Product Specification

AU OPTRONICS CORPORATION

G320ZAN02.2

(V) Preliminary Specifications

(   ) Final Specifications

Module	32 Inch Color TFT-LCD
Model Name	G320ZAN02.2

Customer	Date

Checked & Approved by	Date

Customer's sign back page

Approved by	Date
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Prepared by	Date
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General Display Business Unit /
AU Optronics corporation

Contents

Record of Revision

Version	Date	Page	Old description	New Description
0.1	2020/01/10	All	First draft specification	

1. Operating Precautions

1) Since front polarizer is easily damaged, please be cautious and not to scratch it.
2) Be sure to turn off power supply when inserting or disconnecting from input connector.
3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.
4) When the panel surface is soiled, wipe it with absorbent cotton or soft cloth.
5) Since the panel is made of glass, it may be broken or cracked if dropped or bumped on hard surface.
6) To avoid ESD (Electro Static Discharde) damage, be sure to ground yourself before handling TFT-LCD Module.
7) Do not open nor modify the module assembly.
8) Do not press the reflector sheet at the back of the module to any direction.
9) In case if a module has to be put back into the packing container slot after it was taken out from the container, do not press the center of the LED light bar edge. Instead, press at the far ends of the LED light bar edge softly. Otherwise the TFT Module may be damaged.
10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT Module.
11) TFT-LCD Module is not allowed to be twisted & bent even force is added on module in a very short time. Please design your display product well to avoid external force applying to module by end-user directly.
12) Small amount of materials having no flammability grade is used in the LCD module. The LCD module should be supplied by power complied with requirements of Limited Power Source (IEC60950-1 or UL1950), or be applied exemption.
13) Severe temperature condition may result in different luminance, response time and lamp ignition voltage.
14) Continuous operating TFT-LCD display under low temperature environment may accelerate lamp exhaustion and reduce luminance dramatically.
15) The data on this specification sheet is applicable when LCD module is placed in landscape position.
16) Continuous displaying fixed pattern may induce image sticking. It's recommended to use screen saver or shuffle content periodically if fixed pattern is displayed on the screen.

2. General Description

This specification applies to the Color Active Matrix Liquid Crystal Display G320ZAN02.2 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)x2160(V)) screen and 1.07B colors. All input signals are v-by-one interface compatible. LED driving board for backlight unit is included in G320ZAN02.2.

2.1 Display Characteristics

The following items are characteristics summary on the table under 25℃ condition:

Items	Unit	Specifications
Screen Diagonal	[inch]	32.0" (812.8mm)
Active Area	[mm]	708.48 (H) x 398.52 (V)
Resolution		3840(x3) x 2160
Pixel Pitch	[mm]	0.1845 (per one triad) x 0.1845
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		Normally Black, AHVA
Nominal Input Voltage VDD	[Volt]	+12.0 V
Power Consumption	[Watt]	Logic: max. 30.96W BL power: max.92.85W(TBD)
Weight	[Grams]	4630 (Typ)
Physical Size	[mm]	727.3 (H) x 424.5 (V) x 20.48 (D) (Typ)
Electrical Interface		V by one
Surface Treatment		Anti-Glare treatment
Support Color		10bit(True 10)

Temperature Range (T surface)
    Operating
    Storage (Non-Operating)
	[℃]
	[℃]
		0 to +50
		-20 to +60

RoHS Compliance		Yes

2.2 Optical Characteristics

The optical characteristics are measured under stable conditions(warm up 30 mins) at 25℃ (Room Temperature), VDD 12V , Frame rate:60Hz:

| Item	Unit	Conditions		Min.	Typ.	Max.	Note
White Luminance	cd/m^2	ILED=80mA(center point)		700	850	---	1
Uniformity	%	9 points		---	---	20	2,3
Contrast Ratio	--			1250	1800		4
Response Time	msec	Rising		---	TBD	TBD	5
		Falling		---	TBD	TBD	
		Rising + Falling		---	(20)	TBD	
Viewing Angle	degree	Horizontal CR >= 10	(Right)	75	89	---	6
			(Left)	75	89	---	
		Vertical CR >= 10	(Upper)	75	89	---	
			(Lower)	75	89	---	
Color / Chromaticity Coordinates (CIE 1931)	--	Red x		TBD	(0.687)	TBD	
		Red y		TBD	(0.308)	TBD	
		Green x		TBD	(0.211)	TBD	
		Green y		TBD	(0.730)	TBD	
		Blue x		TBD	(0.149)	TBD	
		Blue y		TBD	(0.051)	TBD	
		White x		0.283	0.313	0.343	
		White y		0.299	0.329	0.359	
Adobe RGB coverage ratio	%			---	99	---	

Note 1: Measurement method

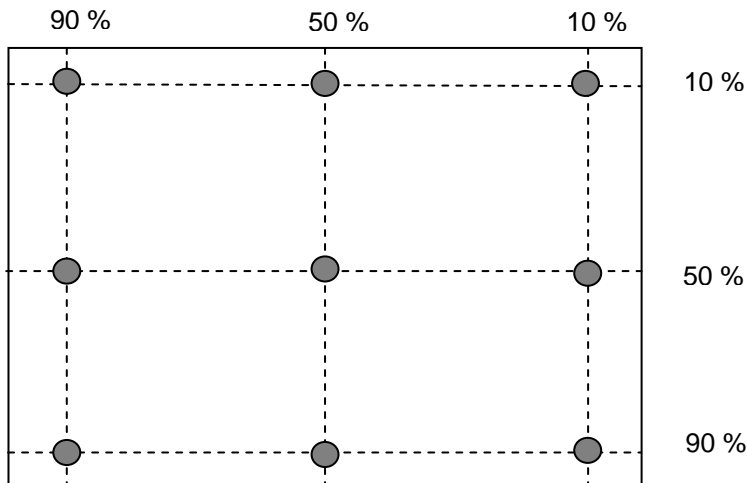Equipment Pattern Generator, Power Supply, Digital Voltmeter, Luminance meter (SR_3 or equivalent)

Aperture   1∘ with 50cm viewing distance

Test Point   Center

Environment   *< 1 lux*

LCD Module

SR_3 or equivalent

Measuring distance

Module Driving Equipment
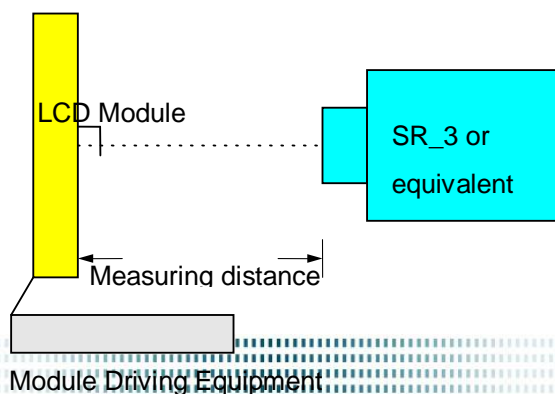
Note 2: Definition of 9 points position

90 %　　　　50 %　　　　10 %

10 %

50 %

90 %

Note 3: Definition of luminance uniformity of 9 points.

$$\delta_{w9} = \frac{\left| B_{max} \text{ or } B_{min} - B_{avg} \right|}{B_{avg}} \times 100\%$$

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.
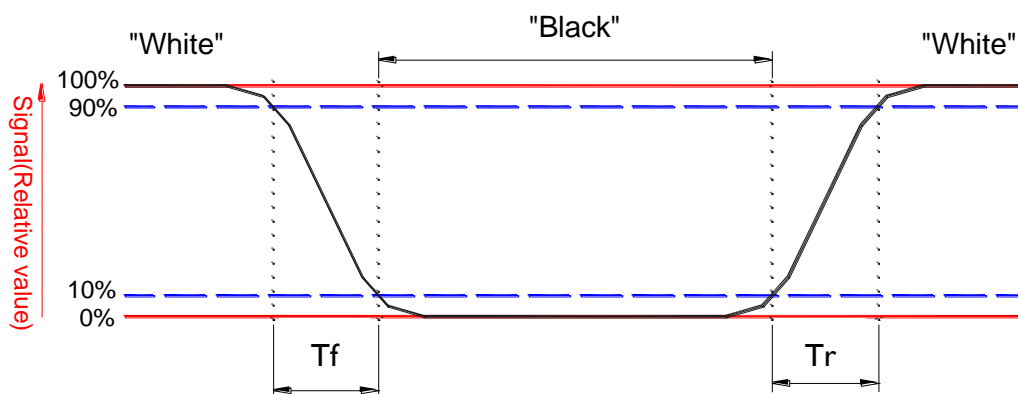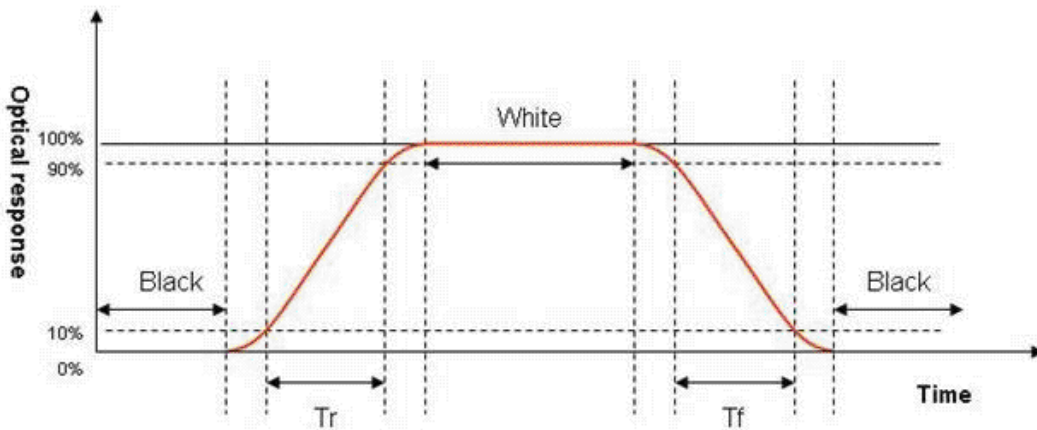
Note 6: Definition of viewing angle

Viewing angle is the measurement of contrast ratio $\geq$ 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.
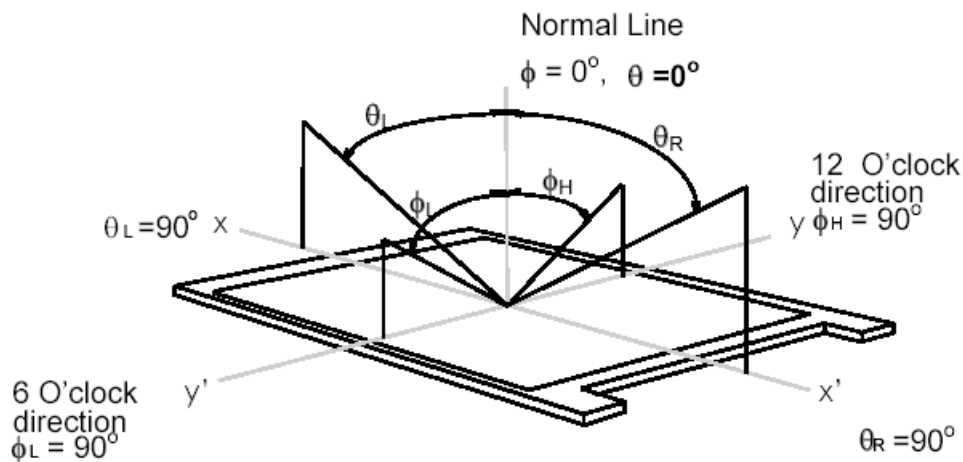
3. Functional Block Diagram

The following diagram shows the functional block of the 32 inch color TFT/LCD module:
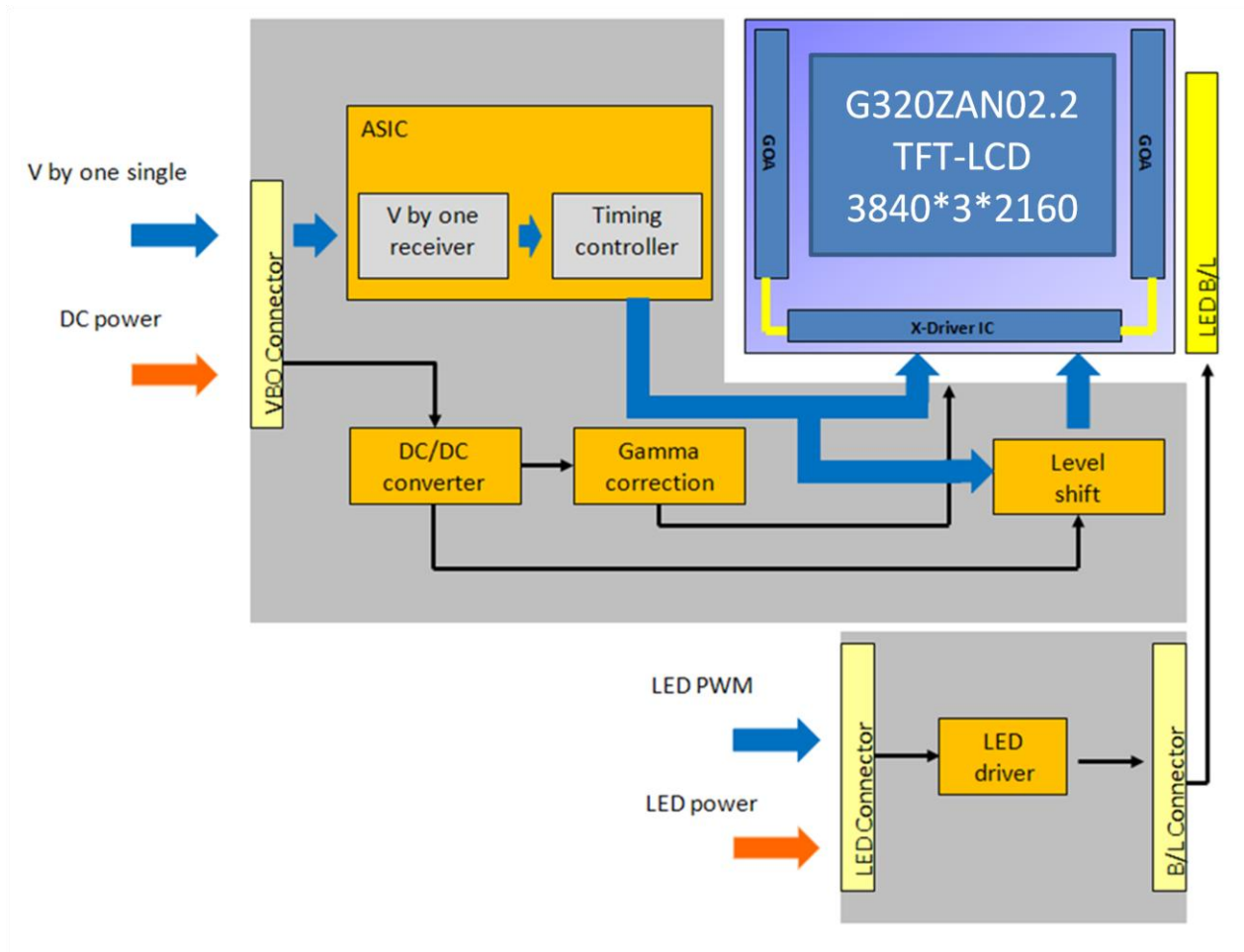
3.1 Interface Connection：

Connector Name / Designation	Signal Connector
Manufacturer	JAE
Connector Model Number	FI-RE51S-HF
Adaptable Plug	FI-RE51HL

4. Absolute Maximum Ratings

4.1 Absolute Ratings of TFT LCD Module

Item	Symbol	Min	Max	Unit
Logic/LCD drive Voltage	Vin	-0.3	+13.5	[Volt]

4.2 Absolute Ratings of Environment

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

Note:temperature is defined as surface temperature

Note: Maximum Wet-Bulb should be 39℃ and no condensation.

Operating Range   Storage Range
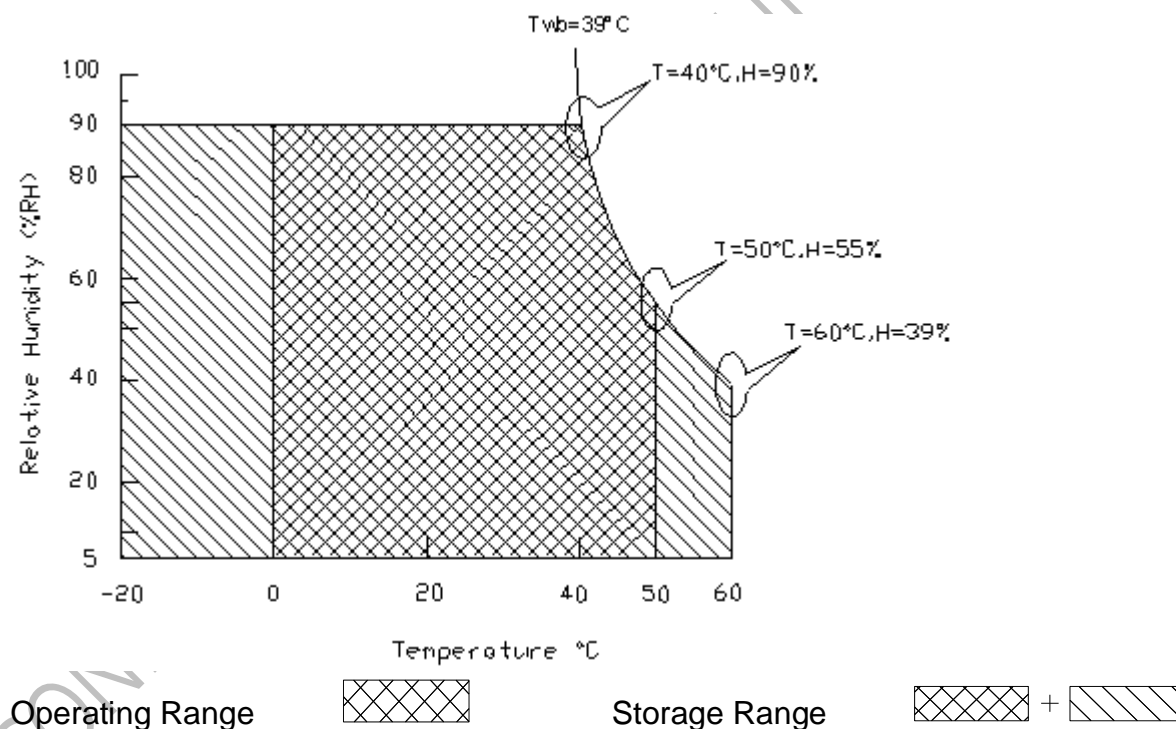
5. Electrical Characteristics

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	Logic/LCD Drive Voltage	10.8	12.0	13.2	[Volt]	±10%
VCA	Frame Polarity	3.0	3.3	3.6	[Volt]	Default disable(+- +-) Enable (++- -)
IDD	VDD Current	-	(2.15)	(2.58)	[A]	White Pattern (VDD=12V, at 60Hz)
Irush	LCD Inrush Current	-	-	4	[A]	*Note 1*
PDD	VDD Power	-	25.8	30.96	[Watt]	White Pattern (VDD=12V, at 60Hz)
VDDrp	Allowable Logic/LCD Drive Ripple Voltage	-	-	VDD* 5%	[mV]	VDD= 12.0V, White pattern, Fv=60Hz

Note 1: Measurement condition:
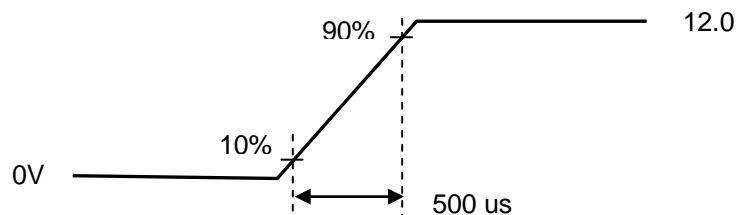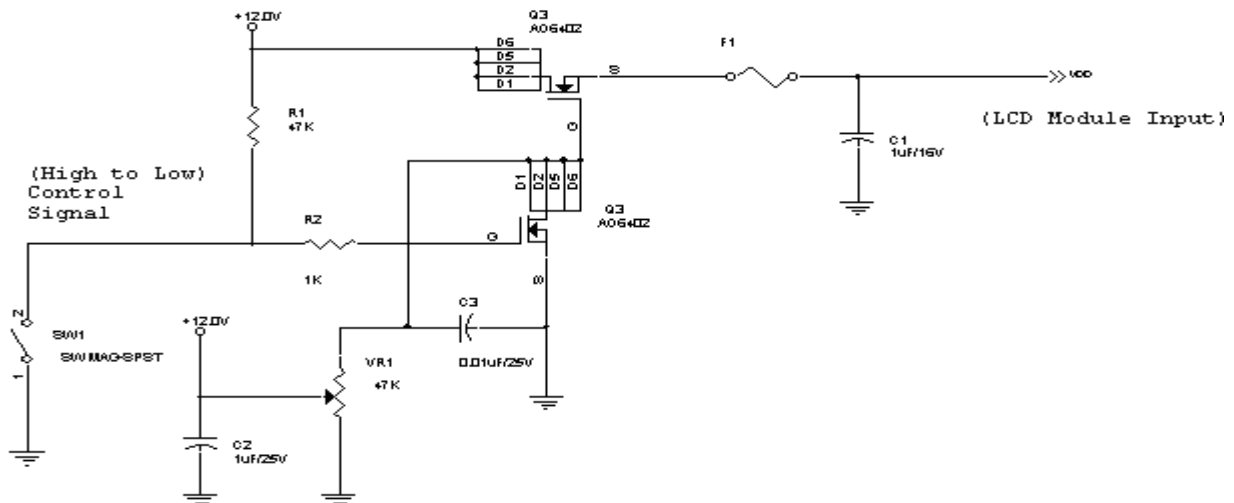
VDD rising time

5.2 Backlight Unit

5.2.1 LED Backlight Unit: Driver Connector

Connector Name / Designation	Lamp Connector
Manufacturer	JST
Connector Model Number	S14B-PH-SM6-K-TB(HF)
Mating Model Number	PHR-14

Pin #	Symbol	Pin Description
1	VBL	+24V
2	VBL	+24V
3	VBL	+24V
4	VBL	+24V
5	VBL	+24V
6	GND	GND
7	GND	GND
8	GND	GND
9	GND	GND
10	GND	GND
11	GND	GND
12	BL_EN	BL enable (3.3V-On / 0V-Off)
13	NC	N/A
14	BL_DIM_P	PWM Dimming

5.2.2 Parameter guideline for LED

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

LED characteristics

Symbol	Parameter	Min	Typ	Max	Units	Condition
PLED	Backlight Power Consumption	---	(90.7)	(103.2)	[Watt]	LED only
LTLED	LED Life-Time	30,000	---	---	Hour	LED only

Note 1: Calculator value for reference P_{LED} = VF (Normal Distribution) * IF (Normal Distribution)

Note 2: The LED life-time define as the estimated time to 50% degradation of initial luminous.

Backlight input signal characteristics

Symbol	Parameter	Min.	Typ.	Max.	Unit	Remark
VDD	Input Voltage	21.6	24.0	26.4	[Volt]	
I_{VDD}	Input Current	---	3.23	---	[A]	100% PWM Duty
P_{VDD}	Power Consumption	---	(81.8)	(92.85)	[Watt]	100% PWM Duty
Backlight on/off	On control Voltage	2	3.3	5	[Volt]	
	Off control Voltage		---	0.8	[Volt]	
Backlight Dimming (Analog Mode)	Dimming Voltage	0	---	3	[Volt]	Adjustable Dimming Range
Backlight Dimming (PWM Mode)	Dimming Frequency	0.2		15	[kHz]	
	Swing Voltage	3	---	3.6	V	Note3
	Dimming Duty Cycle	10	-	100	%	
$I_{F (one channel)}$	LED Forward Current	---	(96)	---	mA	Ta = 25℃

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

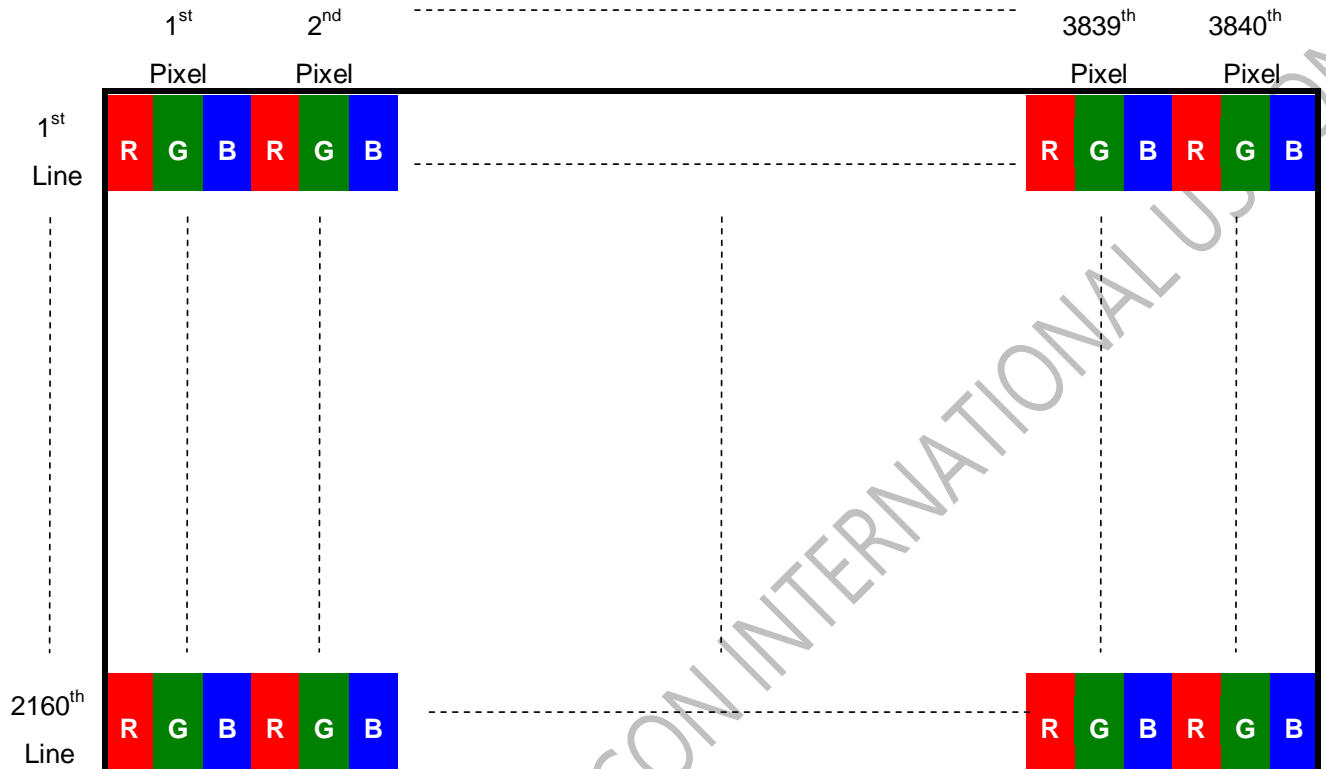Note 2: VDD, IVDD, PVDD , Irush LED are defined for LED B/L.(100% duty of PWM dimming).

Note 3: Swing voltage 3V is best linear of PWM mode.
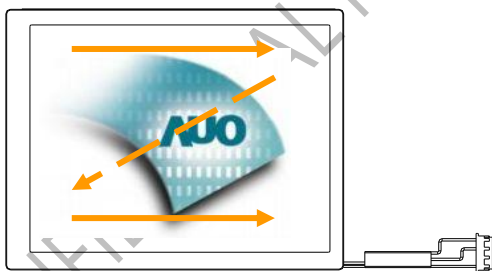
6. Signal Characteristic

6.1 Pixel Format Image

Following figure shows the relationship between input signal and LCD pixel format.

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 V By One receiver embedded in AUO's ASIC. V By One is a differential signal technology for LCD interface and a high-speed data transfer device.

6.3.1 TFT LCD Module: LCD Connector

Connector Name / Designation	Signal Connector
Manufacturer	JAE
Connector Model Number	FI-RE51S-HF
Adaptable Plug	FI-RE51HL

Pin	Symbol	Description	Pin	Symbol	Description
1	VDD	Power input (+12V)	26	LOCKN	Vx1 LOCKN
2	VDD	Power input (+12V)	27	GND	Ground
3	VDD	Power input (+12V)	28	RX0N	Vx1 lane0
4	VDD	Power input (+12V)	29	RX0P	Vx1 lane0
5	VDD	Power input (+12V)	30	GND	Ground
6	VDD	Power input (+12V)	31	RX1N	Vx1 lane1
7	VDD	Power input (+12V)	32	RX1P	Vx1 lane1
8	VDD	Power input (+12V)	33	GND	Ground
9	NC	No Connection	34	RX2N	Vx1 lane2
10	GND	Ground	35	RX2P	Vx1 lane2
11	GND	Ground	36	GND	Ground
12	GND	Ground	37	RX3N	Vx1 lane3
13	GND	Ground	38	RX3P	Vx1 lane3
14	GND	Ground	39	GND	Ground
15	NC	No Connection	40	RX4N	Vx1 lane4
16	NC	No Connection	41	RX4P	Vx1 lane4
17	NC	No Connection	42	GND	Ground
18	NC	For internal use, no connection	43	RX5N	Vx1 lane5
19	NC	For internal use, no connection	44	RX5P	Vx1 lane5
20	NC	No Connection	45	GND	Ground
21	NC	No Connection	46	RX6N	Vx1 lane6
22	NC	No Connection	47	RX6P	Vx1 lane6
23	NC	No Connection	48	GND	Ground
24	NC	No Connection	49	RX7N	Vx1 lane7
25	HTPDN	Vx1 HTPDN	50	RX7P	Vx1 lane7
			51	GND	Ground

Note1: Pin1 start position
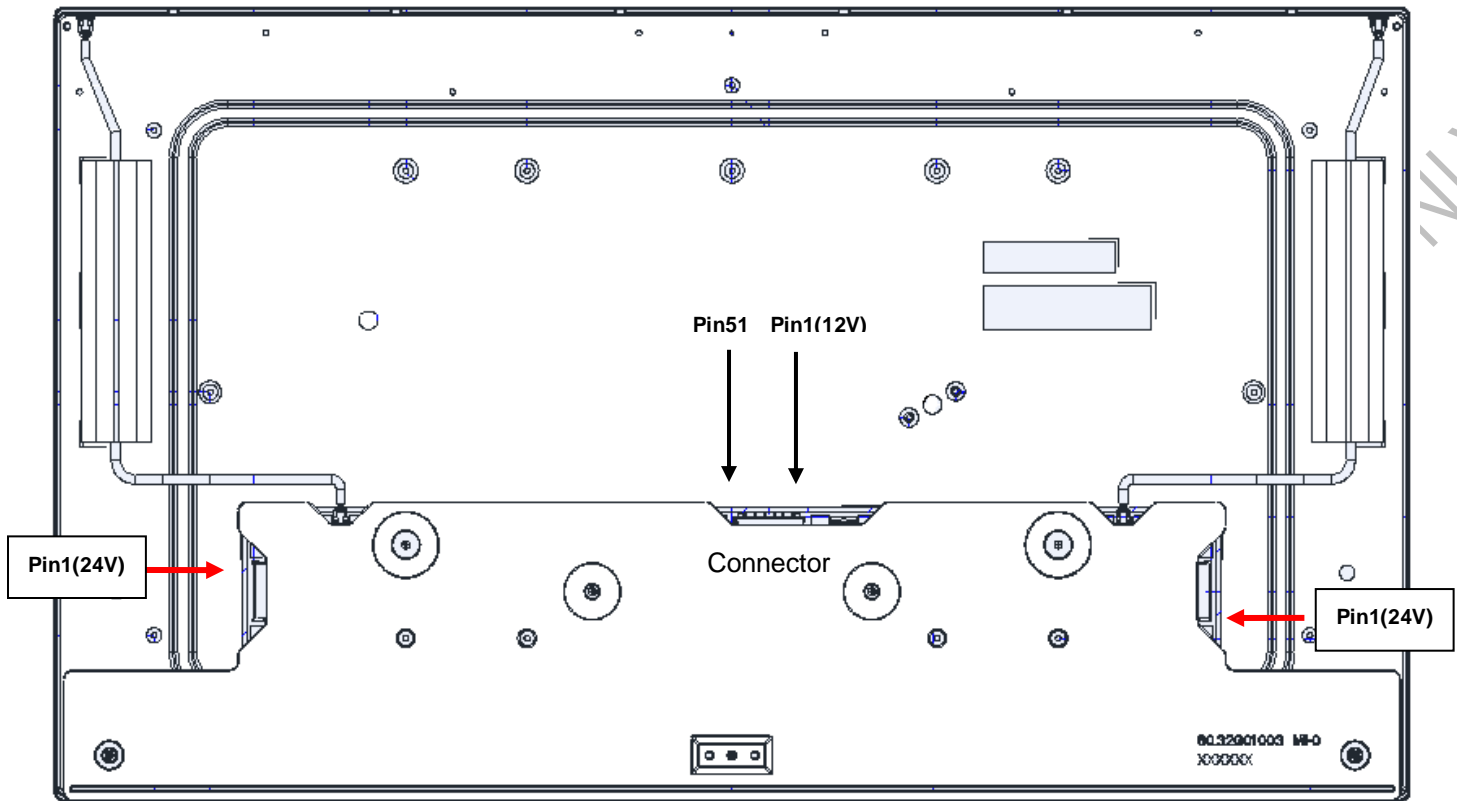
6.4 The Input Data Format

6.4.1 Color data input reference

The brightness of each primary color is based on the 10bit gray scale data input for the color; the higher the ninary input, the brighter the color. The table below provides a reference for color versus data input.
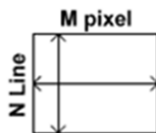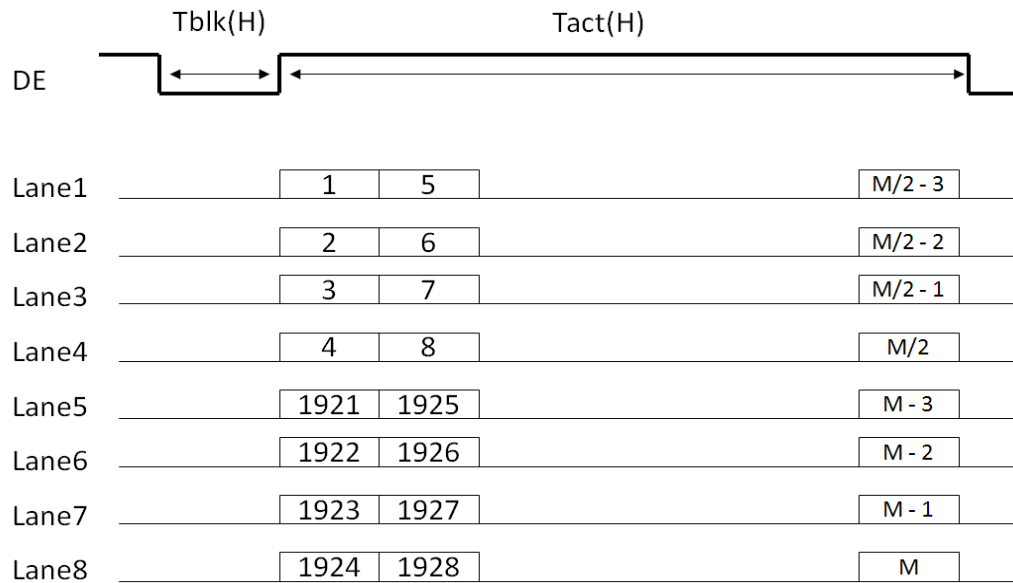
Color		RED MSB R9	R8	R7	R6	R5	R4	R3	R2	R1	LSB R0	GREEN MSB G9	G8	G7	G6	G5	G4	G3	G2	LSB G1	G0	BLUE MSB B9	B8	B7	B6	B5	B4	B3	B2	B1	LSB B0
Basic Color	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(0123)	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1023)	0	0	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(1023)	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
	Cyan	0	0	0	0	0	0	0	0	0	0	1	1	1	1	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	1	1	0	0	0	0	0	0	0	0	0	0	1	1	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	1	1	1	1	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
R	RED(000)	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
	RED(001)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	....																														
	RED(1022)	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	0
	RED(1023)	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
G	Green(000)	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
	Green(001)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	....																														
	Green(1022)	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	Green(1023)	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
B	Blue(000)	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
	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	0	0	0	0	0	0	1
	....																														
	Blue(1022)	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	0
	Blue(1023)	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

6.4.2 The Input Data Format(V-by-one)

Mode	Packer input & Unpacker output		30bpp RGB /YCbCr444 (10bit)
4byte mode	Byte0	D[0]	R/Cr[2]
		D[1]	R/Cr[3]
		D[2]	R/Cr[4]
		D[3]	R/Cr[5]
		D[4]	R/Cr[6]
		D[5]	R/Cr[7]
		D[6]	R/Cr[8]
		D[7]	R/Cr[9]
	Byte1	D[8]	G/Y[2]
		D[9]	G/Y[3]
		D[10]	G/Y[4]
		D[11]	G/Y[5]
		D[12]	G/Y[6]
		D[13]	G/Y[7]
		D[14]	G/Y[8]
		D[15]	G/Y[9]
	Byte2	D[16]	B/Cb[2]
		D[17]	B/Cb[3]
		D[18]	B/Cb[4]
		D[19]	B/Cb[5]
		D[20]	B/Cb[6]
		D[21]	B/Cb[7]
		D[22]	B/Cb[8]
		D[23]	B/Cb[9]
	Byte3	D[24]	- -
		D[25]	- -
		D[26]	B/Cb[0]
		D[27]	B/Cb[1]
		D[28]	G/Y[0]
		D[29]	G/Y[1]
		D[30]	R/Cr[0]
		D[31]	R/Cr[1]

6.4.3 Timing Diagram

(Lane1~8 V By One   data:1, 2, 3, 4, 1921, 1922, 1923, 1924)

	Tblk(H)		Tact(H)	
DE				

Lane1	1	5	M/2 - 3
Lane2	2	6	M/2 - 2
Lane3	3	7	M/2 - 1
Lane4	4	8	M/2
Lane5	1921	1925	M - 3
Lane6	1922	1926	M - 2
Lane7	1923	1927	M - 1
Lane8	1924	1928	M

M pixel

N Line

6.5 V-by-one Specification

6.5.1 Timing Characteristics

Signal	Item	Symbol	Min	Typ	Max	Unit
Vertical Section	Period	Tv	2200	2250	2410	Th
	Active	Tdisp(v)	-	2160	-	Th
	Blanking	Tbp(v)+Tfp(v)+PWvs	40	90	650	Th
Horizontal Section	Period	Th	530	550	580	Tclk
	Active	Tdisp(h)	-	480	-	Tclk
	Blanking	Tbp(h)+Tfp(h)+PWhs	50	70	100	Tclk
Clock	Period	Tclk	15.15	13.47	12.98	ns
	Frequency	Freq.	66	74.25	77	MHz
Frame Rate	Frequency	1/Tv	48	60	63	Hz

Note : DE mode only

Note 1-1: 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 1-2: The equation is listed as following. Please don't exceed the above recommended value.

Fclk (Min.) = Fv (Min.) x Th (Min.) x Tv (Min.);

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

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

6.5.2 V-By-One SPEC

Item		Symbol	Min.	Typ.	Max	Unit	Note
V-by-one Interface	VRXINP/N input each bit Period	TRRIP	310	--	379	ps	1
	CDR training pattern time	TLOCK	--	--	200	us	1
	Latency from LOCKN 'HIGH' to clock training pattern	L1	0	--	--	us	1
	Latency from LOCKN 'LOW' to normal 8b10b data	L2	--	--	70	us	1
	CML Differential Input High Threshold	V_{RTH}	--	--	+50	mV_{DC}	
	CML Differential Input Low Threshold	V_{RTL}	-50	--	--	mV_{DC}	
	CML Common mode Bias Voltage	V_{RCT}	-0.1	0	+0.1	mV_{DC}	
	Intra-pair skew	T_{INTRA}	--	--	0.3	UI	2
	Inter-pair skew	T_{INTER}	--	--	5	UI	3

Note:The V-By-One receiver spec is compliant to V-By-One HS standard version1.4
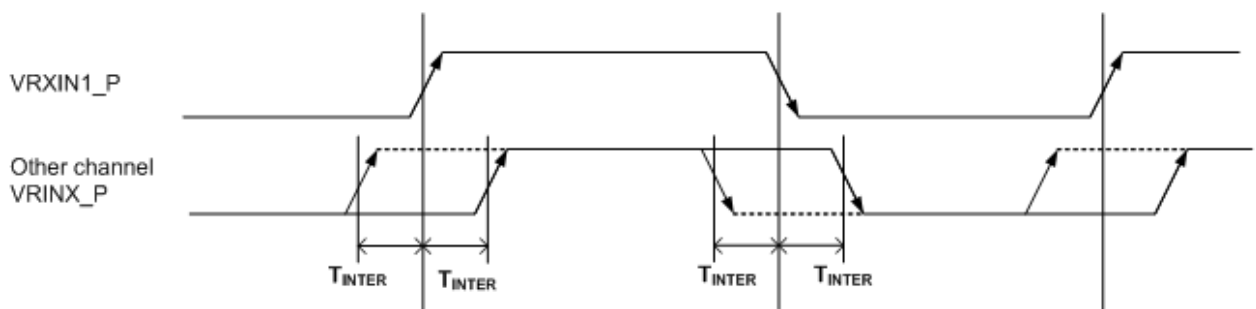
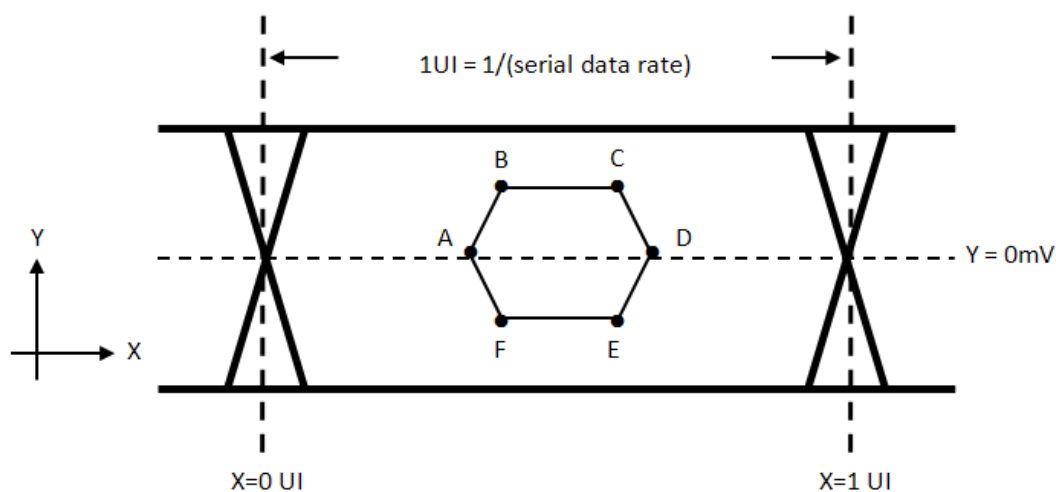1. V-By-One signal diagram
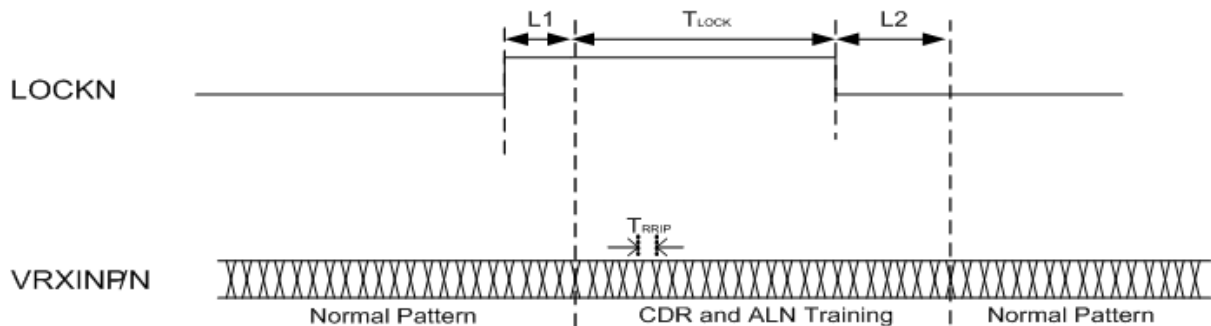
2. V-By-One intra-pair Skew
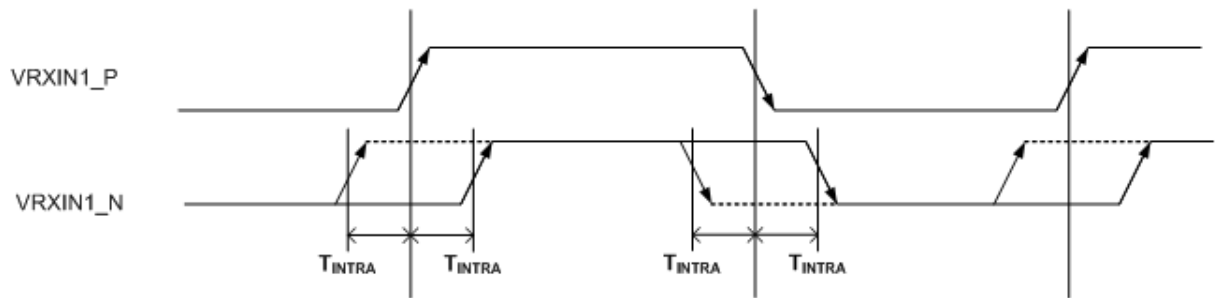
3. V-By-One intra-pair Skew

6.5.3 V-By-One Eye diagram at receiver

Item		Symbol	Min.	Typ.	Max	Unit	Note
V-by-one Interface	Eye diagram at receiver	A_X	--	0.25	--	UI	1.
		A_Y	--	0	--	mV	
		B_X	--	0.3	--	UI	
		B_Y	--	50	--	mV	
		C_X	--	0.7	--	UI	
		C_Y	--	50	--	mV	
		D_X	--	0.75	--	UI	
		D_Y	--	0	--	mV	
		E_X	--	0.7	--	UI	
		E_Y	--	-50	--	mV	
		F_X	--	0.3	--	UI	
		F_Y	--	-50	--	mV	

Note1. Eye Mask

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.
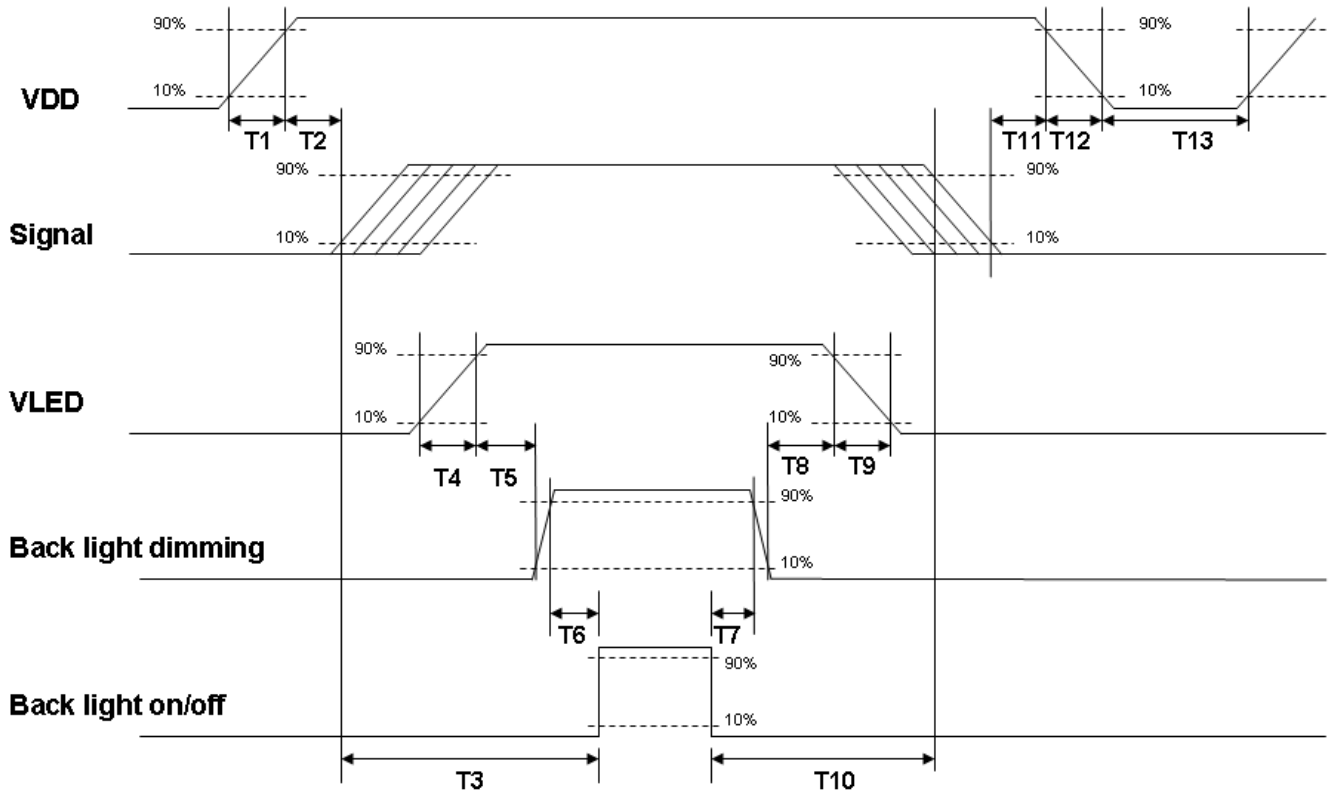
Power sequence timing

Parameter	Value			Units
	Min.	Typ.	Max.	
T1	0.5	-	10	
T2	40	-	-*1	
T3	200	-	-	
T4	0.5	-	10	
T5	10	-	-	
T6	10	-	-*2	
T7	0	-	-	ms
T8	10	-	-	
T9	-	-	10	
T10	110	-	-	
T11	0	16	50	
T12	0	-	10	
T13	1000	-	-	

Note 1 (T2)：The maximum timing of VDD rising(90%) to HTPDN falling edge decided by customer system.
Note 2 (T6)：voftage of VDD must decay smoothly after power-off.(customer system decide this value)

7. Reliability Test Criteria

All testing under following setting: VDD 12V, Frame rate: 60Hz

Items	Required Condition	Note
Temperature Humidity Bias (Ts)	50℃/80%,300Hr	
High Temperature Operation (Ts)	50℃, 300Hr (center point of panel surface)	
Low Temperature Operation (Ts)	0℃, 300Hr	
Hot Storage	60℃, 300 hours	
Cold Storage	-20℃, 300 hours	
Thermal Shock Test (Ts)	-20℃ /30 min ,60 ℃ /30 min ,100cycles, 40℃ minimun ramp rate	
Shock Test (Non-Operating)	50G,20ms,Half-sine wave,(+-X,+-Y,+-Z)	
Vibration Test (Non-Operating)	1.0G, 10~300Hz, Random wave 10mins/axis, 3 direction (X, Y, Z)	
Altitude Test	Operation ：10,000ft Non-Operation：30,000ft	
ESD	Contact : ± 8KV/ operation, Class B Air : ± 15KV / operation, Class B	Note 1

Note1: According to EN61000-4-2, ESD class B: Some performance degradation allowed. No data lost
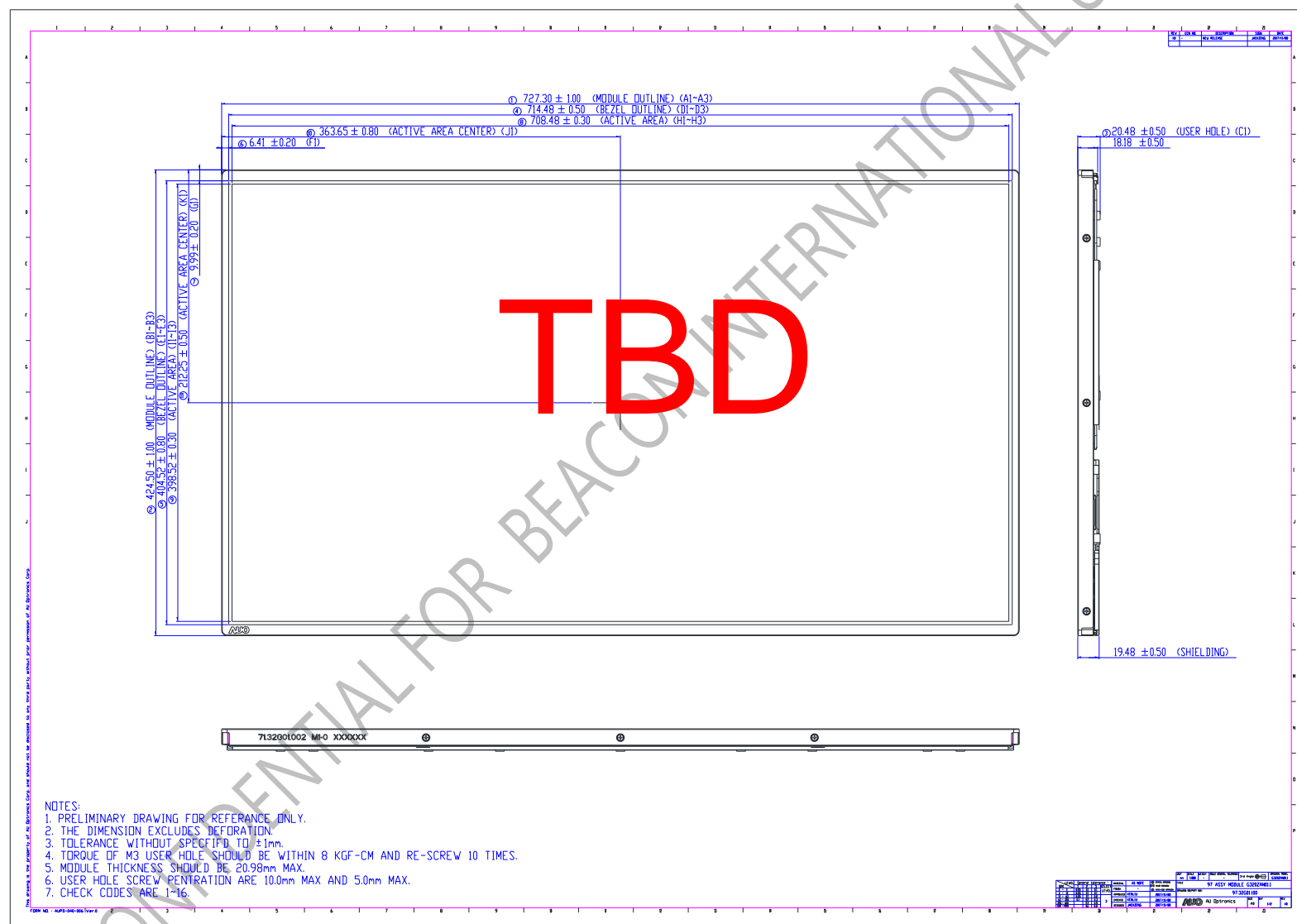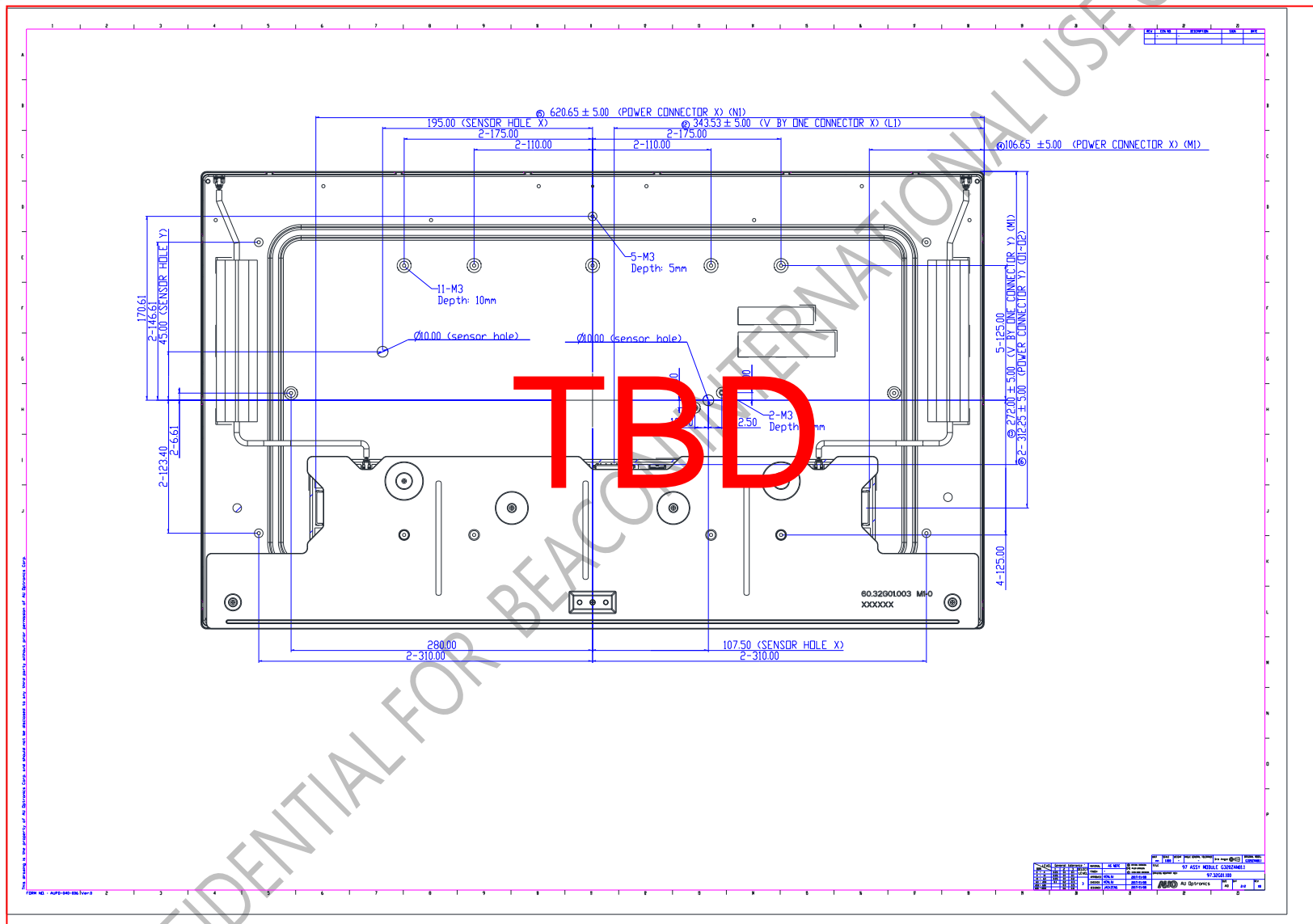
. Self-recoverable. No hardware failures.

Note2:

- Ts is defined as panel surface temperature
- Water condensation is not allowed for each test items.
- Each test is done by new TFT-LCD module. Don't use the same TFT-LCD module repeatedly for reliability test.
- The reliability test is performed only to examine the TFT-LCD module capability.
- To inspect TFT-LCD module after reliability test, please store it at room temperature and room humidity for 24 hours at least in advance.
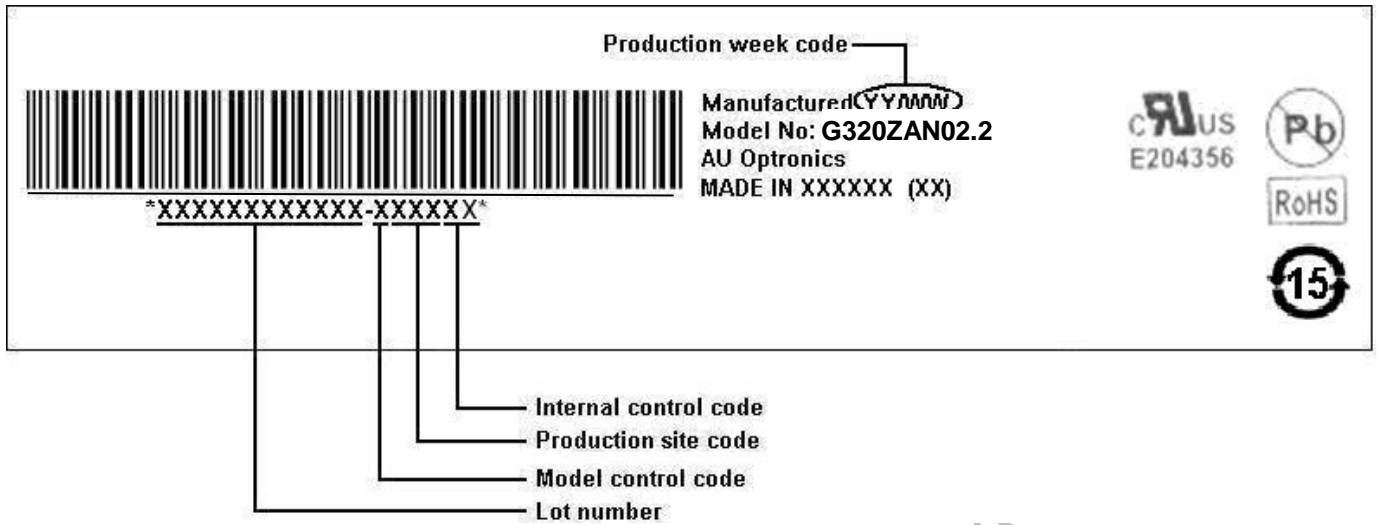- No function failure occurs.

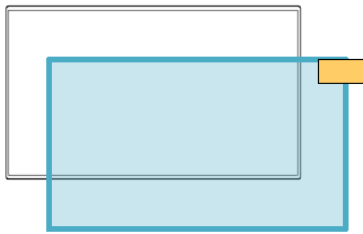# 8. Mechanical Characteristics

8.1 LCM Outline Dimension

727.30 ± 1.00 (MODULE OUTLINE) (A1~A3)
714.48 ± 0.50 (BEZEL OUTLINE) (D1~D3)
708.48 ± 0.30 (ACTIVE AREA) (H1~H3)
363.65 ± 0.80 (ACTIVE AREA CENTER) (J1)
6.41 ±0.20 (F1)

20.48 ± 0.50 (USER HOLE) (C1)
18.18 ±0.50

9.99± 0.20 (ACTIVE AREA CENTER) (K1)
212.25 ±0.50 (ACTIVE AREA) (I1~I3)

424.50 ± 1.00 (MODULE OUTLINE) (B1~B3)
404.52 ± 0.80 (BEZEL OUTLINE) (E1~E3)
398.52 ± 0.30 (ACTIVE AREA) (G1)

19.48 ±0.50 (SHIELDING)

71.32G01002 M1-0 XXXXXX

NOTES:
1. PRELIMINARY DRAWING FOR REFERANCE ONLY.
2. THE DIMENSION EXCLUDES DEFORATION.
3. TOLERANCE WITHOUT SPECIFIED TO ±1mm.
4. TORQUE OF M3 USER HOLE SHOULD BE WITHIN 8 KGF-CM AND RE-SCREW 10 TIMES.
5. MODULE THICKNESS SHOULD BE 20.98mm MAX.
6. USER HOLE SCREW PENTRATION ARE 10.0mm MAX AND 5.0mm MAX.
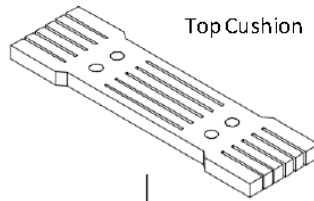7. CHECK CODES ARE 1~16.

9.2 Carton Package

1pcs module

Top Cushion
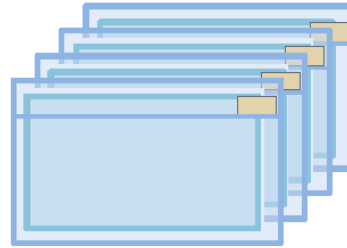
Add protect film
(with pull tape)
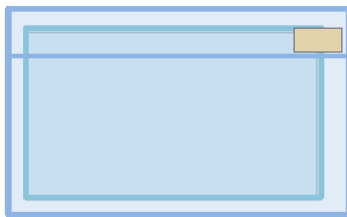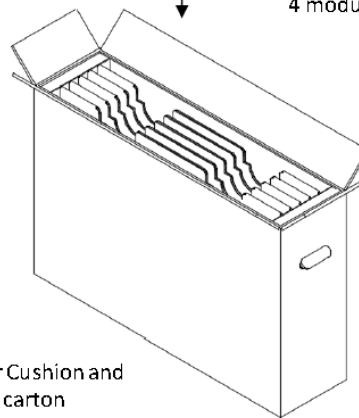
Put product into anti-static bag
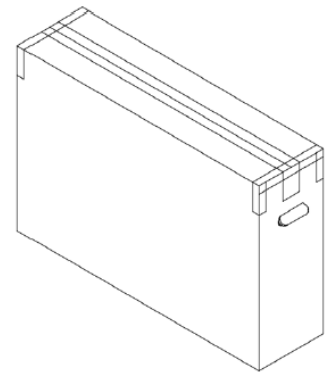
4 modules

Paper Cushion and carton

Sealing carton with tape

Capacity: 4 modules /carton

Weight: 21.5±0.5 kg

Carton Dim.: 820(L)mm* 220(W)mm* 535(H)mm

Pallet Dim.: 1150(L)mm* 840(W)mm* 132(H)mm

Module by air: (1*5)*2 layers, one pallet put 10 boxes, total 40pcs module.

Module by sea: One pallet (1*5)*2 layers + One pallet (1*5)*1 layer, total 60pcs module.

Module by sea (HQ): One pallet (1*5)*2 layers + One pallet (1*5)*2 layers, 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