Doc. version :	4.0
Total pages :	30
Date :	2015/10/14

CUSTOMER APPROVAL SHEET

Company Name

MODEL H546DLB01.1

CUSTOMER Title :

APPROVED Name :

- ☐ APPROVAL FOR SPECIFICATIONS ONLY (Spec. Ver.____)
- ☐ APPROVAL FOR SPECIFICATIONS AND ES SAMPLE (Spec. Ver.____)
- ☐ APPROVAL FOR SPECIFICATIONS AND CS SAMPLE (Spec. Ver.____)
- ☐ CUSTOMER REMARK :

Panox Display
sales@panoxdisplay.com
skype: panoxwesley

Product Specification

5.46" COLOR AMOLED MODULE

MODEL NAME: H546DLB01.1

Trial-run sample P/N: 95.05H33.100

MP product P/N: (TBD)

Panox Display
sales@panoxdisplay.com
skype: panoxwesley

< ◆ >Preliminary Specification
< >Final Specification

Record of Revision

Version	Revise Date	Page	Content
1.0	2015-04-28	1~31	First Draft
2.0	2015-04-30	26	Carton Test (Vibration) Criteria Modified
3.0	2015-06-02	18	Power On Sequence Diagram Modified
4.0	2015-07-31	9 22 24	Display Current Consumption Optical Specification Uniformity condition

Not Confidential for Transsion
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

Contents

Not confidential for Transsion
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

A. General Specification

1. Physical Specifications

NO	Item	unit	Specification	Remark
1	Screen Size	inch	5.46”	Diagonal
2	Display Resolution	--	1080(H) X 1920(V)	Full HD
3	Outline Dimension	mm	70.84 (H) × 128.01(V) × 0.877(T)	
4	Active Area	mm	68.04 (H)×120.96(V)	
5	Pixel Pitch	um	63	
6	Color Configuration	--	R, G, B	
7	Color Depth	--	16.7M	8-bit x RGB
8	NTSC Ratio	%	~ 100	
9	Display Mode	--	AMOLED	
10	Panel Surface Treatment	--	Hard Coat (3H)	
11	Interface	--	MIPI DSI – Video Mode	
12	Driver IC		RM69071	
13	Touch IC		S3508	
14	Multi-finger Touch		10	

AUO Confidential for Tansion
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

2. Pin Assignment

AMOLED Main FPC Pin assignment

#	Pin_name	I/O/P	Description
1	OVSS	P	OLED Power
2	OVDD	P	OLED Power
3	OVSS	P	OLED Power
4	OVDD	P	OLED Power
5	OVSS	P	OLED Power
6	OVDD	P	OLED Power
7	NC	-	Leave this pin OPEN
8	NC	-	Leave this pin OPEN
9	GND	P	Ground
10	AVDD	P	Display Driver IC Source Analog Power
11	D2P	I	MIPI DSI data
12	TP_VCC	P	Touch panel analog I/O power supply
13	D2N	I	MIPI DSI data
14	TP_VDDI	P	Touch Panel I/O voltage power supply
15	GND	P	Ground
16	TP_SDA	I/O	Touch panel I2C data
17	D1P	I	MIPI DSI data
18	TP_SCL	I/O	Touch panel I2C clock
19	D1N	I	MIPI DSI data
20	TP_RESX	I	Touch panel reset
21	GND	P	Ground
22	TP_INT	O	Touch panel interrupt output
23	CKP	I	MIPI DSI data
24	NC	-	Leave this pin OPEN
25	CKN	I	MIPI DSI data
26	NC	-	Leave this pin OPEN
27	GND	P	Ground
28	VCI	P	Display Driver Analog IC Power

Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Made exclusively for Tansion

29	D0P	I/O	MIPI DSI data
30	IOVCC	P	Display Driver Digital IC Power
31	D0N	I/O	MIPI DSI data
32	RESX	I	This signal will reset the device and must be applied to properly initialize the chip. Signal is active low.
33	GND	P	Ground
34	AVDD_EN	O	DC/DC power IC control signal, please connect to power IC EN pin
35	D3P	I	MIPI DSI data
36	SWIRE	O	DC/DC power IC control signal, please connect to power IC CTRL pin
37	D3N	I	MIPI DSI data
38	MTP_Power	P	Leave this pin OPEN
39	GND	P	Ground
40	GND	P	Ground

Recommended connector: JAE WP7B-S040VA1

AUO Confidential for Tansion
Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Internal use only

3. Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit	Remark
OLED Power supply	OVDD	-	4.6	V	
OLED Power supply	OVSS	-	-2.9	V	
Driver IC Source output power supply	AVDD	-	7.6	V	
Digital Power supply	IOVCC	-0.3	+1.95	V	
Analog Power supply	VCI	-0.3	+3.2	V	
Touch analog power supply	TP_VCC	-0.3	+4.0	V	
Touch digital power supply	TP_VDDI	-0.3	+2.0	V	
Operating temperature (Ambient)	Topr	-40	+85	℃	
Storage temperature (Ambient)	Tstg	-55	+125	℃	

Note : If the module exceeds the absolute maximum ratings, it may be damaged permanently. Also, if the module operates with the absolute maximum ratings for a long time, the reliability may drop.

B. DC Characteristics

1. Typical Operating Conditions

Item		Symbol	Min.	Typ.	Max.	Unit	Remark
OLED Power supply		OVDD	-	4.6	-	V	
OLED Power supply		OVSS	-	-2.9	-	V	
Driver IC Source output power supply		AVDD	-	7.6	-	V	
Digital Power supply		IOVCC	1.65	1.8	1.95	V	
Analog Power supply		VCI	2.8	3	3.2	V	
Touch analog power supply		TP_VCC	2.70	3.10	3.60	V	
Touch digital power supply		TP_VDDI	1.65	1.80	1.95	V	
Input Signal Voltage	H Level	V_{IH}	0.8* IOVCC	-	IOVCC	V	RESX
	L Level	V_{IL}	0	-	0.2* IOVCC	V	

Note 1: The operation is guaranteed under the recommended operating conditions only. The operation is not guaranteed if a quick voltage change occurs during the operation. To prevent the noise, a bypass capacitor must be inserted into the line closed to the power pin.

AUO confidential for internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

2. Display Current Consumption

Mode	Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Normal	I_{AVDD}	AVDD = 7.6V VCI = 3V IOVCC = 1.8V OVDD = 4.6V OVSS = -2.9V 25℃	-	15	30	mA	Note 1
	I_{VCI}		-	3	3	mA	
	I_{IOVCC}		-	38	40	mA	
	I_{OVDD}		-	190	200	mA	Note 2
	I_{OVSS}		-	190	200	mA	
Deep Standby (DSTB=1)	I_{AVDD}		-	0.2	1	uA	
	I_{VCI}		-	2	3	mA	
	I_{IOVCC}		-	25	30	uA	
	I_{OVDD}		-	0	0	uA	
	I_{OVSS}		-	0	0	uA	

Typ.

Max.

Note 1: Typ.

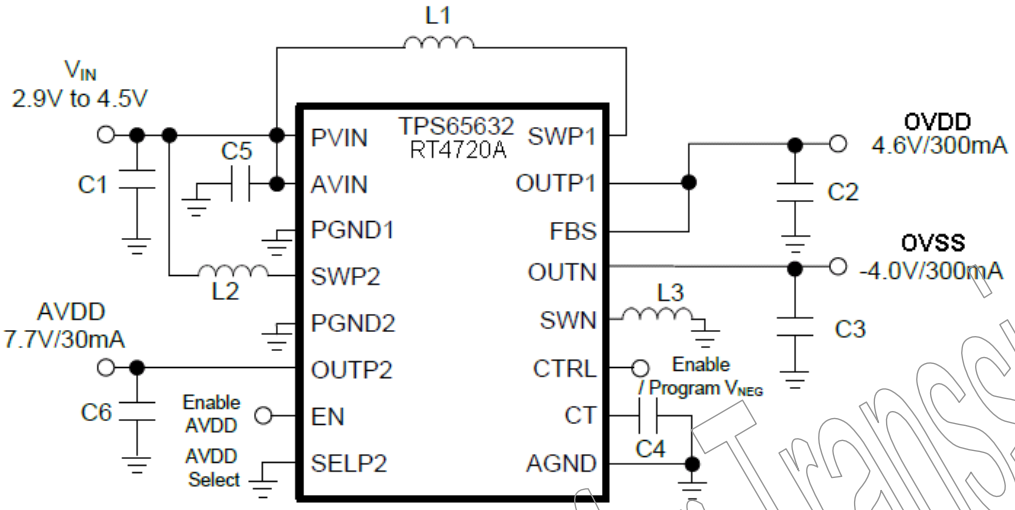
Note 2: 350 nits White.

Not for commercial use
Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Internal use only

3. Touch Panel Current Consumption

Mode	Symbol	Condition	Min	Typ.	Max	Unit
Active (1finger)	I_{TP_VDDI}	TP_VDDI = 1.8V TP_VCC=3.1V Report Rate: 100Hz Doze Interval: 30 ms (28Rx X 16Tx)	-	18	20	mA
	I_{TP_VCC}		-	12	14	mA
Active (10fingers)	I_{TP_VDDI}		-	25	28	mA
	I_{TP_VCC}		-	12	14	mA
Normal Operation	I_{TP_VDDI}		-	0.4	0.5	mA
	I_{TP_VCC}		-	0.4	0.5	mA
Sensor Sleep (Deep sleep)	I_{TP_VDDI}		-	7	8	µA
	I_{TP_VCC}		-	6	7	µA

4. Recommend DC/DC Power IC Application Circuit



Vendor	Model
TI	TPS65632RTER
Richtek	RT4720A

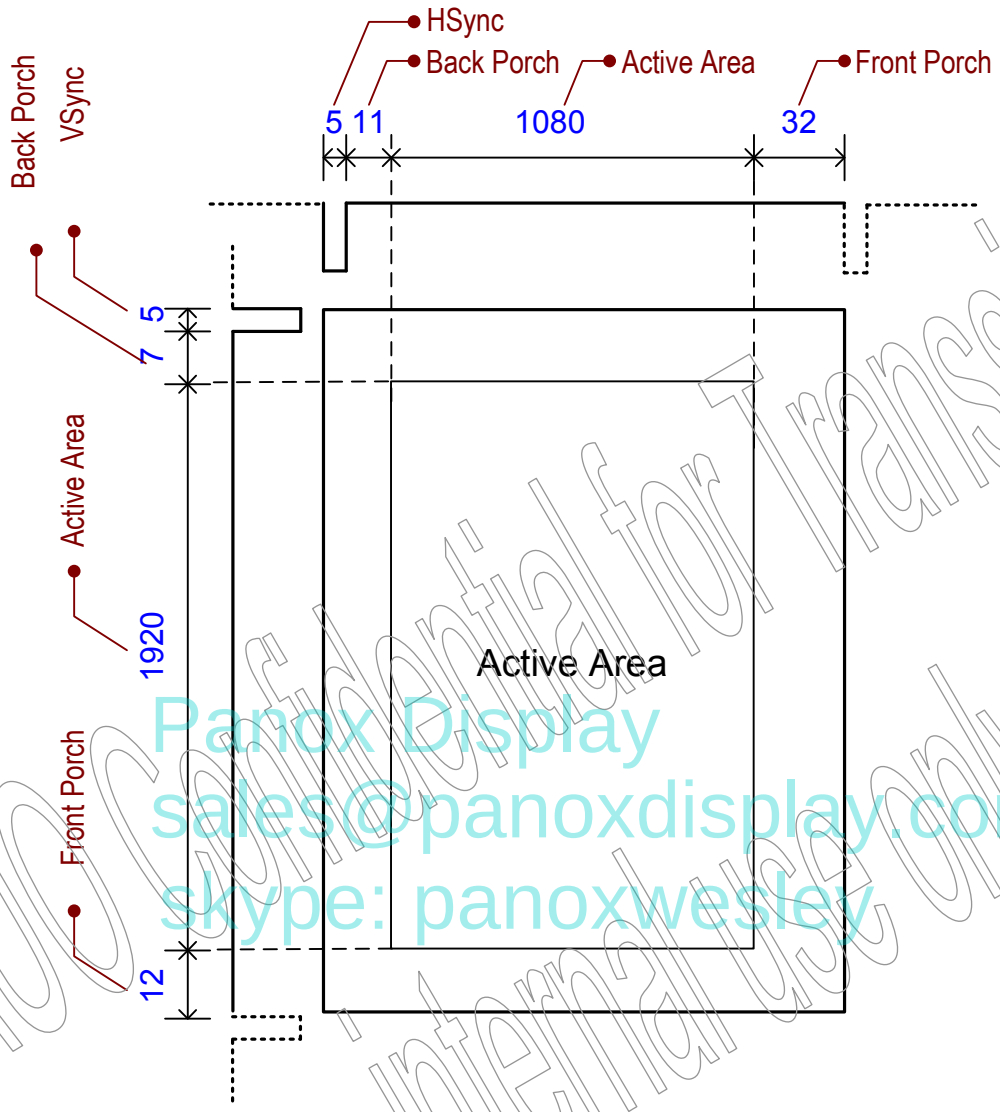
Bill of Materials

	Value	Part Number	Manufacturer
C1	3 x 10µF	GRM21BR71A106KE51	Murata
C2, C6	10µF	GRM21BR71A106KE51	Murata
C3	2 x 10µF	GRM21BR71A106KE51	Murata
C4, C5	100nF	GRM21BR71E104KA01	Murata
L1, L3	4.7µH	XFL4020-4R7ML	CoilCraft
L2	10µH	MMPP252012-100N	Coil Master

Panox Display
sales@panoxdisplay.com
skype:panoxdisplay

C. AC Characteristics

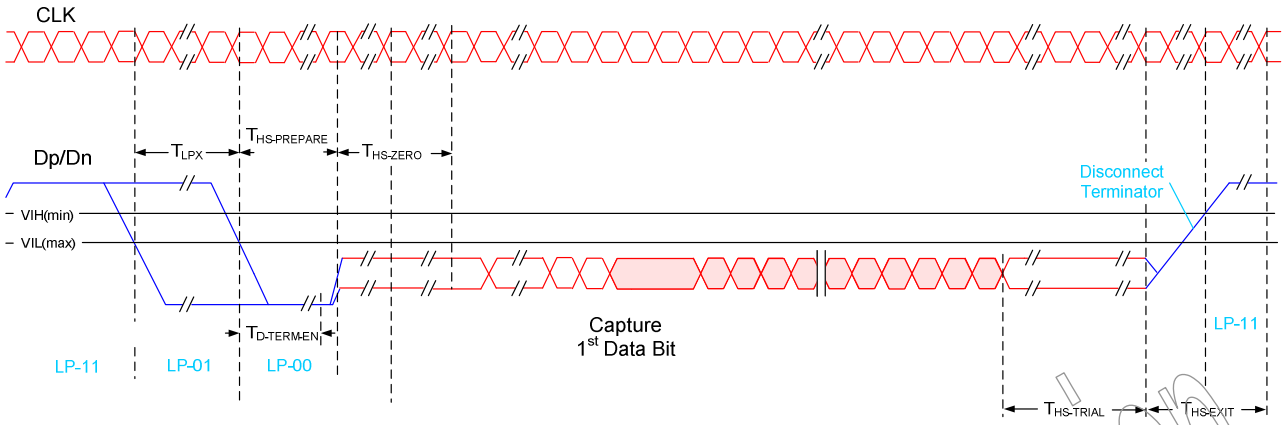
1. Display Video Timing



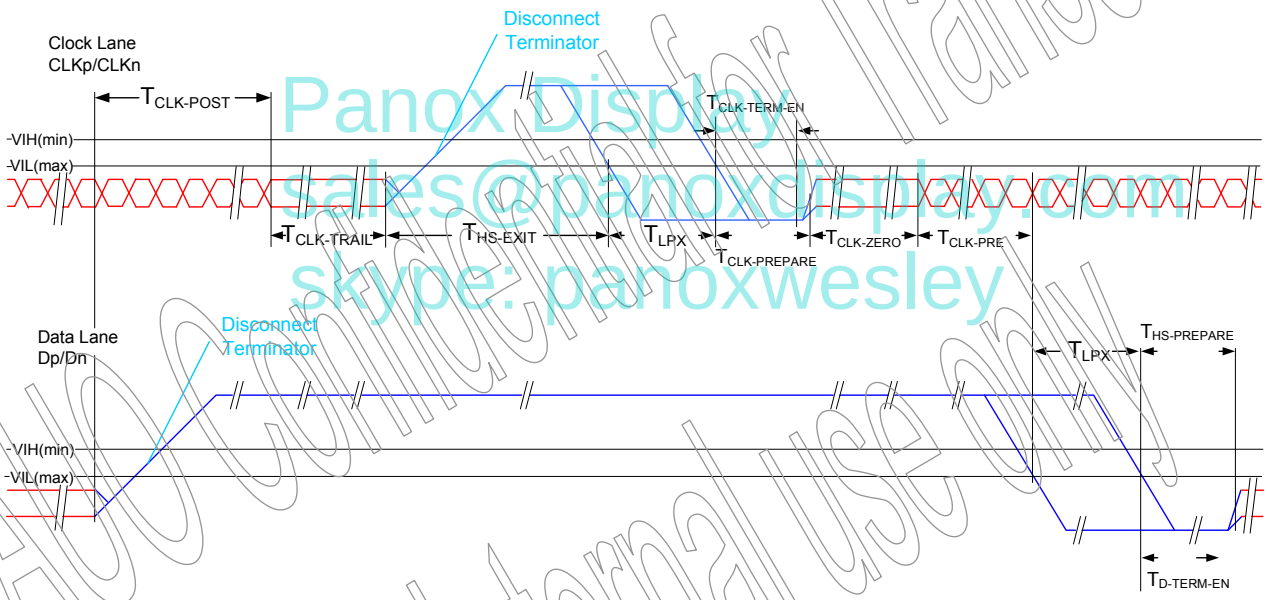
AUO Confidential for Tansion
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

2. MIPI Interface Characteristics

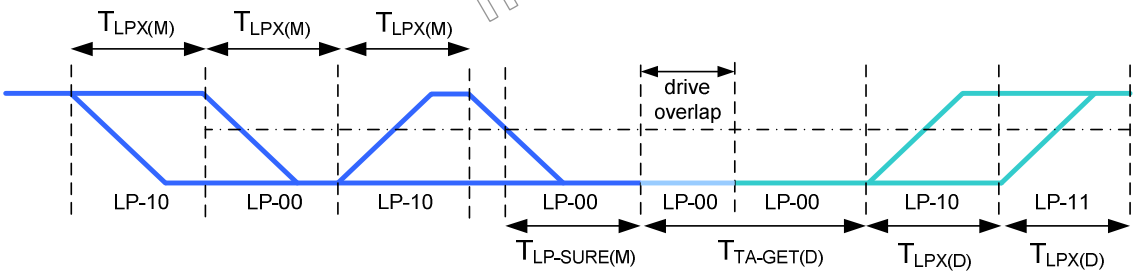
HS Data Transmission Burst



HS clock transmission



Turnaround Procedure



Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Accordingly for internal use only

Timing Parameters

Symbol	Description	Min	Typ	Max	Unit
$T_{CLK-POST}$	Time that the transmitter continues to send HS clock after the last associated Data Lane has transitioned to LP Mode. Interval is defined as the period from the end of $T_{HS-TRAIL}$ to the beginning of $T_{CLK-TRAIL}$.	60ns + 52*UI			ns
$T_{CLK-TRAIL}$	Time that the transmitter drives the HS-0 state after the last payload clock bit of a HS transmission burst.	60			ns
$T_{HS-EXIT}$	Time that the transmitter drives LP-11 following a HS burst.	300			ns
$T_{CLK-TERM-EN}$	Time for the Clock Lane receiver to enable the HS line termination, starting from the time point when Dn crosses $V_{IL,MAX}$.	Time for Dn to reach $V_{TERM-EN}$		38	ns
$T_{CLK-PREPARE}$	Time that the transmitter drives the Clock Lane LP-00 Line state immediately before the HS-0 Line state starting the HS transmission.	38		95	ns
$T_{CLK-PRE}$	Time that the HS clock shall be driven by the transmitter prior to any associated Data Lane beginning the transition from LP to HS mode.	8			UI
$T_{CLK-PREPARE} + T_{CLK-ZERO}$	$T_{CLK-PREPARE}$ + time that the transmitter drives the HS-0 state prior to starting the Clock.	300			ns
$T_{D-TERM-EN}$	Time for the Data Lane receiver to enable the HS line termination, starting from the time point when Dn crosses $V_{IL,MAX}$.	Time for Dn to reach $V_{TERM-EN}$		35ns +4*UI	
$T_{HS-PREPARE}$	Time that the transmitter drives the Data Lane LP-00 Line state immediately before the HS-0 Line state starting the HS transmission	40ns + 4*UI		85 ns + 6*UI	ns
$T_{HS-PREPARE} + T_{HS-ZERO}$	$T_{HS-PREPARE}$ + time that the transmitter drives the HS-0 state prior to transmitting the Sync sequence.	145ns + 10*UI			ns
$T_{HS-TRAIL}$	Time that the transmitter drives the flipped differential state after last payload data bit of a HS transmission burst	60ns + 4*UI			ns

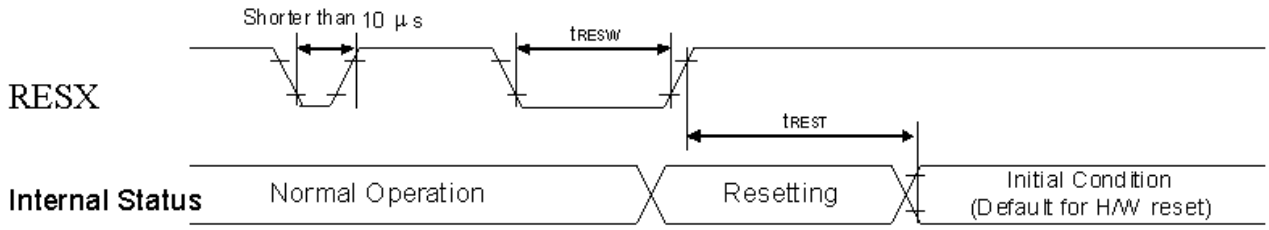
Panox Display
sales@panoxdisplay.com
skype: panoxwesley
For Customer Internal Use Only

$T_{LPX(M)}$	Transmitted length of any Low-Power state period of MCU to display module	50		150	ns
$T_{TA-SURE(M)}$	Time that the display module waits after the LP-10 state before transmitting the Bridge state (LP-00) during a Link Turnaround.	$T_{LPX(M)}$		$2*T_{LPX(M)}$	ns
$T_{LPX(D)}$	Transmitted length of any Low-Power state period of display module to MCU	50		150	ns
$T_{TA-GET(D)}$	Time that the display module drives the Bridge state (LP-00) after accepting control during a Link Turnaround.		$5*T_{LPX(D)}$		ns
$T_{TA-GO(D)}$	Time that the display module drives the Bridge state (LP-00) before releasing control during a Link Turnaround.		$4*T_{LPX(D)}$		ns
$T_{TA-SURE(D)}$	Time that the MPU waits after the LP-10 state before transmitting the Bridge state (LP-00) during a Link Turnaround.	$T_{LPX(D)}$		$2*T_{LPX(D)}$	ns

AUO Confidential for Tansun
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

3. Display RESET Timing Characteristics

Reset input timing



IOVCC=1.65 to 1.95V, VCI=2.8 to 3.2V, GND=0V, Ta=-40 to 85℃

Timing Parameters

Symbol	Parameter	Related Pins	MIN	TYP	MAX	Note	Unit
t_{RESW}	*1) Reset low pulse width	RESX	10	-	-	-	µs
t_{REST}	*2) Reset complete time	-	-	-	5	When reset applied during Sleep in mode	ms
		-		-	120	When reset applied during Sleep out mode	ms

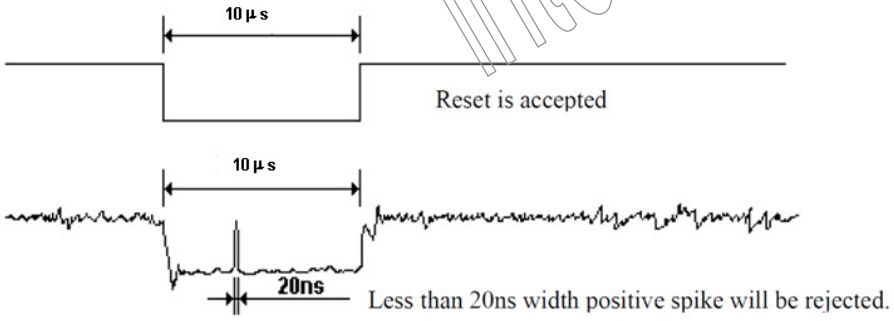
Note 1. Spike due to an electrostatic discharge on RESX line does not cause irregular system reset according to the table below.

RESX Pulse	Action
Shorter than 5µs	Invalid Reset
Longer than 10µs	Valid Reset
Between 5µs and 10µs	Reset Initialization Precedure

Note 2. During the resetting period, the display will be blanked (The display is entering blanking sequence, which maximum time is 120 ms, when Reset Starts in Sleep Out –mode. The display remains the blank state in Sleep In –mode) and then return to Default condition for H/W reset.

Note 3. During Reset Complete Time, data in OTP will be latched to internal register during this period. This loading is done every time when there is H/W reset complete time (tREST) within 5ms after a rising edge of RESX.

Note 4. Spike Rejection also applies during a valid reset pulse as shown below:



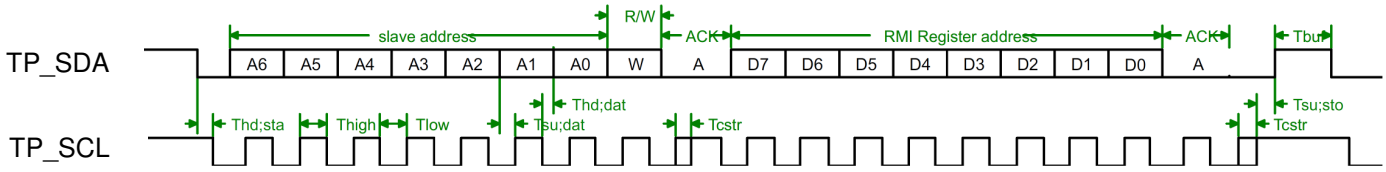
Note 5. It is necessary to wait 5msec after releasing RESX before sending commands. Also Sleep Out command cannot be sent for 120msec.

Panox Display
sales@panoxdisplay.com
skype: panoxwesley

4. Touch Panel I2C Timing Characteristics

I2C address: 0x20

I2C timing



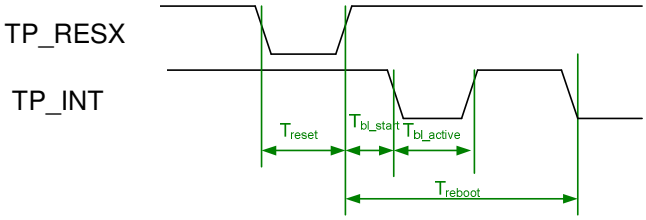
Timing Parameters

Symbol	Parameter	Standard- Mode Host		Fast-Mode Host		Unit
		Min.	Max.	Min.	Max.	
fSCL	TP_SCL clock frequency	-	100	-	400	kHz
Tcstr	Stretch time	-	25	-	25	µs
Thd;sta	Hold time (repeated) START condition. After this period, the first clock pulse is generated.	4.0	-	0.6	-	µs
Tlow	LOW period of the TP_SCL clock	4.7	-	1.3	-	µs
Thigh	HIGH period of the TP_SCL clock	4.0	-	0.6	-	µs
Tsu;sta	Set-up time for a repeated START condition	4.7	-	0.6	-	µs
Thd;dat	Data hold time	0	3.45	0	0.9	µs
Thd;dato	Data out hold time	-	0	-	0	µs
Tsu;dat	Data set-up time	250	-	100	-	ns
Tr	Rise time of both TP_SDA and TP_SCL signals	-	1000	20 + 0.1 Cb	300	ns
Tf	Fall time of both TP_SDA and TP_SCL signals	-	300	20 + 0.1 Cb	300	ns
Tsu:sto	Set-up time for STOP condition	4.0	-	0.6	-	µs
tBUF	Bus free time between a STOP and START condition	4.7	-	1.3	-	µs
Cb	Capacitive load for each bus line	-	400	-	400	pF
VnL	Noise margin at the LOW level for each connected device (including hysteresis)	0.1 TP_VDDI		0.1 TP_VDDI		V
VnH	Noise margin at the HIGH level for each connected device (including hysteresis)	0.2 TP_VDDI	-	0.2 TP_VDDI	-	V

Panox Display
sales@panoxdisplay.com
Skype:panoxwesley

5. Touch Panel RESET Timing Characteristics

Reset input timing

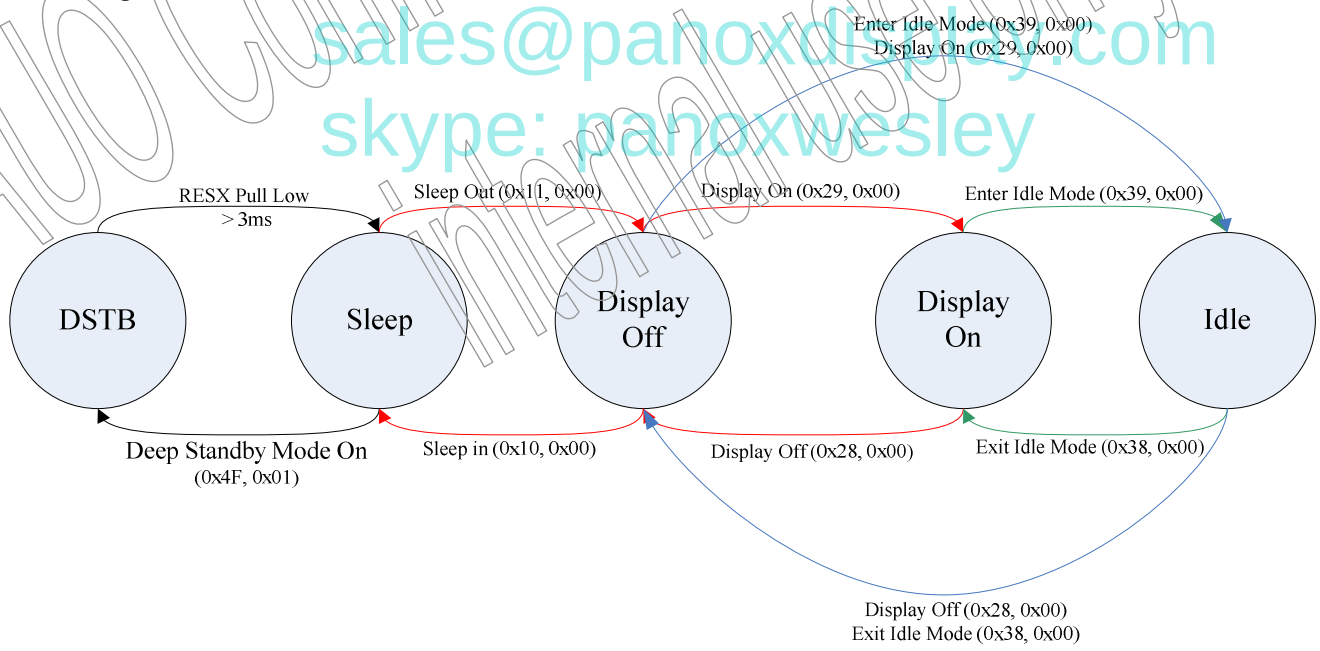


Timing Parameters

Symbol	Min.	Max.	Unit
T_{reset} (TP_RESX)	100	-	ns
T_{bl_start}	-	2	ms
T_{bl_active}	-	11	ms
T_{reboot}	-	16	ms

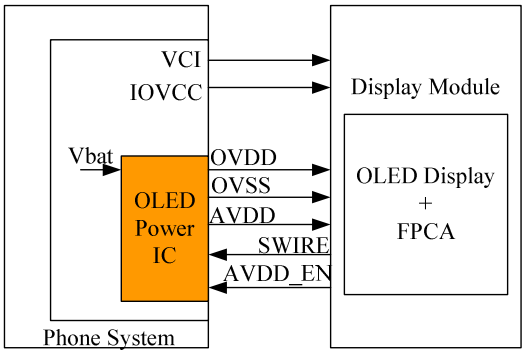
6. Recommended Operating Sequence

State Diagram

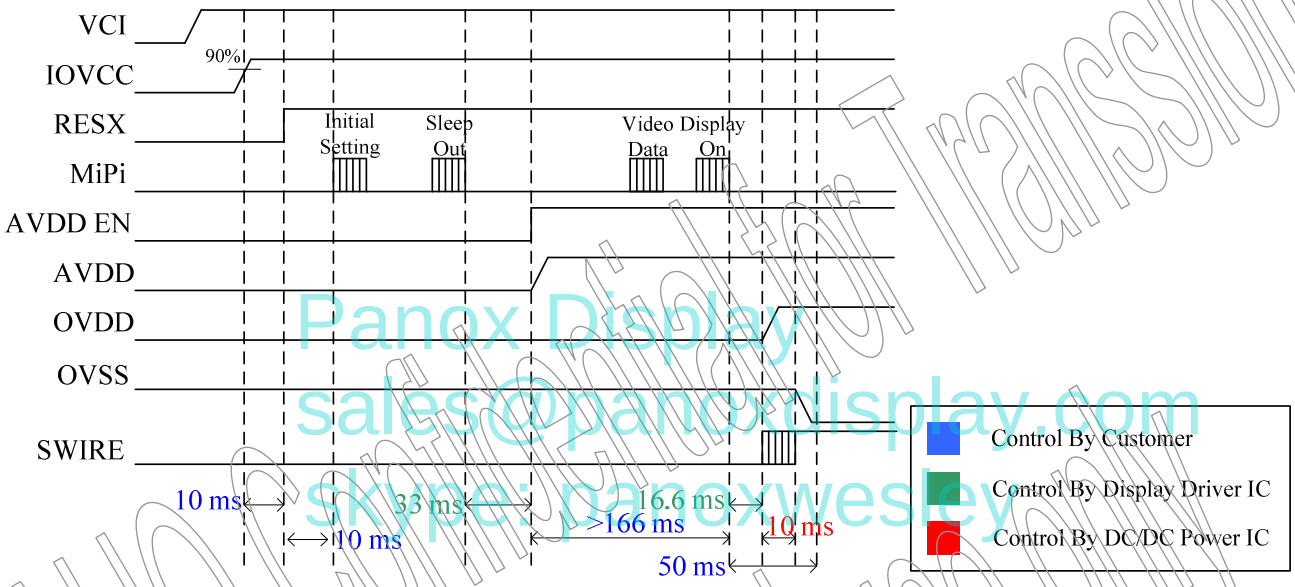


AUO Confidential for Extension
Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Information only

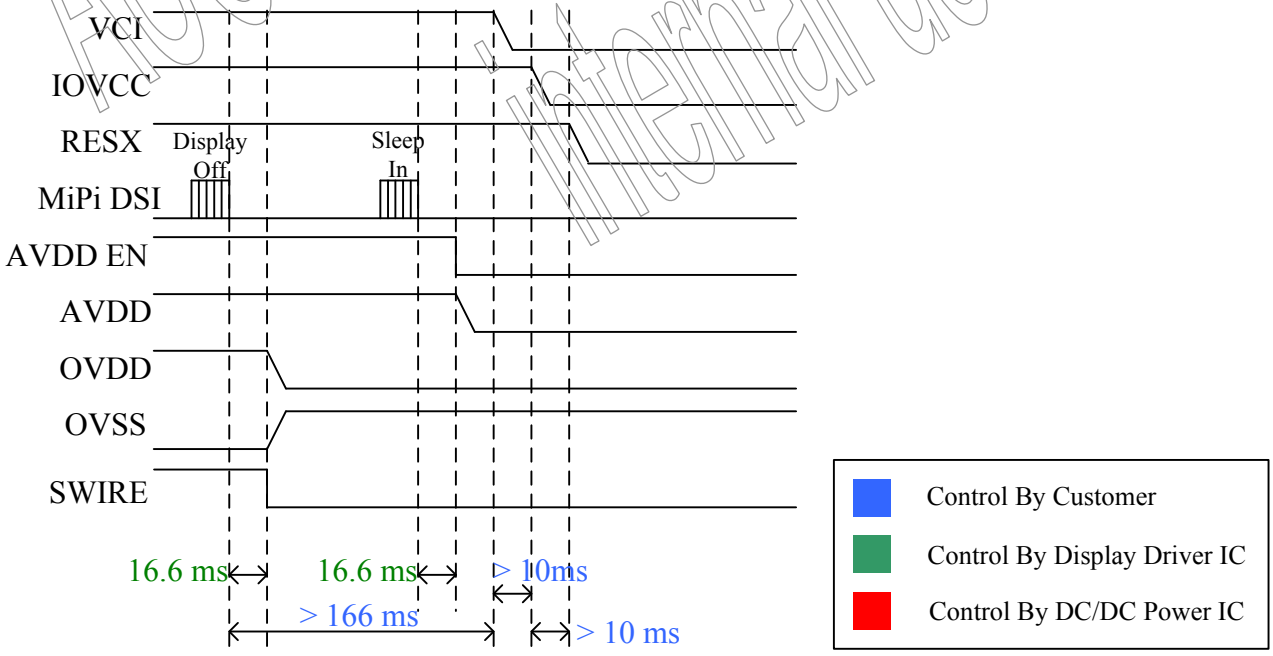
Power Structure



Power on sequence



Power off sequence



Panox Display
sales@panoxdisplay.com
skype: panoxwesley
AVO confidential for Transsion
Internal use only

Initial Setting:

Item	Parameter Quantity	Address	P0
1	1	0xFE	0x08
2	1	0x03	0x40
3	1	0x07	0x1A
4	1	0xFE	0x00
5	1	0x51	0xFF

Sleep Out:

Item	Parameter Quantity	Address	P0
1	1	0x11	0x00

Display On:

Item	Parameter Quantity	Address	P0
1	1	0x29	0x00

Sleep In

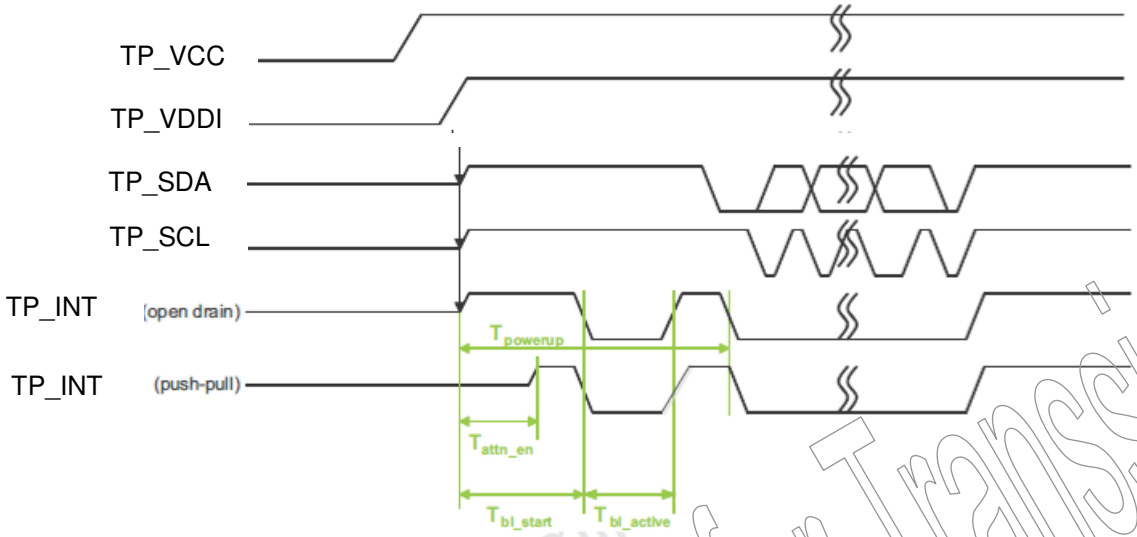
Item	Parameter Quantity	Address	P0
1	1	0x10	0x00

Display Off:

Item	Parameter Quantity	Address	P0
1	1	0x28	0x00

Confidential for Jarison
Panox Display
sales@panoxdisplay.com
skype:panoxwesley
Internal use only

Touch Panel Power on Sequence



Symbol	Min.	Max.	Unit
T_{attn_en}	5	21	ms
$T_{powerup}$	-	60	ms
T_{bl_start} (bootloader start)	-	46	ms
T_{bl_active} (bootloader active)	-	11	ms

AUO confidential for Irasson
Panox Display
sales@panoxdisplay.com
skype: panoxwesley
internal use only

D. Touch Specifications

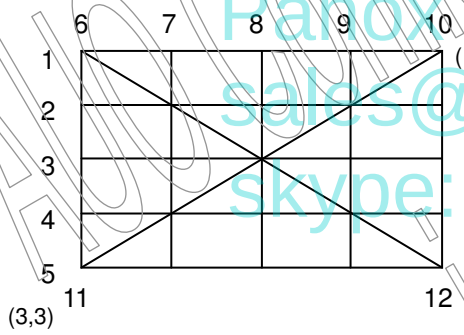
No.	Item		Spec.	Remark
1	Touch IC		S3508	Synaptics
2	Multi-Finger		10	
3	Report Rate		≧ 100Hz	
4	Performance	Accuracy.	≦2.0mm	Note 1
		Linearity	≦2.0mm	

Note 1: Draw straight lines on the X axis, Y axis and diagonal axis with 6mm diameter copper slug at 50mm/sec drawing speed. And, drawing area is defined as below figure shown, which according to AA area and slig size.

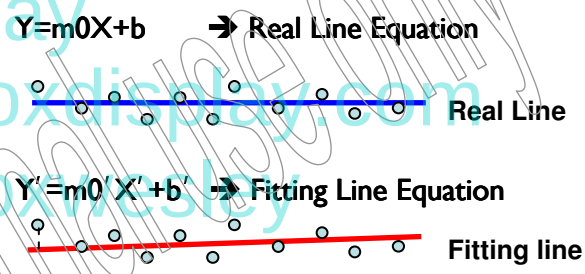
Accuracy= Max{|(y-m0x-b)/(m0^2+1)^0.5|}

Linearity= Max{|(y-m0'x-b')/(m0'^2+1)^0.5|}

where (x,y)s are the TP IC reported coordinates,



Unit: mm



Reported points to fit a line.

All Contents for Tansion Internal only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

E. Optical Specification

All optical specifications are measured under typical condition. (Note 1)

Item		Abbr.	Min.	Typ.	Max.	Unit	Remark
Brightness		Y @ θ=0°	280	350		nits	Note 2
Contrast ratio		@ θ=0°	10000	--	--	--	
		@ θ=60°	3000	--	--	--	
		@ θ=80°	1600	--	--	--	
Viewing angle (CR > 1600)		Top	80	--	--	Deg.	
		Bottom	80	--	--	Deg.	
		Left	80	--	--	Deg.	
		Right	80	--	--	Deg.	
Chromacity (CIE1931)	Red	x	0.640	0.670	0.700	--	Note 3
		y	0.300	0.330	0.360	--	
	Green	x	0.186	0.236	0.286	--	
		y	0.661	0.711	0.761	--	
	Blue	x	0.090	0.130	0.170	--	
		y	0.025	0.065	0.105	--	
	White	x	0.28	0.30	0.32	--	
		y	0.29	0.31	0.33	--	
Uniformity		9 points	70	80	--	%	Note 4
Flicker			--	--	3.5	%	Note 5
Crosstalk			--	--	4.0	%	Note 6
Life Time		95% @ 25°C	100			hrs	Note 7

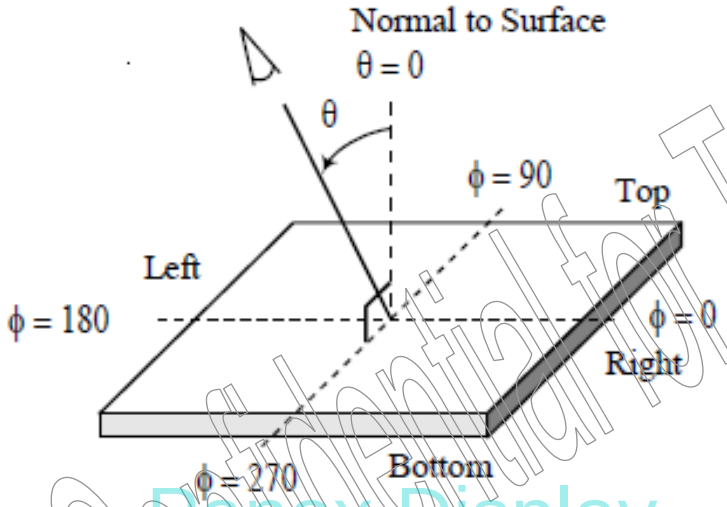
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

Note 1: **Typical Condition**

Optical characteristics should be measured at the **center area** of the display with **Konica Minolta CA-310** and at the ambient temperature = **25℃±2℃** and in the dark room.

Note 2: **Viewing Angle & Contrast Ratio**

The optical performance is specified as the driver IC located at ϕ**=270°**.



Contrast ratio is calculated with the following formula:

$$\text{Contrast ratio (CR)} = \frac{\text{Photo detector output when OLED is at "White" patern}}{\text{Photo detector output when OLED is at "Black" pattern}}$$

Note 3: **Chromacity**

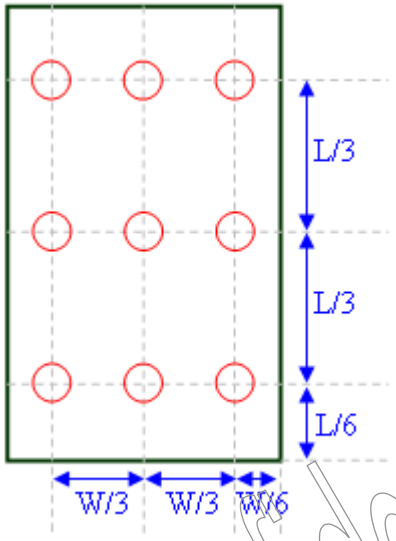
Chromacity of **R, G, B** pattern are measured at Gray Level "**255**".

Chromacity of **White** pattern are measured at Gray Level "**255**".

AUO Confidential for Transsion internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

Note 4: **Uniformity**

Uniformity under **White(L255)** pattern = $\frac{\text{minimum luminance of } \mathbf{9} \text{ points}}{\text{maximum luminance of } \mathbf{9} \text{ points}}$



Note 5: **Flicker**

Suggested Instruments: **Konica Minolta CA-310**

Measuring Point: **Center point of 128th gray**

Flicker Level: **AC/DC (%)**

AC = Max. Peak – Min. Peak

Test Pattern: **L128 Gray**

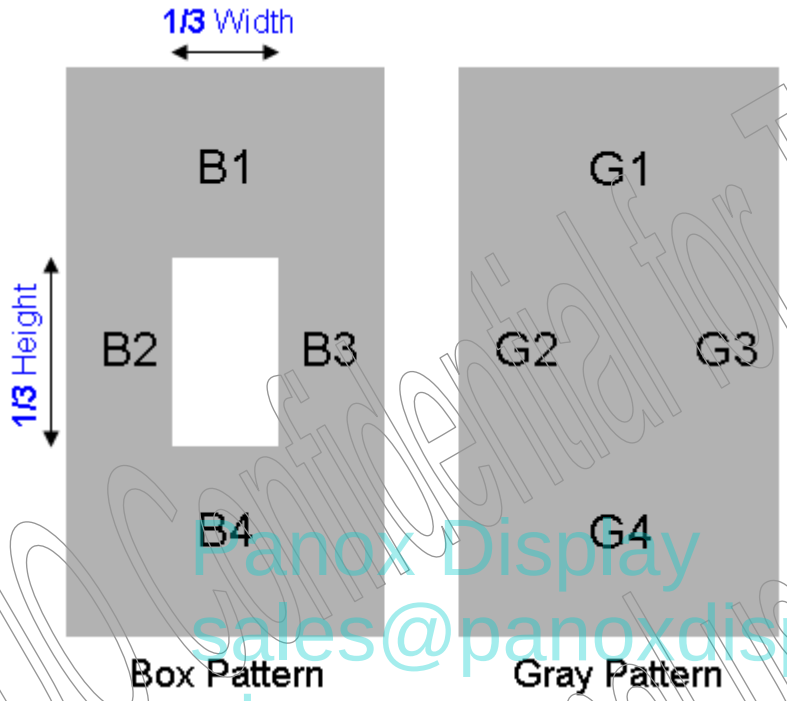
AUO Confidential for Transsion Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

Note 6: **Crosstalk**

Crosstalk shall be calculated by the luminance of **B1~B4** and **G1~G4** in the patterns shown below.

Box Pattern: **L128** gray level background with a **L255** White window in the central area.

Gray Pattern: **L128** gray level background only.



Panox Display
sales@panoxdisplay.com
skype: panoxwesley
AUO Confidential for Transsion Internal use only

$$Crosstalk \equiv Maximum: \left\{ \frac{|B1-G1|}{G1}, \frac{|B2-G2|}{G2}, \frac{|B3-G3|}{G3}, \frac{|B4-G4|}{G4} \right\} \times 100\%$$

Note 7: **Life Time**

OLED life time is defined by the **Minimum Duration Time** that the luminance is decayed to a specific ratio (ex. **95%**) of initial state.

Test Pattern under duration period: **L255** White

F. Reliability Test Items

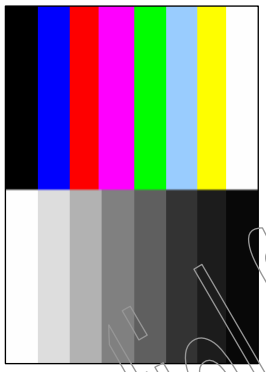
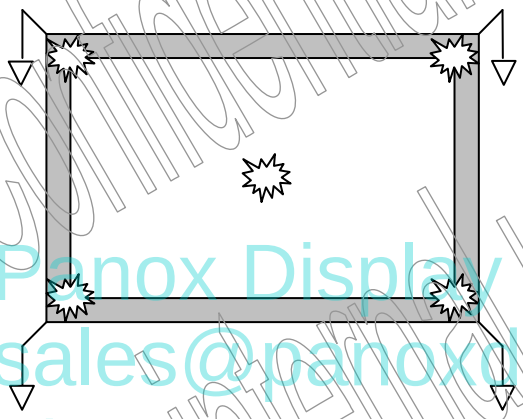
In the standard condition, there should **not** be any display function NG issue occurred during the reliability test and the performance is confirmed after panel is left at room temperature. All the cosmetic specifications are judged only **before** the reliability stress.

No.	Test items	Conditions		Remark
1	High Temperature Storage	T= 80℃	100Hrs	Note 1
2	Low Temperature Storage	T= -30℃	100Hrs	
3	High Temperature Operation	T= 70℃	100Hrs	
4	Low Temperature Operation	T= -20℃	100Hrs	
5	High Temperature & Humidity Operation	T= 60℃. 90% RH	100Hrs	
6	Thermal Shock	-30℃ ~ 80℃, 30 cycle, 1Hrs/cycle		Non-operation
7	Electrostatic Discharge	Contact = ± 4 kV, Class B Air = ± 8 kV, Class B		Note 2
8	Vibration (With Carton)	1.5Grms, 10~200Hz Total time: 90 mins (30 mins/axis for X, Y, Z)		
9	Drop (With Carton)	Height: 60cm 1 corner, 3 edges, 6 surfaces		

Note 1 : T = Ambient Temperature

Panox Display
sales@panoxdisplay.com
skype: panoxwesley
AUO confidential information
internal use only

Note 2 : All test techniques follow IEC 61000-4-2 standard.

Test Condition		Note
Pattern		
Procedure & Set-up	Contact Discharge : 330Ω, 150pF, 1sec, 5 point, 10 times/point Air Discharge : 330Ω, 150pF, 1sec, 5 point, 10 times/point 	
Criteria	Class B – Some performance degradation allowed. No data lost. Self-recoverable hardware failure.	
Others	1. Gun to Panel Distance 2. No SPI command, keep default register settings.	

No confidential for Transsion
Not for public use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

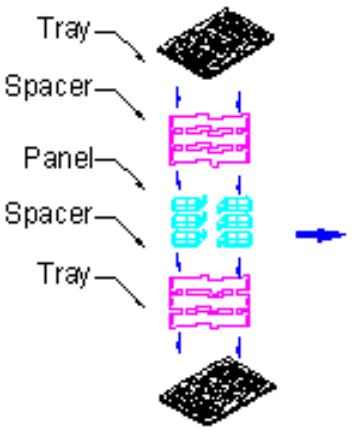
G. Precautions

1. Do not twist or bend the module and prevent the unsuitable external force for display module during assembly.
2. Adopt measures for good heat radiation. Be sure to use the module with in the specified temperature.
3. Avoid dust or oil mist during assembly.
4. Follow the correct power sequence while operating. Do not apply the invalid signal, otherwise, it will cause improper shut down and damage the module.
5. Less EMI: it will be more safety and less noise.
6. Please operate module in suitable temperature. The response time & brightness will drift by different temperature.
7. Avoid to display the fixed pattern (exclude the white pattern) in a long period, otherwise, it will cause image sticking.
8. Be sure to turn off the power when connecting or disconnecting the circuit.
9. Polarizer scratches easily, please handle it carefully.
10. Display surface never likes dirt or stains.
11. A dewdrop may lead to destruction. Please wipe off any moisture before using module.
12. Sudden temperature changes cause condensation, and it will cause polarizer damaged.
13. High temperature and humidity may degrade performance. Please do not expose the module to the direct sunlight and so on.
14. Acetic acid or chlorine compounds are not friends with TFT display module.
15. Static electricity will damage the module, please do not touch the module without any grounded device.
16. Do not disassemble and reassemble the module by self.
17. Be careful do not touch the rear side directly.
18. No strong vibration or shock. It will cause module broken.
19. Storage the modules in suitable environment with regular packing.
20. Be careful of injury from a broken display module.
21. Please avoid the pressure adding to the surface (front or rear side) of modules, because it will cause the display non-uniformity or other function issue.
22. Touch code is decided by (1) cover lens type, (2) lens lamination parameters, and (3) customers' hardware/software setting. Please be noted if above factors was changed, AUO need new samples to re-adjusted touch code.

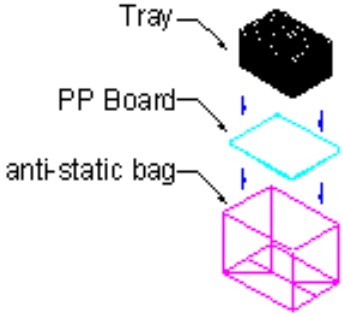
AUO confidential for Tansion
Internal use only
Panox Display
sales@panoxdisplay.com
skype: panoxwesley

H. Packing Information

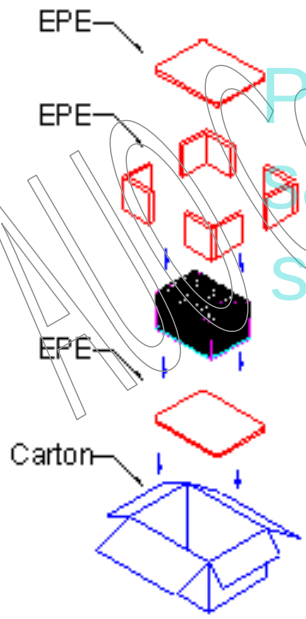
Packing Form



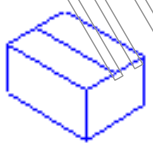
1 tray for 6 pcs Panels

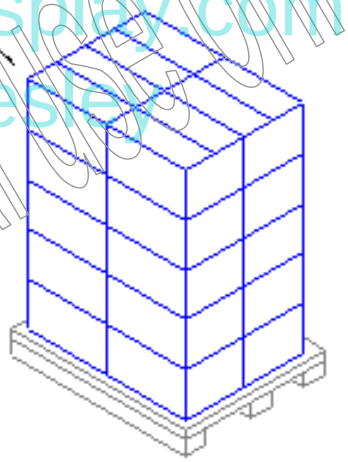


1 set for 20+1 pcs trays
=120 pcs Touch panels



5 layers for ASRS
=20 Cartons
=2400 pcs





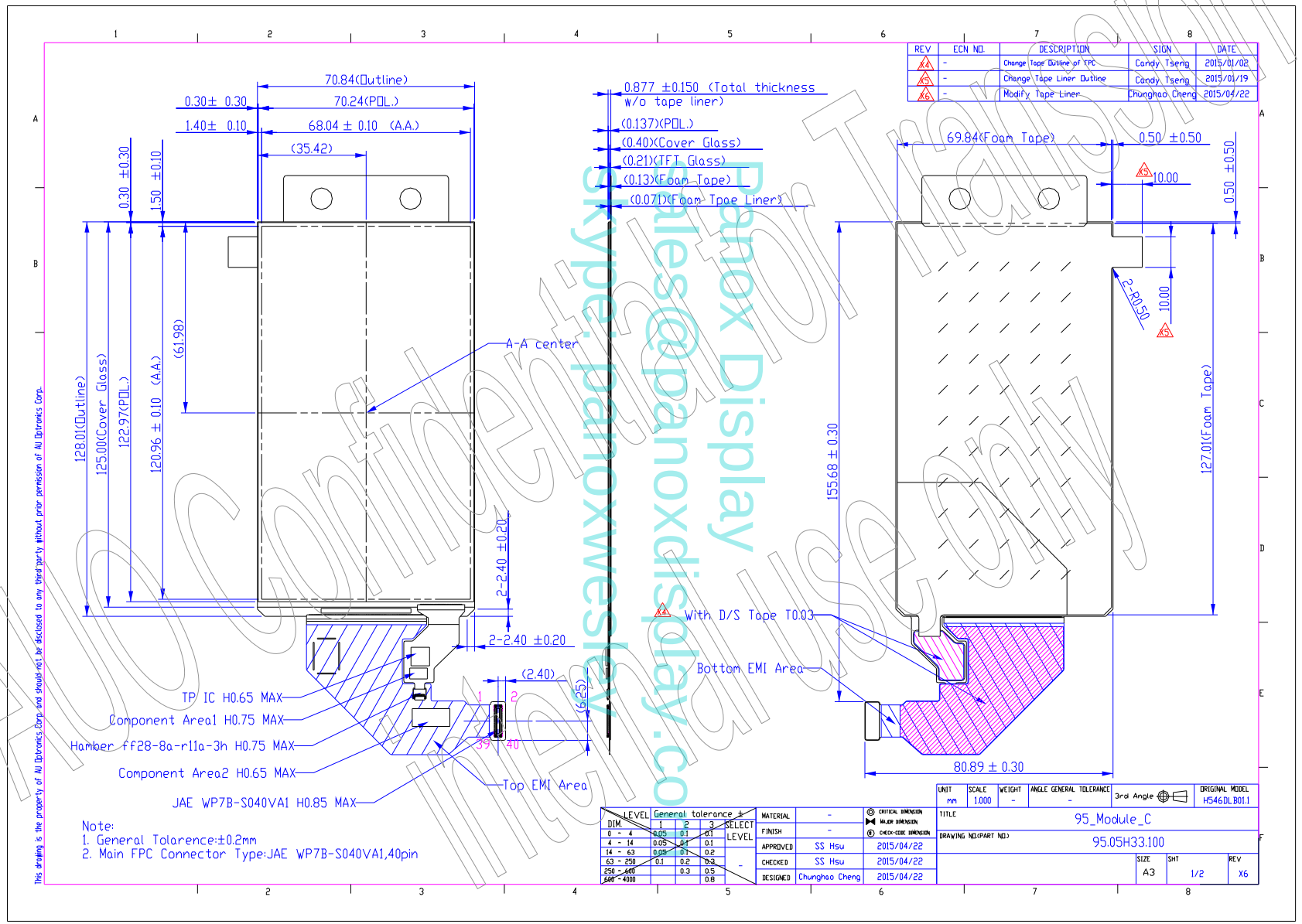
Carton DIM：
550*410*274 mm

Pallet DIM：
1150*840*132 mm

Panox Display
sales@panoxdisplay.com
skype: panoxwesley
Confidential for Transsion
internal use only

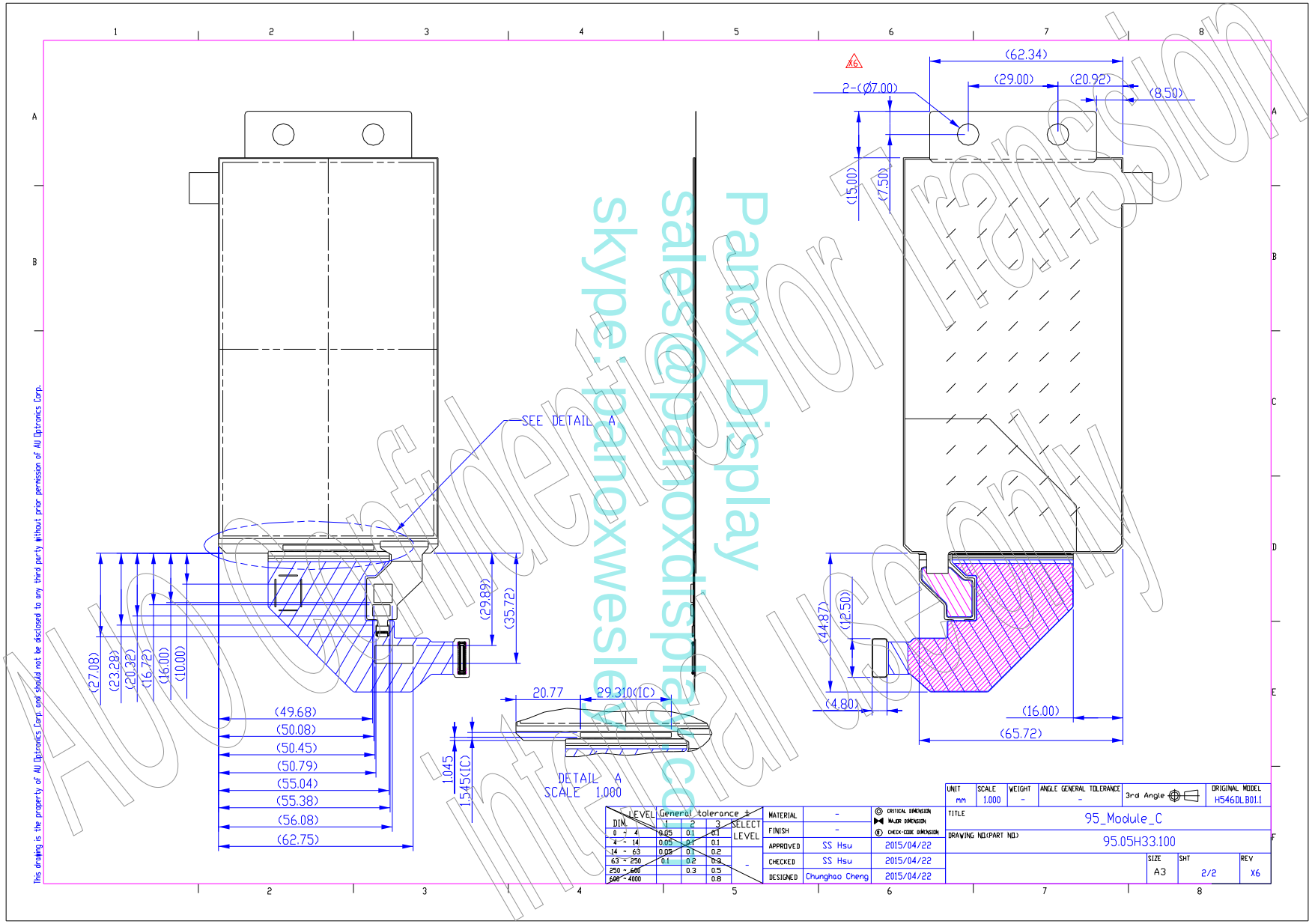
I. Outline Dimension

Module Outline (1)



AUO Confidential Information
Panox Display
Sales@panoxdisplay.com
Skype:panoxwesley
Transmission
Internal use only

Module Outline (2)



Panox Display
sales@panoxdisplay.com
skype:panoxwesley.chen
Not authorized for transfer
internal use only