
1	VDD	Power +12V
2	VDD	Power +12V
3	VDD	Power +12V
4	VDD	Power +12V
5	VDD	Power +12V
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	NC	No connection (for AUO test only. Do not connect)
10	NC	No connection (for AUO test only. Do not connect)
11	NC	No connection (for AUO test only. Do not connect)
12	NC	No connection (for AUO test only. Do not connect)
13	NC	No connection (for AUO test only. Do not connect)
14	NC	No connection (for AUO test only. Do not connect)
15	NC	No connection (for AUO test only. Do not connect)
16	NC	No connection (for AUO test only. Do not connect)
17	GND	Ground
18	1st Lane3_N	Negative eDP differential data input
19	1st Lane3_P	Positive eDP differential data input
20	GND	Ground
21	1st Lane2_N	Negative eDP differential data input
22	1st Lane2_P	Positive eDP differential data input
23	GND	Ground
24	1st Lane1_N	Negative eDP differential data input
25	1st Lane1_P	Positive eDP differential data input
26	GND	Ground
27	1st Lane0_N	Negative eDP differential data input
28	1st Lane0_P	Positive eDP differential data input

29	GND	Ground
30	1st AUX_CH_P	Positive AUX Channel differential data input
31	1st AUX_CH_N	Negative AUX Channel differential data input
32	GND	Ground
33	NC	No connection (for AUO test only. Do not connect)
34	GND	Ground
35	2nd Lane3_N	Negative eDP differential data input
36	2nd Lane3_P	Positive eDP differential data input
37	GND	Ground
38	2nd Lane2_N	Negative eDP differential data input
39	2nd Lane2_P	Positive eDP differential data input
40	GND	Ground
41	2nd Lane1_N	Negative eDP differential data input
42	2nd Lane1_P	Positive eDP differential data input
43	GND	Ground
44	2nd Lane0_N	Negative eDP differential data input
45	2nd Lane0_P	Positive eDP differential data input
46	GND	Ground
47	2nd AUX_CH_P	Positive AUX Channel differential data input
48	2nd AUX_CH_N	Negative AUX Channel differential data input
49	GND	Ground
50	HPD	Hot plug detection
51	GND	Ground

Note 1: Input Signals shall be in low status when VDD is off.

Note 2: High stands for "3.3V", Low stands for "0V", NC means "No Connection".
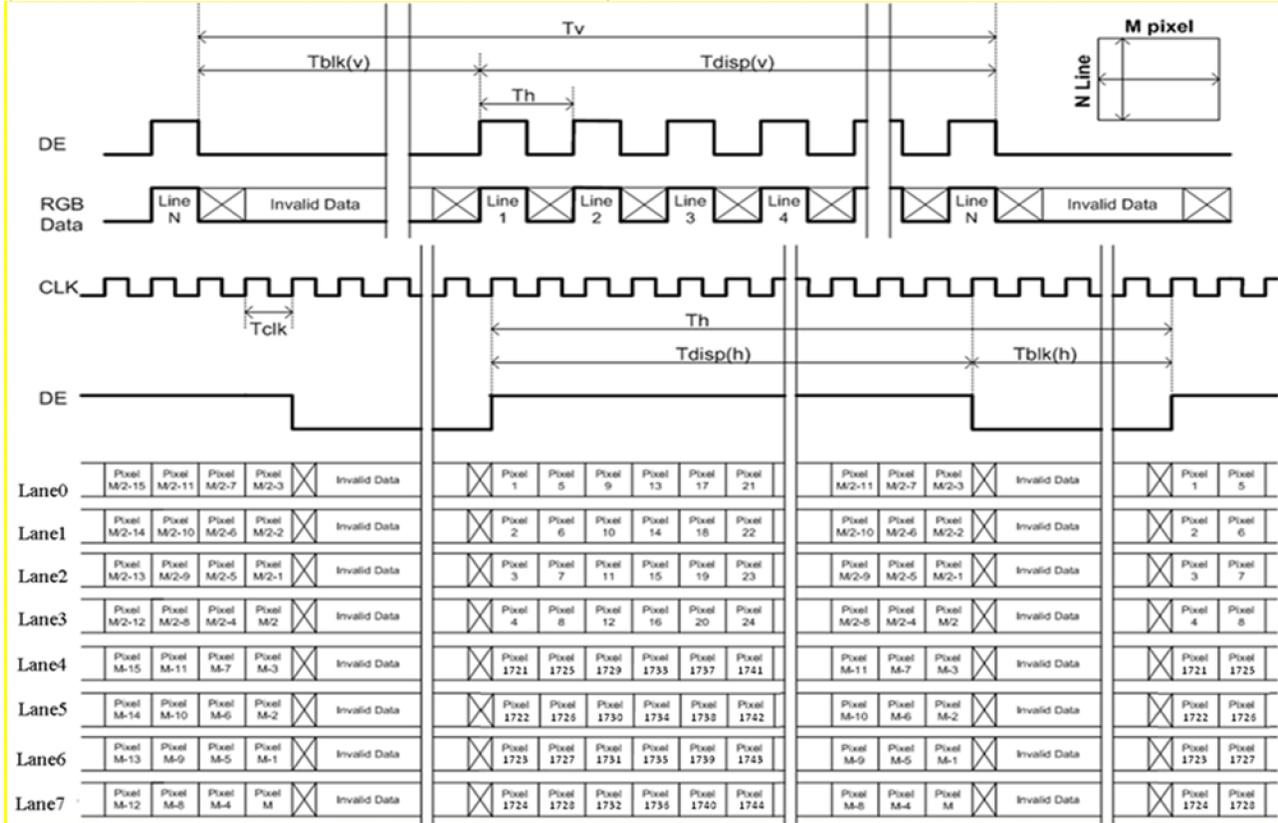
Note 3: RSV means "Reserved".

6.4 The Input Data Format

6.4.1 eDP Data Format

1st Lane0	1st Lane1	1st Lane2	1st Lane3
R1-9:2	R2-9:2	R3-9:2	R4-9:2
R1-1:0IG1-9:4	R2-1:0IG2-9:4	R3-1:0IG3-9:4	R4-1:0IG4-9:4
G1-3:0IB1-9:6	G2-3:0IB2-9:6	G3-3:0IB3-9:6	G4-3:0IB4-9:6
B1-5:0IR5-9:8	B2-5:0IR6-9:8	B3-5:0IR7-9:8	B4-5:0IR8-9:8
R5-7:0	R6-7:0	R7-7:0	R8-7:0
G5-9:2	G6-9:2	G7-9:2	G8-9:2
G5-1:0IB5-9:4	G6-1:0IB6-9:4	G7-1:0IB7-9:4	G8-1:0IB8-9:4
B5-3:0IR9-9:6	B6-3:0IR10-9:6	B7-3:0IR11-9:6	B8-3:0IR12-9:6
R9-5:0IG9-9:8	R10-5:0IG10-9:8	R11-5:0IG11-9:8	R12-5:0IG12-9:8
G9-7:0	G10-7:0	G11-7:0	G12-7:0
B9-9:2	B10-9:2	B11-9:2	B12-9:2
B9-1:0IR13-9:4	B10-1:0IR14-9:4	B11-1:0IR15-9:4	B12-1:0IR16-9:4
R13-3:0IG13-9:6	R14-3:0IG14-9:6	R15-3:0IG15-9:6	R16-3:0IG16-9:6
G13-5:0IB13-9:8	G14-5:0IB14-9:8	G15-5:0IB15-9:8	G16-5:0IB16-9:8
B13-7:0	B14-7:0	B15-7:0	B16-7:0
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

2nd Lane0	2nd Lane1	2nd Lane2	2nd Lane3
R1921-9:2	R1922-9:2	R1923-9:2	R1924-9:2
R1921-1:0IG1921-9:4	R1922-1:0IG1922-9:4	R1923-1:0IG1923-9:4	R1924-1:0IG1924-9:4
G1921-3:0IB1921-9:6	G1922-3:0IB1922-9:6	G1923-3:0IB1923-9:6	G1924-3:0IB1924-9:6
B1921-5:0IR1925-9:8	B1922-5:0IR1926-9:8	B1923-5:0IR1927-9:8	B1924-5:0IR1928-9:8
R1925-7:0	R1926-7:0	R1927-7:0	R1928-7:0
G1925-9:2	G1926-9:2	G1927-9:2	G1928-9:2
G1925-1:0IB1925-9:4	G1926-1:0IB1926-9:4	G1927-1:0IB1927-9:4	G1928-1:0IB1928-9:4
B1925-3:0IR1929-9:6	B1926-3:0IR1930-9:6	B1927-3:0IR1931-9:6	B1928-3:0IR1932-9:6
R1929-5:0IG1929-9:8	R1930-5:0IG1930-9:8	R1931-5:0IG1931-9:8	R1932-5:0IG1932-9:8
G1929-7:0	G1930-7:0	G1931-7:0	G1932-7:0
B1929-9:2	B1930-9:2	B1931-9:2	B1932-9:2
B1929-1:0IR1933-9:4	B1930-1:0IR1934-9:4	B1931-1:0IR1935-9:4	B1932-1:0IR1936-9:4
R1933-3:0IG1933-9:6	R1934-3:0IG1934-9:6	R1935-3:0IG1935-9:6	R1936-3:0IG1936-9:6
G1933-5:0IB1933-9:8	G1934-5:0IB1934-9:8	G1935-5:0IB1935-9:8	G1936-5:0IB1936-9:8
B1933-7:0	B1934-7:0	B1935-7:0	B1936-7:0
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

6.4.2 Color versus Input Data

The following table is for color versus input data (10bit). The higher the gray level, the brighter the color.

.

Color	Gary Level	RED data (MSB:R9,LSB:R0)										GREEN data (MSB:G9,LSB:G0)										BLUE data (MSB:B9,LSB:B0)										Remark
		R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	G9	G8	G7	G6	G5	G4	G3	G2	G1	G0	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0	
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	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	1	1	1	1	1	1	
L511	-	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	
Red	L0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Black
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
	L1023	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Green	L0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Black
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
	L1023	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	
Blue	L0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Black
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
	L1023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	

6.4.3 Input Timing Diagram

(Lane0~7 eDP data:1, 2, 3, 4, 1921, 1922, 1923, 1924)

6.5 Interface Timing

6.5.1 Timing Characteristics

The input timing is shown as the following table.

Symbol	Description		Min.	Typ.	Max.	Unit	Remark
Tv	Vertical Section	Period	2180	2200	4500	Th	
Tdisp (v)		Active	2160	2160	2160	Th	
Tblk (v)		Blanking	20	40	2340	Th	
Fv		Frequency	29	60	65	Hz	***Note 6-6*** ***Note 6-7***
Th	Horizontal Section	Period	2000	2100	3520	Tclk	
Tdisp (h)		Active	1920	1920	1920	Tclk	
Tblk (h)		Blanking	80	180	1600	Tclk	
Fh		Frequency	40	132	151	kHz	***Note 6-4***
Tclk	Pixel Clock	Period	3.330	3.608	12.500	ns	1/Fclk
Fclk		Frequency	80	277	300.3	MHz	***Note 6-5***
Link Rate per Lane				2.7		Gbps	**2180**

Note 6-4: The equation is listed as following. Please don't exceed the above recommended value.

Fh (Min.) = Fclk (Min.) / Th (Min.)
Fh (Typ.) = Fclk (Typ.) / Th (Typ.)
Fh (Max.)= Fclk (Max.) / Th (Min.)

Note 6-5: The equation is listed as following. Please don't exceed the above recommended value.

1st Lane N & 2nd Lane N skew < 200ns

Fclk (Typ.) = Fv (Typ.) x Th (Typ.) x Tv (Typ.)

Fclk (Min.)$\leq$Fv x Th x Tv $\leq$ Fclk (Max.)

Note 6-6: The equation is listed as following. Please don't exceed the above recommended value.

Fv =Fclk(Typ.) / (Tv x Th)

Note 6-7: The optimal Vertical Frequency is 50~65 Hz for best picture quality.

6.6 Power ON/OFF Sequence

VDD power and lamp on/off sequence is as below. Interface signals are also shown in the chart. Signals from any system shall be Hi-Z state or low level when VDD is off.
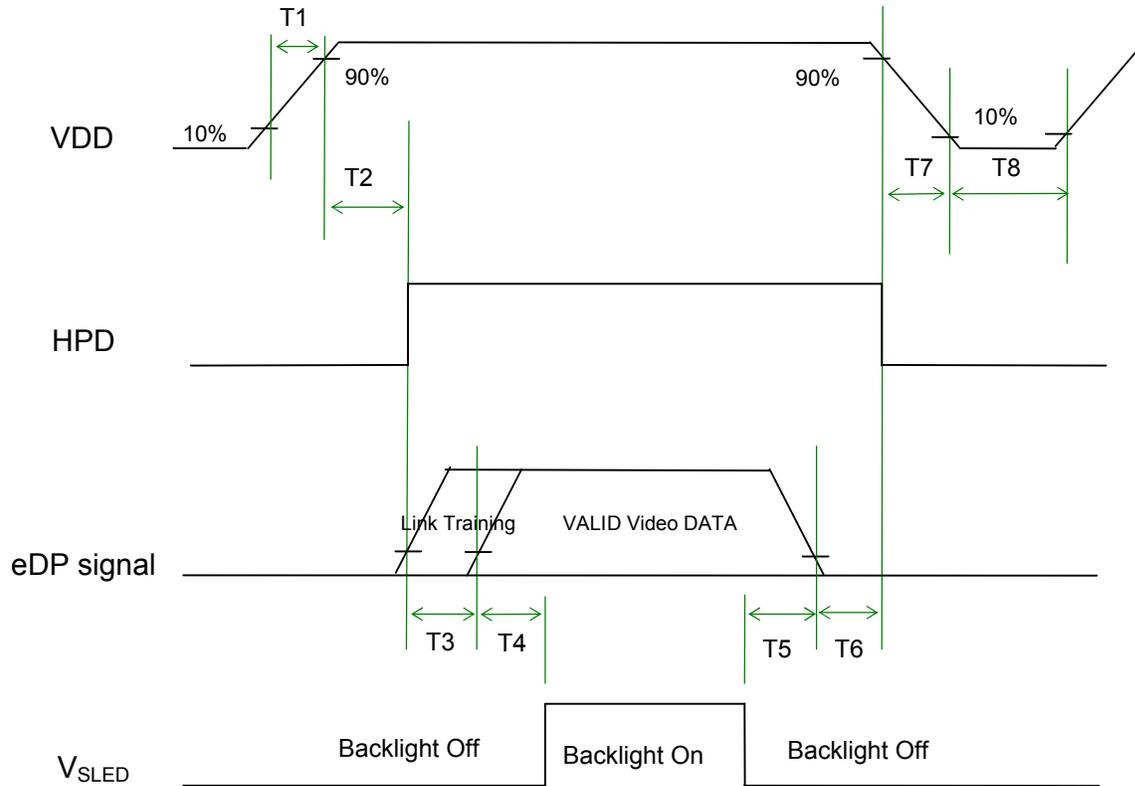
Power ON/OFF sequence timing

Symbol	Value			Unit	Remark
	Min.	Typ.	Max.		
T1	0.5	-	10	[ms]	
T2	0	-	200	[ms]	
T3	0	-	-	[ms]	
T4	500	-	-	[ms]	
T5	100	-	-	[ms]	
T6	0		50	[ms]	
T7	0	-	200	[ms]	
T8	1000	-	-	[ms]	

The above on/off sequence should be applied to avoid abnormal function in the display. Please make sure to turn off the power when you plug the cable into the input connector or pull the cable out of the connector.

7. Reliability Test Criteria

Items	Required Condition	Note
Temperature Humidity Bias (THB)	Ta= 50oC, 80%RH, 300hours	
High Temperature Operation (HTO)	Ta= 50oC, 300hours	
Low Temperature Operation (LTO)	Ta= 0oC, 300hours	
High Temperature Storage (HTS)	Ta= 60oC, 300hours	
Low Temperature Storage (LTS)	Ta= -20oC, 300hours	
Vibration Test (Non-operation)	Acceleration: 1.5 G Wave: Random Frequency: 10 - 200Hz Sweep: 30 Minutes each Axis (X, Y, Z)	
Shock Test (Non-operation)	Acceleration: 50 G Wave: Half-sine Active Time: 20 ms Direction: $\pm X$, $\pm Y$, $\pm Z$ (one time for each Axis)	
Drop Test	Height: 60 cm, package test	
Thermal Shock Test (TST)	-20 oC /30min, 60/ oC 30min, 100 cycles	*1*
On/Off Test	On/10sec, Off/10sec, 30,000 cycles	
ESD (Electrostatic Discharge)	Contact Discharge: ± 8KV, 150pF(330Ω) 1sec, 9 points, 25 times/ point.	*2*
	Air Discharge: ± 15KV, 150pF(330Ω) 1sec 9 points, 25 times/ point.	
Altitude Test	Operation:10,000 ft Non-Operation:30,000 ft	

Note 1: The TFT-LCD module will not sustain damage after being subjected to 100 cycles of rapid temperature change.

a. A cycle of rapid temperature change consists of varying the temperature from -20oC to 60oC, and back again. Power is not applied during the test.

b. After finish temperature cycling, the unit is placed in normal room ambient for at least 4 hours before power on.

Note 2: According to EN61000-4-2 , ESD class B: Some performance degradation allowed. No data lost. Self-recoverable. No hardware failures.
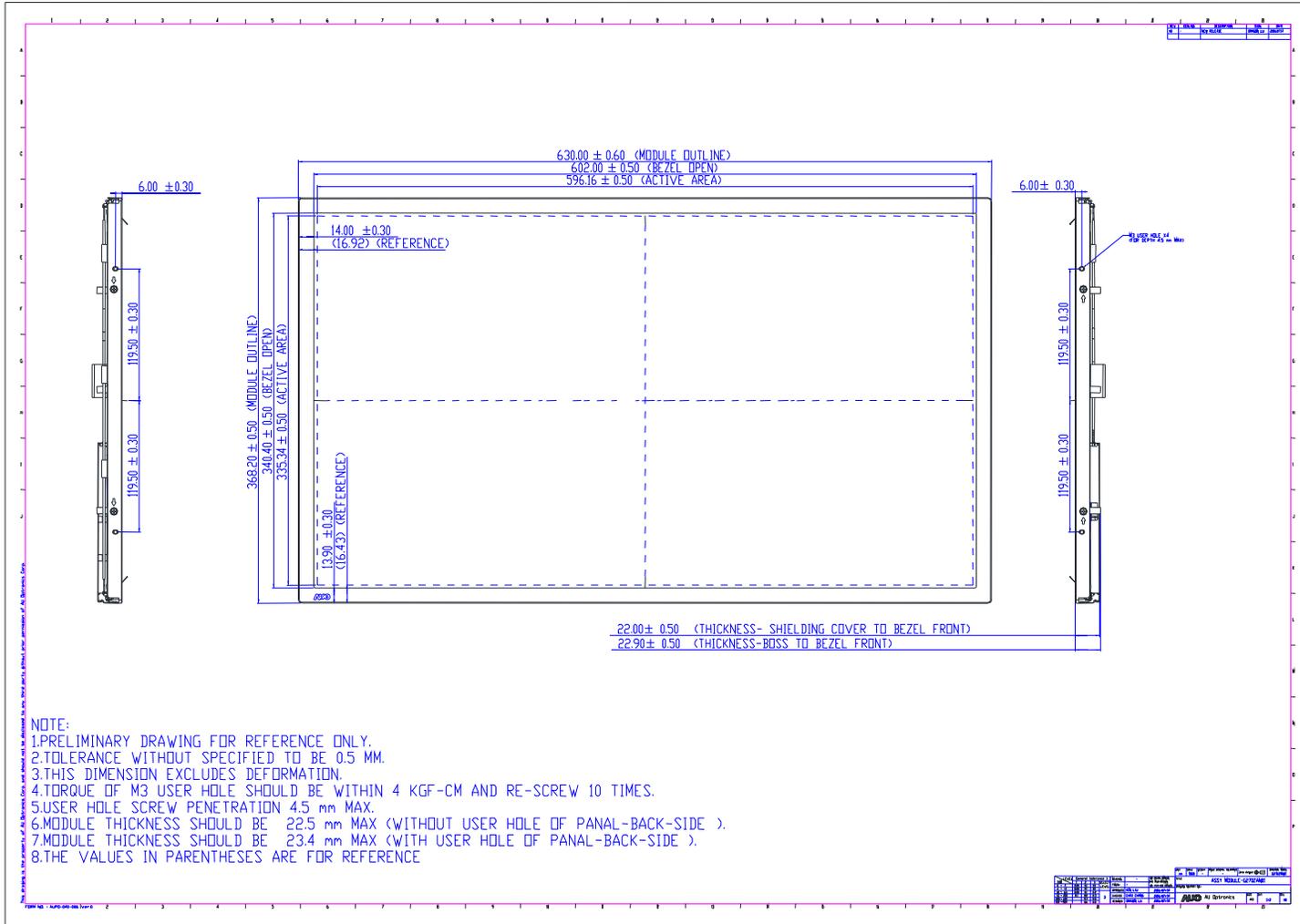
Note 3:

a. Water condensation is not allowed for each test items.

b. Each test is done by new TFT-LCD module. Don't use the same TFT-LCD module repeatedly for reliability test.

c. The reliability test is performed only to examine the TFT-LCD module capability.

d. To inspect TFT-LCD module after reliability test, please store it at room temperature and room humidity for 24 hours at least in advance.

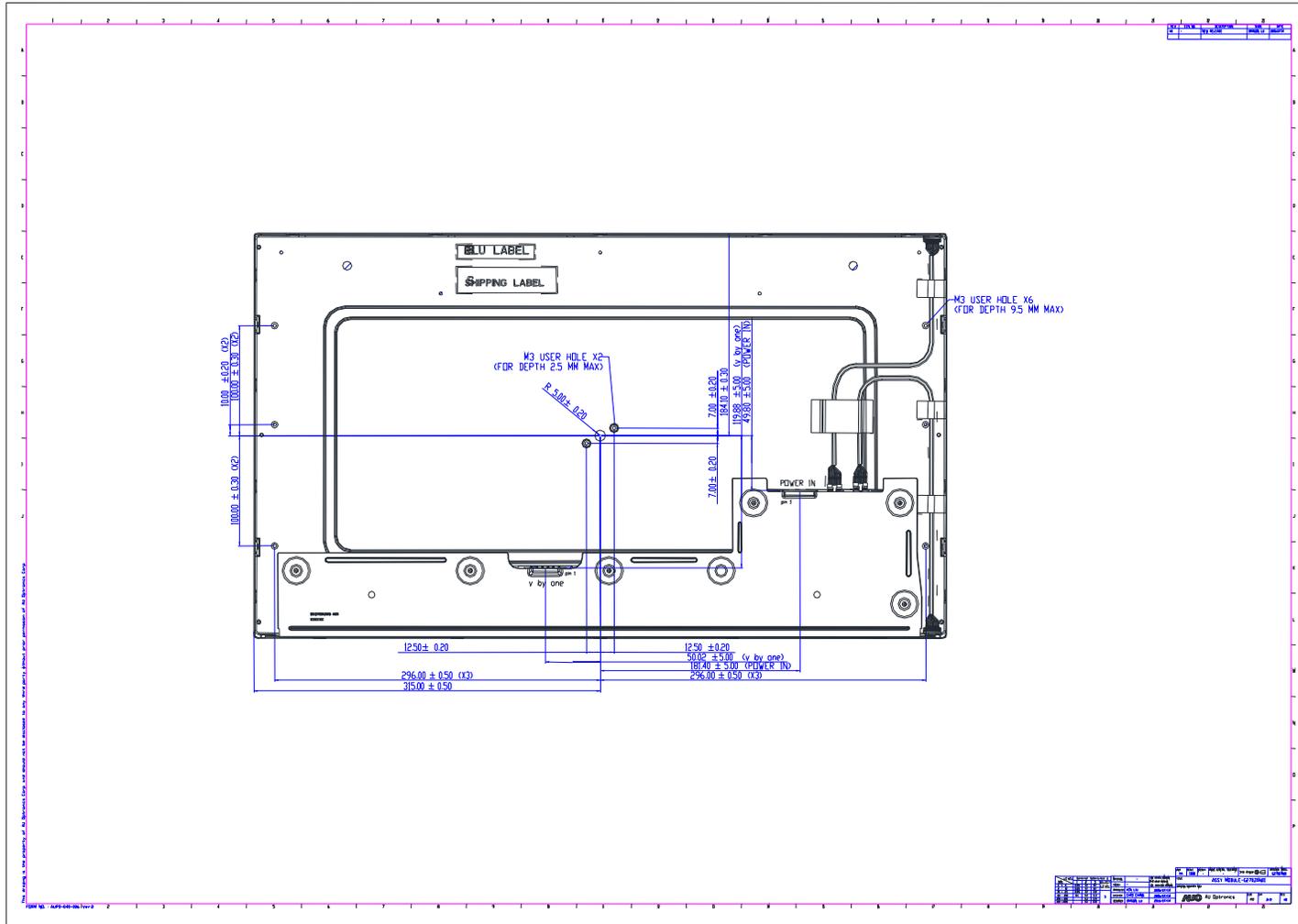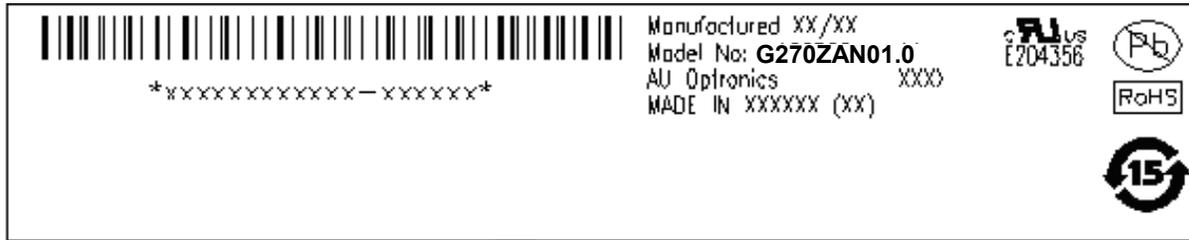# 8. Mechanical Characteristics

8.1 LCM Outline Dimension

NOTE:
1. PRELIMINARY DRAWING FOR REFERENCE ONLY.
2. TOLERANCE WITHOUT SPECIFIED TO BE 0.5 MM.
3. THIS DIMENSION EXCLUDES DEFORMATION.
4. TORQUE OF M3 USER HOLE SHOULD BE WITHIN 4 KGF-CM AND RE-SCREW 10 TIMES.
5. USER HOLE SCREW PENETRATION 4.5 mm MAX.
6. MODULE THICKNESS SHOULD BE 22.5 mm MAX (WITHOUT USER HOLE OF PANAL-BACK-SIDE).
7. MODULE THICKNESS SHOULD BE 23.4 mm MAX (WITH USER HOLE OF PANAL-BACK-SIDE).
8. THE VALUES IN PARENTHESES ARE FOR REFERENCE

9. Label and Packaging

9.1 Shipping Label (on the rear side of TFT-LCD display)

```
||||||||||||||||||||||||||||||||||||||||||||      Manufactured XX/XX        c[UL]us
                                                  Model No: G270ZAN01.0     E204356     (Pb)
       *xxxxxxxxxxxx—xxxxxx*                       AU Optronics      XXX)
                                                  MADE IN XXXXXX (XX)                    RoHS

                                                                                        (15)
```

Note 1: For Pb Free products, AUO will add (Pb) for identification.

Note 2: For RoHS compatible products, AUO will add [RoHS] for identification.

Note 3: For China RoHS compatible products, AUO will add (15) for identification.

Note 4: The Green Mark will be presented only when the green documents have been ready by AUO Internal Green

Team.

9.2 Carton Package
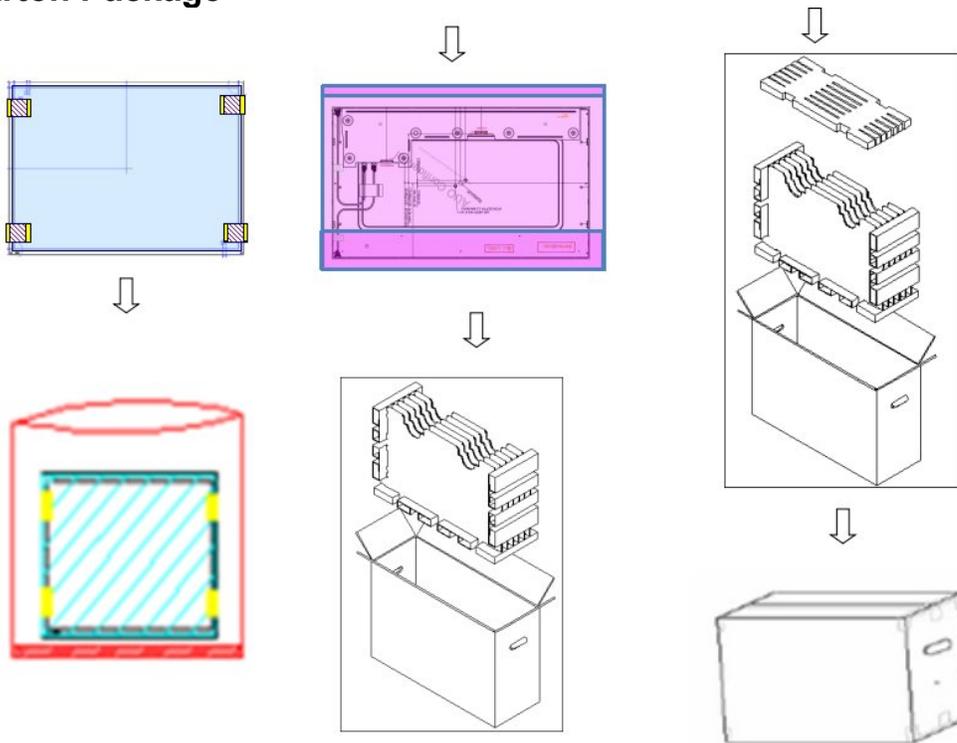
- Max capacity：5 PCS TFT-LCD module per carton

- Max weight: 20 kg per carton

- Outside dimension of carton: 730mm(L) * 270mm(W) * 470mm(H)

- Pallet size： 1200 mm * 800 mm * 132mm

- Box stacked

  Module by air_Max：(1*4) *3 layers，one pallet put 12 boxes，total 60pcs module

  Module by sea_Max：(1*4) *3 layers + (1*4) *1 layers，two pallet put 16 boxes，total 80pcs module

  Module by sea_HQ_Max：(1*4) *3 layers + (1*4) *1 layers，two pallet put 16 boxes，total 80pcs module

10 Safety

10.1 Sharp Edge Requirements

There will be no sharp edges or comers on the display assembly that could cause injury.

10.2 Materials

10.2.1 Toxicity

There will be no carcinogenic materials used anywhere in the display module. If toxic materials are used, they will be reviewed and approved by the responsible AUO toxicologist.

10.2.2 Flammability

All components including electrical components that do not meet the flammability grade UL94-V1 in the module will complete the flammability rating exception approval process.

The printed circuit board will be made from material rated 94-V1 or better. The actual UL flammability rating will be printed on the printed circuit board.

10.3 Capacitors

If any polarized capacitors are used in the display assembly, provisions will be made to keep them from being inserted backwards.

10.4 National Test Lab Requirement

The display module will satisfy all requirements for compliance to:

UL 60950-1 second edition   U.S.A. Information Technology Equipment