



Product Specification

F121PET-Z09

- ☒ Draft Specifications
☐ Preliminary Specifications
☐ Final Specifications

Title	12.1-inches Touch Display Product Specifications
Model Name	F121PET-Z09
Version	0

Customer	
Approved by	Date
Notice: This Specification is subject to change without notice.	

Approved By	Prepared By
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2026-06-01	2026-06-01



REVISION HISTORY

Version	ECN No.	Description of Changes	Date	Prepared
0		Draft specification first edition	2026-05-20	Allen Fang



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1. GENERAL DESCRIPTION

1.1. INTRODUCTION

F121PET-Z09 is a 12.1" color active matrix TFT LCD module G121ICE-L01 with projected capacitive multi-touch B121PFU-E02 air bonding.

The display format is intended to support the Wide-XGA AAS mode (1280(H) x 800(V)) screen and 1 channel 30 pins LVDS interface, 26.2K/16.7M colors, with white LEDs backlight built in PCBA.

1.2. FEATURES

- WXGA (1280 x 800 pixels) resolution
- PSWG (Panel Standardization Working Group)
- Wide operation temperature
- RoHS compliance

1.3. APPLICATION

- TFT LCD monitor
- Factory application
- Amusement

1.4. GENERAL SPECIFICATIONS

Parameter	Specification	Unit	Remarks
Active Area Size	12.1	inch	
Display Area	261.12 (H) x 163.2 (V)	mm	
Outline Dimension	302.00 (H) x 204.00 (V) x 13.04 (D)	mm	D:PCAP+LCM
Weight	810	g	Typ.
Driver Element	a-Si TFT active matrix	-	
Display Colors	262k / 16.7M	Colors	
Number of Pixels	1280 (H) x 800 (V)	pixels	
Pixel Pitch	0.204 (H) x 0.204(W)	mm	
Pixel Arrangement	RGB vertical stripe	-	
Display Mode	Transmissive mode / Normal Black	-	
White Variation	80% (Typ.)	-	
Touch Technology	Projected Capacitive Multi-Touch Panel	-	
Touch Method	Finger or exclusive pen	-	
Numbers of Touch	10	Points	
Touch Sensor Glass Type	Strengthening Glass	-	
Touch FPC Type	COF	-	
Touch Controller IC	EETI, EXC80W46	-	
Touch Driver Interface	USB / I ² C	-	
Support OS	Windows (Embedded/CE/XP/2000/Vista/7/8/10) / Linux / Android	-	

2. ABSOLUTE MAXIMUM RATINGS

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

Parameter	Symbol	Min.	Max.	Unit	Remarks
Logic/LCD Drive Voltage	V _{DD}	-0.3	18	V	Note 1
Input Voltage of Signal	V _{In}	-0.3	5.5	V	
Operating Temperature	T _{op}	-20	+70	°C	Note 2
Operating Humidity	H _{op}	10	90	%RH	
Storage Temperature	T _{st}	-30	+80	°C	
Storage Humidity	H _{st}	10	90	%RH	
Touch DC Supply Voltage	USB_V _{DD}	-0.3	5.5	V	

Note:

1. Duration: 50 msec.
2. Maximum Wet-Bulb temperature should be 39°C and no condensation.

The relative humidity must not exceed 90% non-condensing at temperatures of 40°C or less. At temperatures greater than 40°C, the wet bulb temperature must not exceed 39°C.

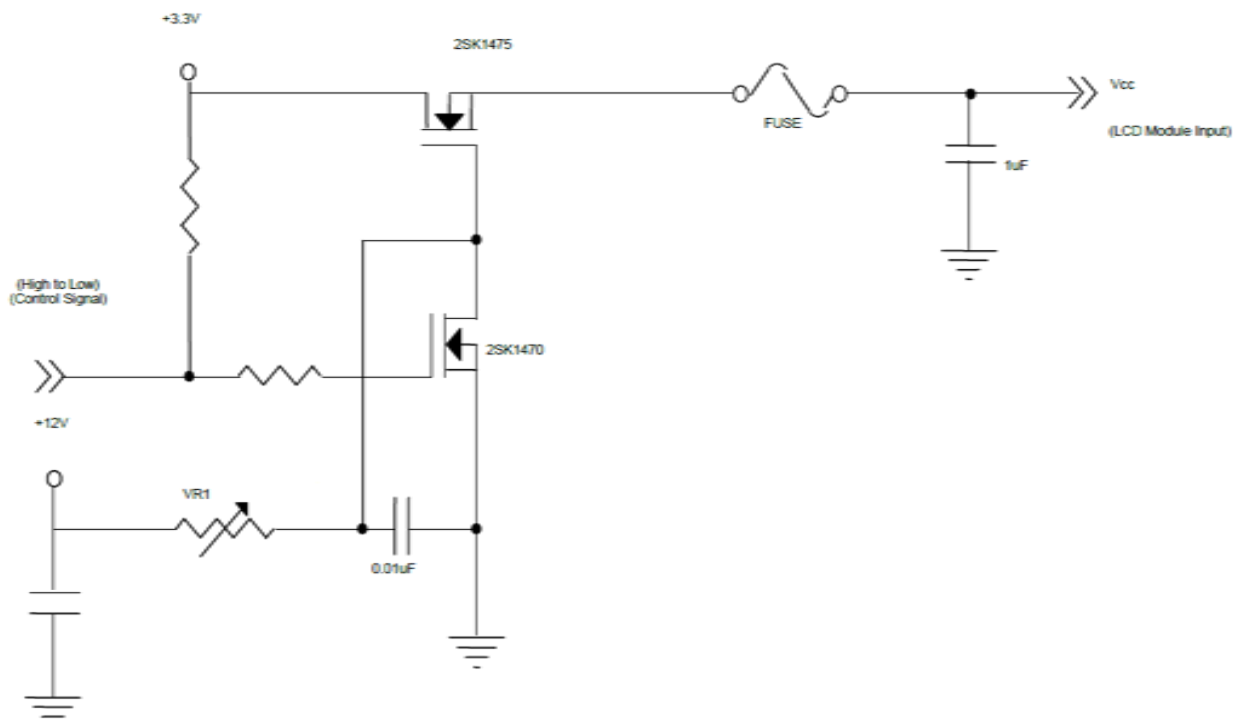
3.ELECTRICAL CHARACTERISTICS

3.1. LCD MODULE

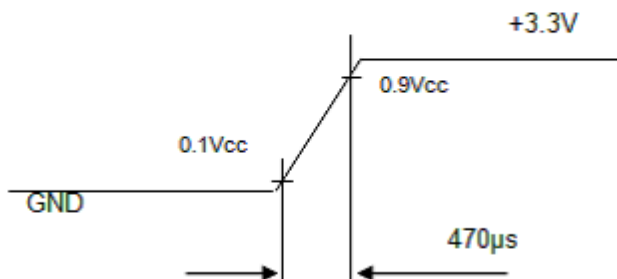
Parameter		Symbol	Values			Unit	Notes
			Min.	Typ.	Max.		
Power Supply Input Voltage		V_{CC}	3.0	3.3	3.6	V	1
Power Supply Ripple Voltage		V_{RP}	-	50	-	mV	
Rush Current		I_{RUSH}	-	1.5	-	A	2
Power Supply Input Current	Black Pattern	I_{CC}	-	560	675	mA	3
	White Pattern		-	360	430	mA	
LVDS differential input voltage		V_{id}	100	-	600	mV	
LVDS common input voltage		V_{ic}	1.125	1.2	1.375	V	
Logic High Input Voltage		V_{IH}	100	-	-	V	
Logic Low Input Voltage		V_{IL}	-	-	-100	V	
LVDS terminating resistor		R_T	-	100	-	ohm	

Notes: 1.The assembly should be always operated within above ranges.

2. Measurement Condition :



VCC rising time is 470us



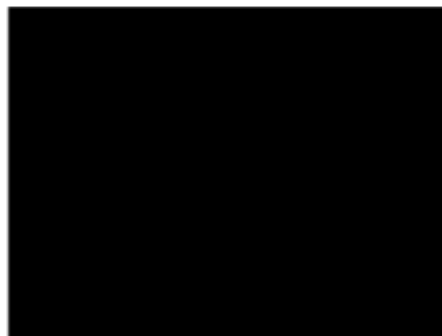
3. The specified power supply current is under the conditions at $V_{cc} = 3.3\text{ V}$, $T_a = 25 \pm 2\text{ }^\circ\text{C}$, $f_v = 60\text{ Hz}$, whereas a power dissipation check pattern below is displayed.

a. White Pattern



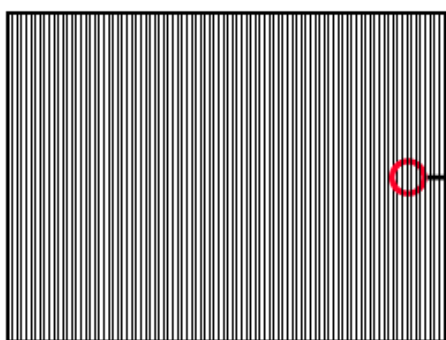
Active Area

b. Black Pattern

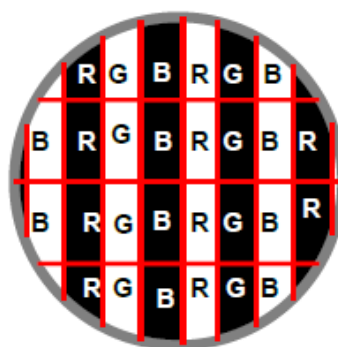


Active Area

c. Vertical Stripe Pattern



Active Area

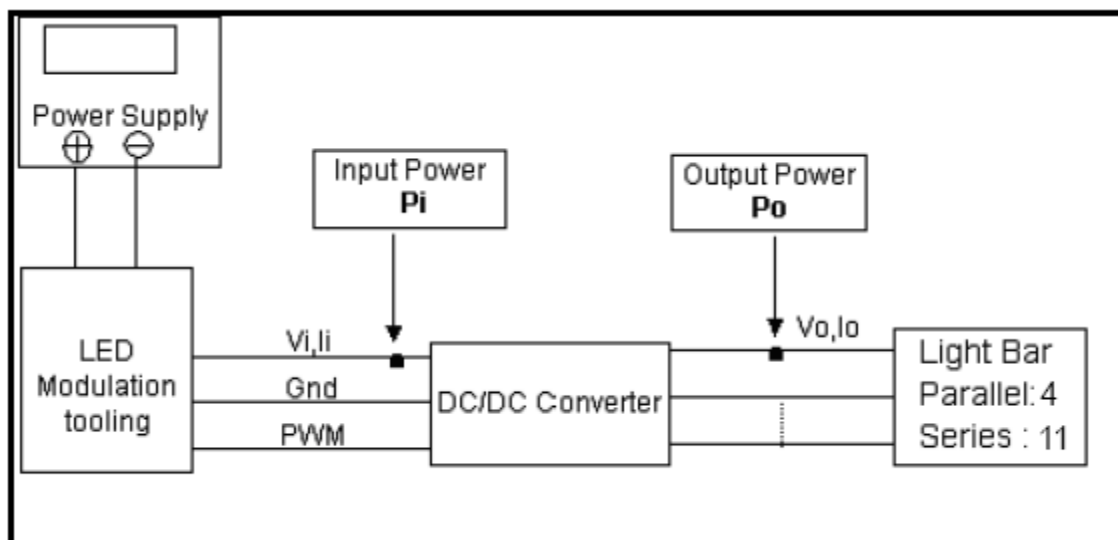


3.2. LCD BACKLIGHT UNIT

Parameter		Symbol	Values			Unit	Notes
			Min.	Typ.	Max.		
Converter Input Voltage		V_i	10.8	12	13.2	V	(Duty 100%)
Converter Input Ripple Current		V_{iRP}	-	-	350	mV	
Converter Input Current		I_i	-	0.8	1.0	A	@ $V_i=12V$ (Duty 100%)
Converter Inrush Current		I_{iRUSH}	-	-	3.0	A	@ V_i rising time =20ms ($V_i=12V$)
Input Power Consumption		P_{BL}	-	9.6	12	W	1
EN Control Level	Backlight on	ENLED (BLON)	2.5	3.3	5.0	V	
	Backlight off		0	-	0.3	V	
PWM Control level	PWM High	Dimming (E_PWM)	2.5	-	5.0	V	
	PWM Low		0	-	0.15	V	
PWM Noise Range		V_{Noise}	-	-	0.1	V	
PWM Control Frequency		f_{PWM}	190	200	20K	Hz	2
PWM Control Duty Ratio		-	5	-	100	%	2, Suggestion @ 190Hz< f_{PWM} <1kHz
			20	-	100	%	2, @ 1kHz≤ f_{PWM} <20kHz
LED Life Time		LT_{LED}	50,000	-	-	Hr	3

Notes:

1. LED current is measured by utilizing a high frequency current meter as shown below:

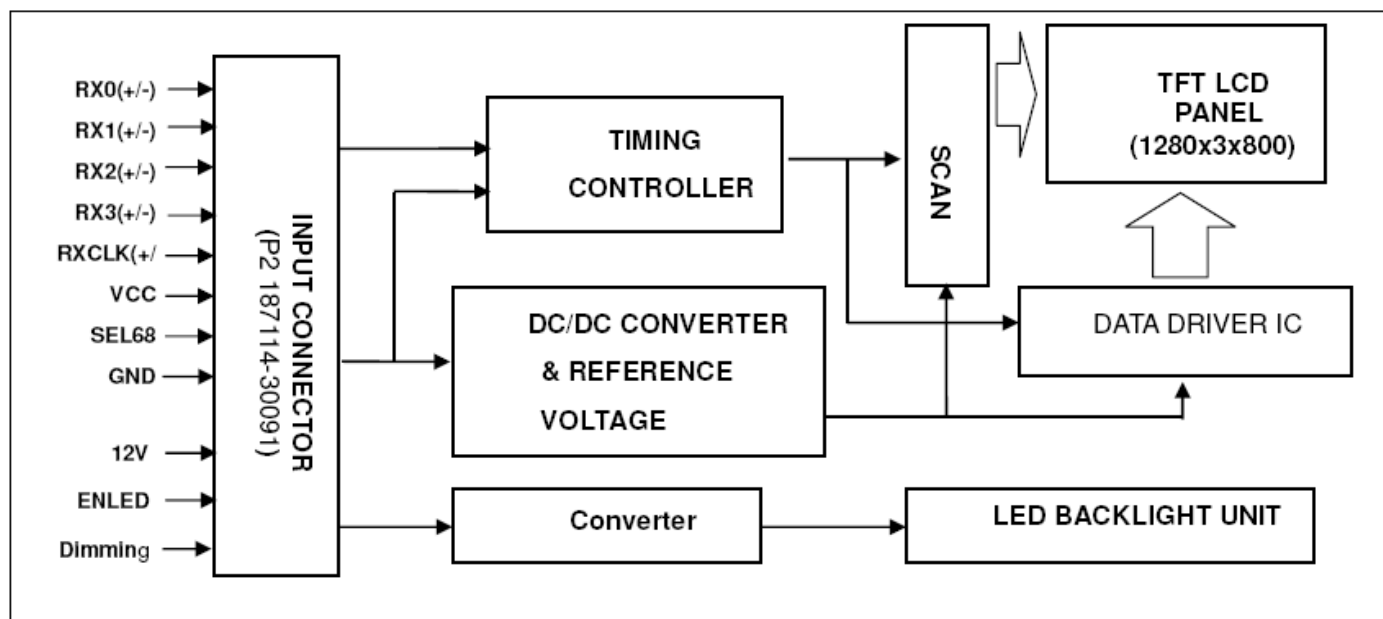


2. At 190 ~1 KHz PWM control frequency, duty ratio range is restricted from 5% to 100%.
1K ~20 KHz PWM control frequency, duty ratio range is restricted from 20% to 100%.
If PWM control frequency is applied in the range from 1 KHz to 20KHZ, The “non-linear” phenomenon on the Backlight Unit may be found. It's a suggestion that PWM control frequency should be less than 1 KHz.
3. The lifetime of LED is estimated data and defined as the time when it continues to operate under the conditions at $T_a = 25 \pm 2 \text{ }^{\circ}\text{C}$ and Duty 100% until the brightness becomes $\leq 50\%$ of its original value.
Operating LED at high temperature condition will reduce life time and lead to color shift.

3.3. TOUCH CONTROL

Parameter	Values			Unit
	Min.	Typ.	Max.	
I2C Input Voltage	-	3.3	-	V
USB Input Voltage	-	5	-	V
FPC Type / Interface	COF / USB & I2C			-
Touch Controller IC	EXC80W46			-
Max Resolution	4096*4096			-
Precision	≤ 2.5			mm
Two points separate distance	≥ 15 (pitch of finger center)			mm
Touch point	1~10 points			-
Power consumption (mA)	Active Mode: About 50mA			mA
Report rate (points/sec)	≥ 120			Hz
Response time	15			ms

3.4. LCD BLOCK DIAGRAM



3.5. INPUT TERMINAL PIN ASSIGNMENT

Pin	Symbol	Description	Note
1	12V	LED power	
2	12V	LED power	
3	12V	LED power	
4	12V	LED power	
5	ENLED	LED Enable	3
6	Dimming	Backlight Adjust	3
7	N.C.	No connection or Ground	4
8	N.C.	No connection or Ground	4
9	VCC	Power supply : +3.3V	
10	VCC	Power supply : +3.3V	
11	GND	Ground	
12	GND	Ground	
13	RX0-	Negative transmission data of pixel 0	
14	RX0+	Positive transmission data of pixel 0	
15	GND	Ground	
16	RX1-	Negative transmission data of pixel 1	
17	RX1+	Positive transmission data of pixel 1	
18	GND	Ground	
19	RX2-	Negative transmission data of pixel 2	
20	RX2+	Positive transmission data of pixel 2	
21	GND	Ground	
22	RXCLK-	Negative of clock	
23	RXCLK+	Positive of clock	
24	GND	Ground	
25	RX3-	Negative transmission data of pixel 3	
26	RX3+	Positive transmission data of pixel 3	
27	GND	Ground	
28	SEL6/8	LVDS 6/8 bit select control : Low → 6 bit input High → 8 bit input	2, 3
29	GND	Ground	
30	NC	No connection	4

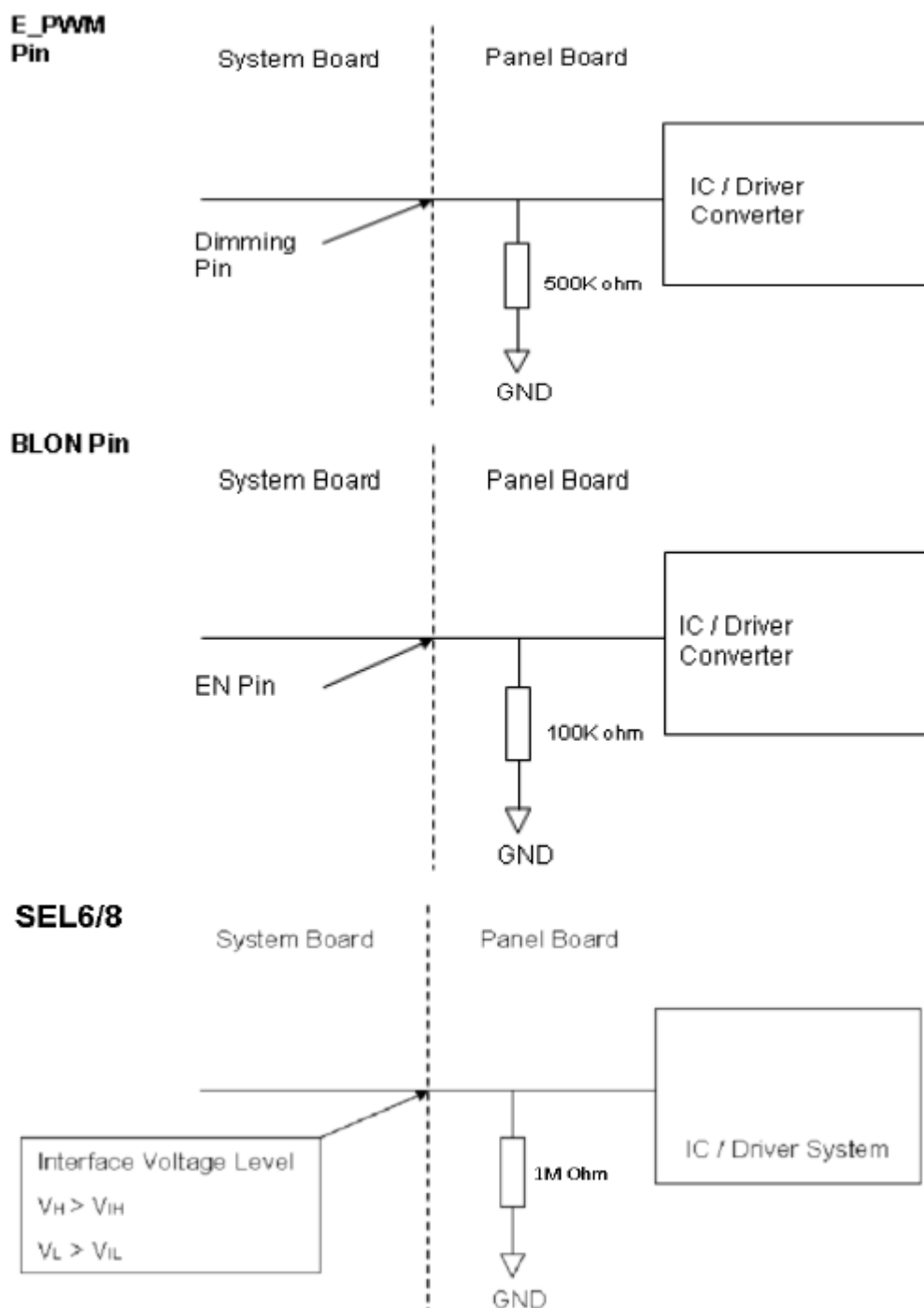
Note1. LCD connector: P-TWO 187114-30091 or equivalent.

User's connector Part No.: JAE FI-X30HL or FI-X30HL-B or equivalent.

Note2. "Low" stands for 0V. "High" stands for 3.3V. "NC" stands for "No Connected".

Note3. ENLED (BLON), Dimming (E_PWM), SEL6/8 as shown below:

Note4. Pin7, Pin8, Pin30 input signals should be set to no connection or ground, this module would operate normally.



3.6. Touch Control Board Pin Assignment :

JP1 : I2C

Brand: JST

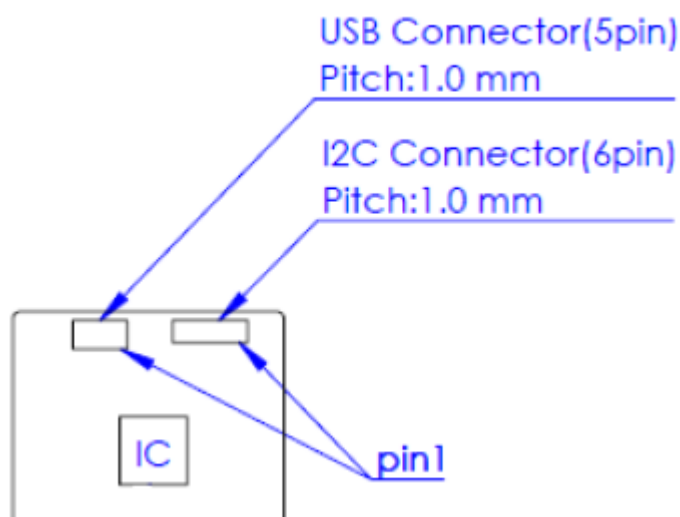
Part number: ZIF-FPC-1.0mm-SMT-6P-Bottom flap or equivalence

JP2 : USB

Brand: Centenary Materials

Part number: SM05B-SRSS-TB or equivalence

PIN ASSIGNMENT			
J1 (I2C)		J2 (USB)	
Pin	Name	Pin	Name
1	RST	1	EGND
2	VDD_3.3V	2	VDD_5V
3	GND	3	GND
4	INT	4	D+
5	SDA_3.3V	5	D-
6	SCL_3.3V		



3.7. LCD COLOR DATA INPUT ASSIGNMENT

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

Color		Data Signal																	
		Red						Green						Blue					
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
Basic Colors	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gray Scale of Red	Red (0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red (1)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red (2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
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	Red (61)	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red (62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red (63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Gray Scale of Green	Green (0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green (1)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Green (2)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
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	Green (61)	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
	Green (62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	Green (63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Gray Scale of Blue	Blue(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue (1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Blue (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
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	Blue (61)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
	Blue (62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	Blue (63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

Note1. 0: Low Level Voltage, 1: High Level Voltage



Product Specification

F121PET-Z09

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.

Color		Data Signal																							
		Red								Green								Blue							
		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 Colors	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	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	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	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
Gray Scale of Red	Red (0)/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 (1)	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 (2)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	Red (253)	1	1	1	1	1	1	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	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
Gray Scale of Green	Green (0)/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 (1)	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 (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
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	Green (253)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	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
Gray Scale of Blue	Blue(0)/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 (1)	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 (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
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	Blue (253)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	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

Note1. 0: Low Level Voltage, 1: High Level Voltage

4. SIGNAL TIMING SPECIFICATION

4.1. LCD COLOR INPUT DATA REFERENCE

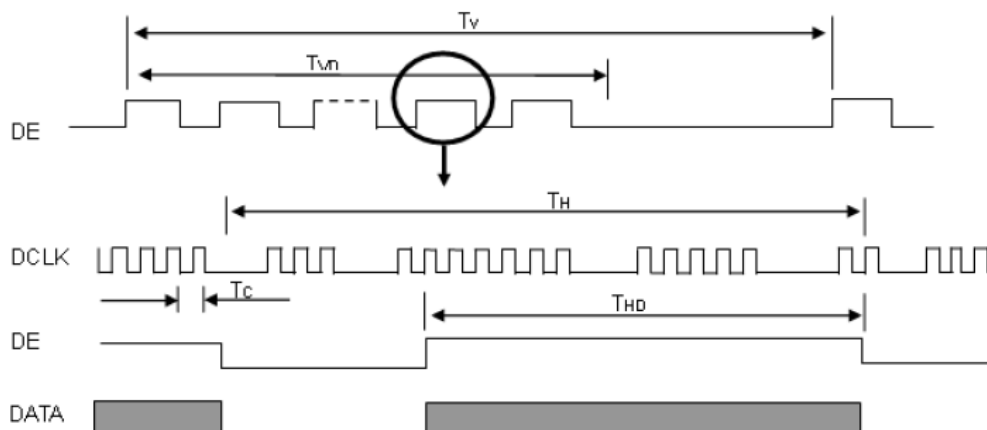
The signal input timing specification as shown as the following table and timing diagram.

Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Note
LVDS Clock	Frequency	F_C	65.9	71	85	MHz	
	Period	T_C	13.4	14.1	15.2	ns	
	Input cycle to cycle jitter	T_{rcl}	-	-	200	ns	a
	Input Clock to data skew	TLVCCS	$-0.02 \cdot T_C$	-	$0.02 \cdot T_C$	ps	b
	Spread spectrum modulation range	F_{clkin_mod}	$0.987 \cdot F_C$	-	$1.013 \cdot F_C$	MHz	c
	Spread spectrum modulation frequency	F_{SSM}	-	-	200	KHz	
Vertical Display Term	Frame Rate	F_r	-	60	-	Hz	$T_v = T_{vd} + T_{vb}$
	Total	T_v	808	823	885	T_h	
	Active Display	T_{vd}	800	800	800	T_h	
	Blank	T_{vb}	8	23	85	T_h	
Horizontal Display Term	Total	T_h	1360	1440	1600	T_c	$T_h = T_{hd} + T_{hb}$
	Active Display	T_{hd}	1280	1280	1280	T_c	
	Blank	T_{hb}	80	160	320	T_c	

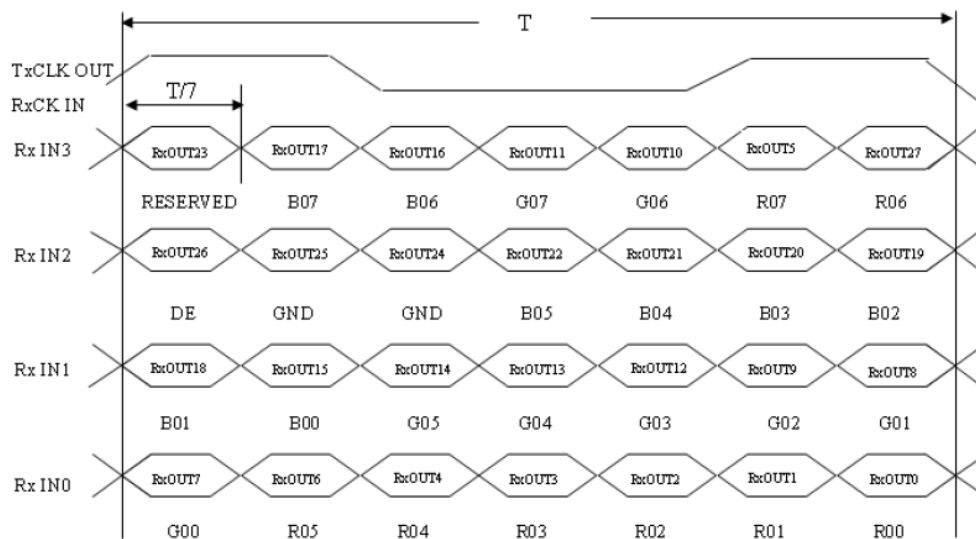
Notes : (1) Because this module is operated by DE only mode, Hsync and Vsync input signals should be set to low logic level or ground. Otherwise, this module would operate abnormal.

(2) The T_v ($T_{vd} + T_{vb}$) must be integer, otherwise, the module would operate abnormally.

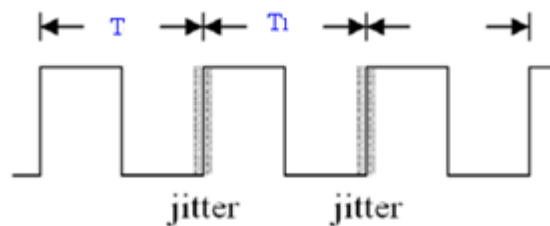
INPUT SIGNAL TIMING DIAGRAM



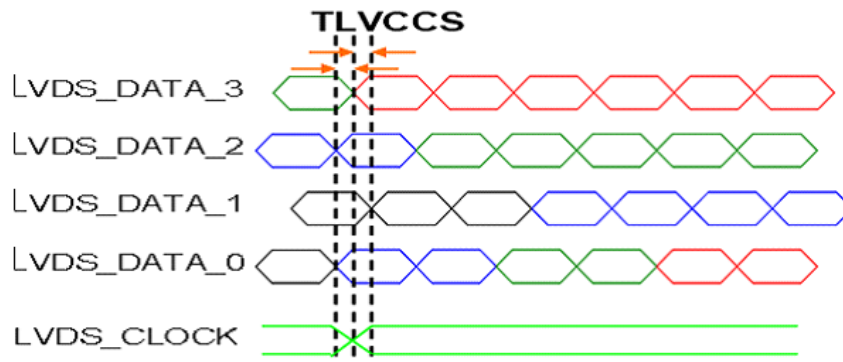
TIMING DIAGRAM of LVDS



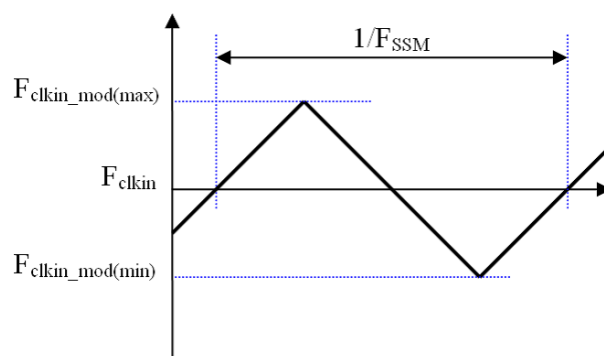
(a) The input clock cycle-to-cycle jitter is defined as below figures. $Trcl = |T1 - T|$



(b) Input Clock to data skew is defined as below figures.



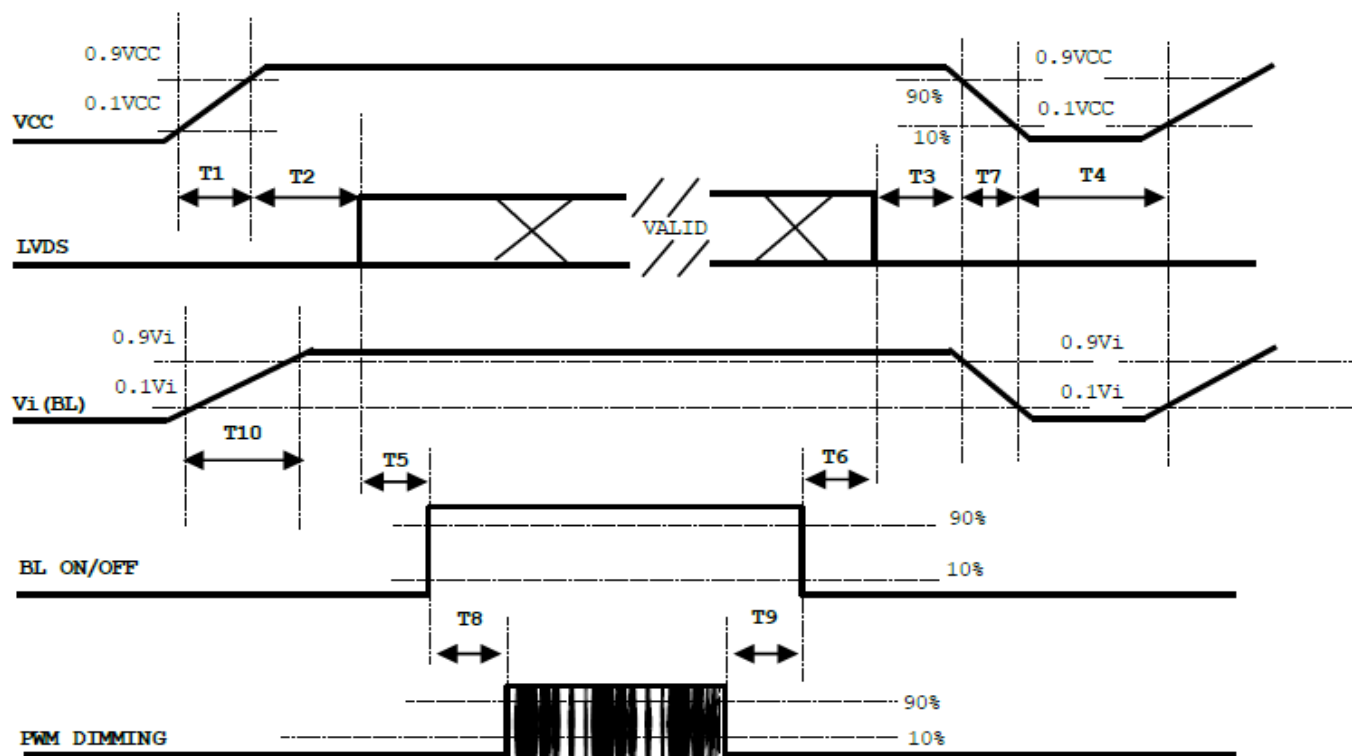
(c) The SSCG (Spread spectrum clock generator) is defined as below figures.



4.2. POWER SEQUENCE FOR LCD

To prevent a latch-up or DC operation of LCD assembly, the power on/off sequence should be as the diagram below.

Power ON/OFF sequence



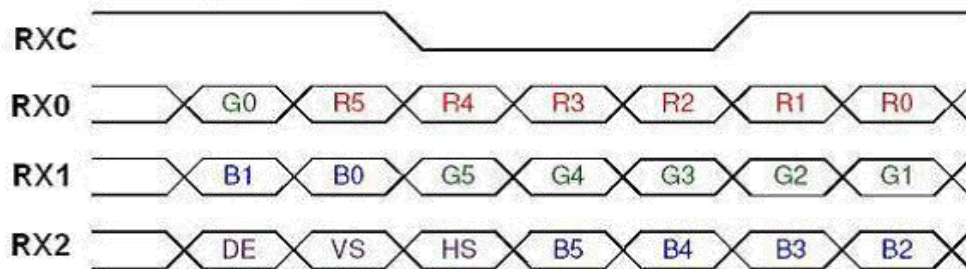
Parameter	Values			Unit
	Min.	Typ.	Max.	
T1	0.5	---	10	ms
T2	0	---	50	ms
T3	0	---	50	ms
T4	500	---	---	ms
T5	450	---	---	ms
T6	200	---	---	ms
T7	10	---	100	ms
T8	10	---	---	ms
T9	10	---	---	ms
T10	20	---	50	ms

Note:

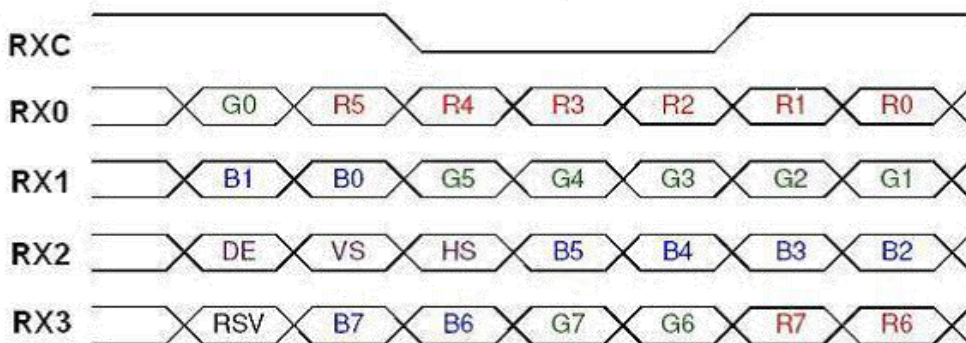
- (1) The supply voltage of the external system for the module input should be the same as the definition of Vcc.
- (2) When the backlight turns on before the LCD operation of the LCD turns off, the display may momentarily become abnormal screen.
- (3) In case of VCC = off level, please keep the level of input signals on the low or keep a high impedance.
- (4) T4 should be measured after the module has been fully discharged between power off and on period.
- (5) Interface signal shall not be kept at high impedance when the power is on.
- (6) INX won't take any responsibility for the products which are damaged by the customers not following the Power Sequence.
- (7) There might be slight electronic noise when LCD is turned off (even backlight unit is also off). To avoid this symptom, we suggest "Vcc falling timing" to follow "T7 spec".

4.3. THE INPUT DATA FORMAT

SEL 6/8 = "High" for 6 bits LVDS Input



SEL 6/8 = "Low" or "NC" for 8 bits LVDS Input



Note (1) R/G/B data 7: MSB, R/G/B data 0: LSB

Note (2) Please be follow PSWG

Signal Name	Description	Remark
R7 R6 R5 R4 R3 R2 R1 R0	Red Data 7 (MSB) Red Data 6 Red Data 5 Red Data 4 Red Data 3 Red Data 2 Red Data 1 Red Data 0 (LSB)	Red-pixel Data Each red pixel's brightness data consists of these 8 bits pixel data.
G7 G6 G5 G4 G3 G2 G1 G0	Green Data 7 (MSB) GreenData 6 GreenData 5 GreenData 4 GreenData 3 GreenData 2 GreenData 1 GreenData 0 (LSB)	Green-pixel Data Each green pixel's brightness data consists of these 8 bits pixel data.
B7 B6 B5 B4 B3 B2 B1 B0	Blue Data 7 (MSB) Blue Data 6 Blue Data 5 Blue Data 4 Blue Data 3 Blue Data 2 Blue Data 1 Blue Data 0 (LSB)	Blue-pixel Data Each blue pixel's brightness data consists of these 8 bits pixel data.
RXCLKIN+ RXCLKIN-	LVDS Clock Input	
DE	Display Enable	
VS	Vertical Sync	
HS	Horizontal Sync	

5. OPTICAL CHARACTERISTICS

5.1. TEST CONDITIONS

Item	Symbol	Value	Unit
Ambient Temperature	Ta	25±2	°C
Ambient Humidity	Ha	50±10	%RH
Supply Voltage	According to typical value and tolerance in “ELECTRICAL CHARACTERISTICS”		
Input Signal			
PWM Duty Ratio	D	100	%

5.2. OPTICAL SPECIFICATIONS

The relative measurement methods of optical characteristics are shown here and all items are measured at the center point of screen except white variation. The following items should be measured under the test conditions described in 7.1 and stable environment shown in Note (5).

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Color Coordinates	Red	R _x	$\theta_x=0^\circ, \theta_y=0^\circ$ Grayscale Maximum	0.602	0.652	0.702	-	1, 5
		R _y		0.288	0.338	0.388		
	Green	G _x		0.276	0.326	0.376		
		G _y		0.558	0.608	0.658		
	Blue	B _x		0.100	0.150	0.200		
		B _y		0.003	0.053	0.103		
	White	W _x		0.263	0.313	0.363		
		W _y		0.279	0.329	0.379		
	Surface Luminance (White)			L _C	480	600		
Contrast Ratio		CR	800	1000	--		4, 5	
Response Time		T _R	$\theta_x=0^\circ, \theta_y=0^\circ$	--	12	17	ms	3
		T _F		--	8	13	ms	
Luminance Variation		δ _W	$\theta_x=0^\circ, \theta_y=0^\circ$	70	80		%	5, 6
Viewing Angle	Horizontal	θ _r	CR≥10	80	89	--	degree	1, 5
		θ _l		80	89	--		
	Vertical	θ _u		80	89	--		
		θ _d		80	89	--		

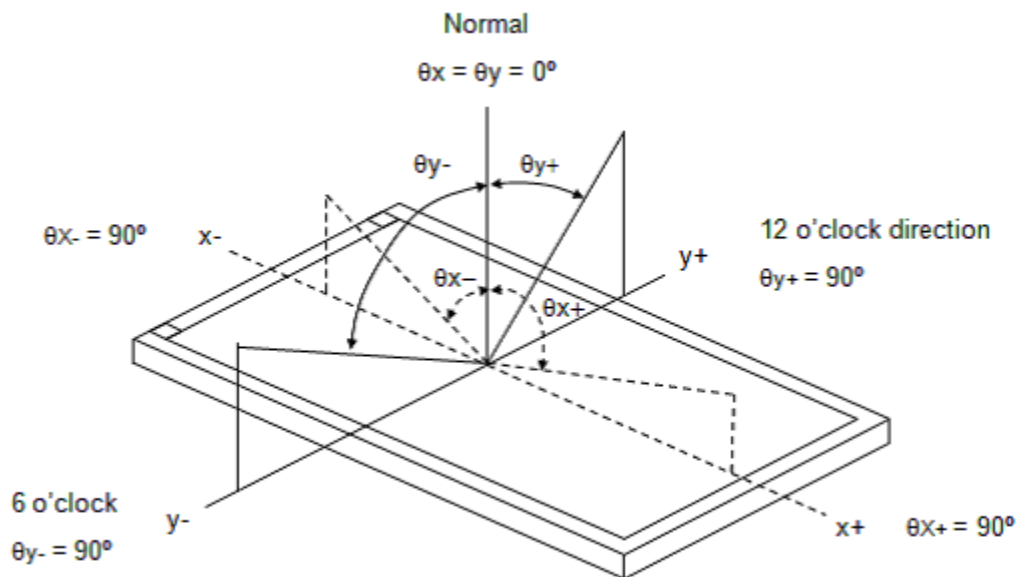
Definition :

Grayscale Maximum: Grayscale 255 (10 bits: grayscale 1023; 8 bits: grayscale 255; 6 bits: grayscale 63)

White: Luminance of Grayscale Maximum (All R, G, B)

Black: Luminance of grayscale 0 (All R, G, B)

Note 1: Definition of Viewing Angle (θ_x , θ_y):

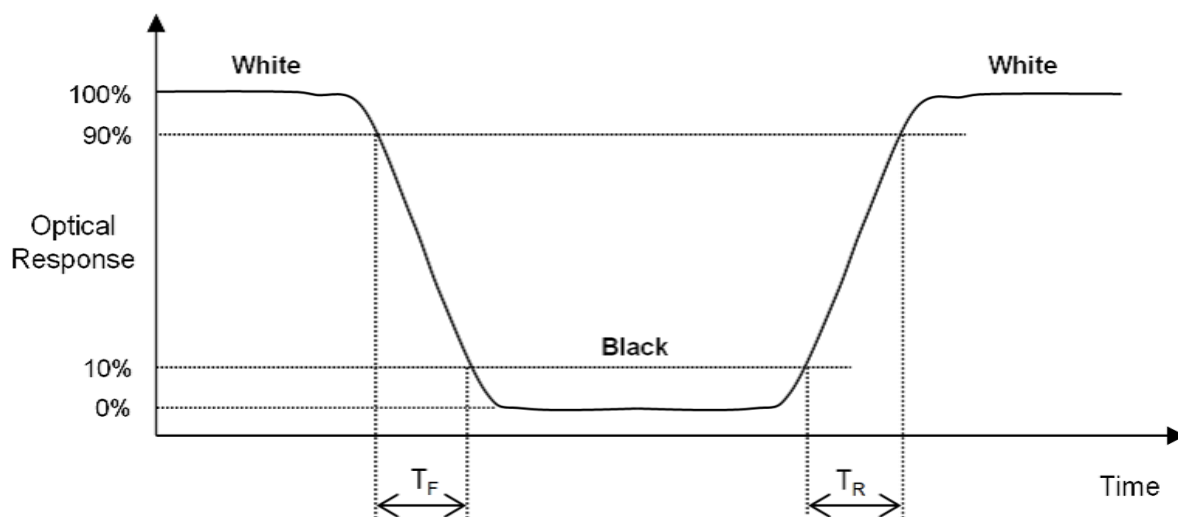


Note 2: Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression at center point.

Contrast Ratio (CR) = White / Black Note

Note 3: Definition of Response Time (T_R , T_F)

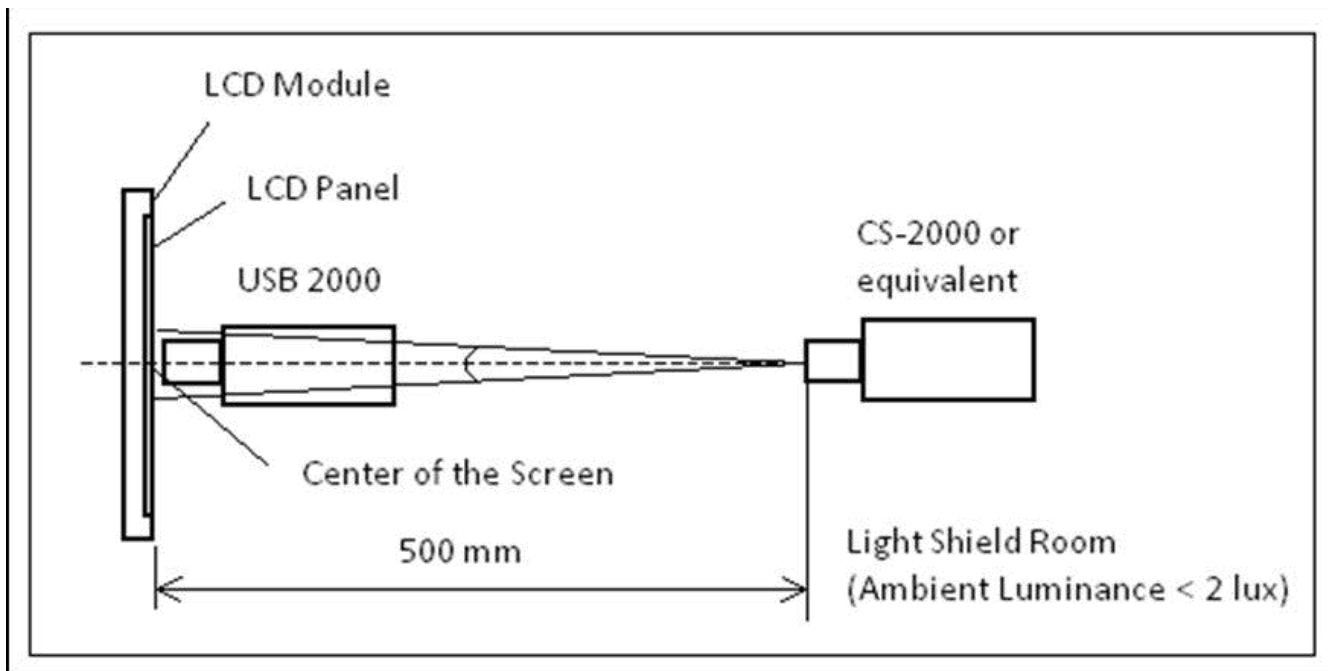


Note 4: Definition of Luminance of White (LC):

Measure the luminance of White at center point.

Note 5: Measurement Setup:

The LCD module should be stabilized at given temperature to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 40 minutes in a windless room. The measurement placement of module should be in accordance with module drawing.

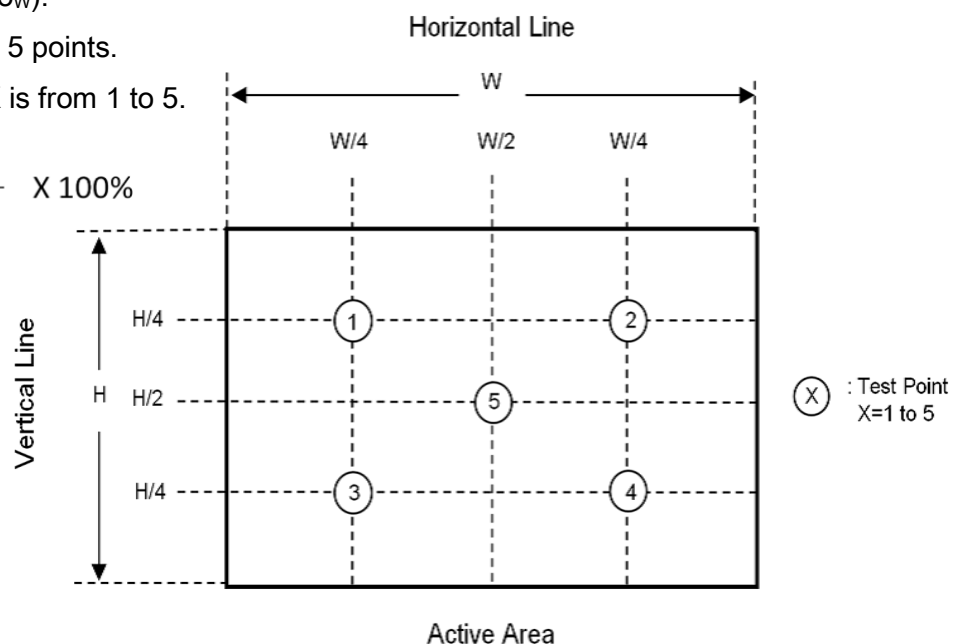


Note 6: Definition of White Variation (δW):

Measure the luminance of White at 5 points.

Luminance of White: $L(X)$, where X is from 1 to 5.

$$\delta W = \frac{\text{Minimum [} L(1) \text{ to } L(5) \text{]}}{\text{Maximum [} L(1) \text{ to } L(5) \text{]}} \times 100\%$$



6. RELIABILITY TEST ITEMS

Test Item		Condition
1	High temperature storage test	80°C, 240hrs
2	Low temperature storage test	-30°C, 240hrs
3	High temperature operation test	70°C, 240hrs
4	Low temperature operation test	-20°C, 240hrs
5	High temperature & High Humidity operation test	60°C, RH 90%, 240hrs
6	Thermal Cycle storage test	-20°C(30min)~70°C(30min), 10cycles

7. LABEL

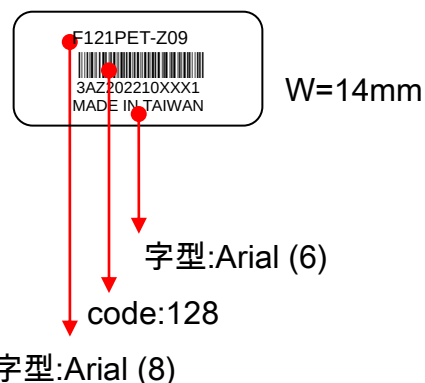
Model NO. F121PET-Z09

條碼

L=32mm

SN 3A Z 20 2 21 0 XXX1

code 1,2 Production location
 code 3 Production version
 code 4,5 Production year
 code 6 Production month
 code 7,8 Production day
 code 9 Production code
 code 10,11,12,13 Serial number



8. MECHANICAL CHARACTERISTICS

Item		Dimension	Unit	Note
Outline Dimension	Horizontal	302.00	mm	PCAP : B121PFU-E02
	Vertical	204.00	mm	
	Depth	2.40	mm	
	Horizontal	278.00	mm	LCD : G121ICE-L01
	Vertical	184.00	mm	
	Depth	10.00	mm	
Weight		810	g	F121PET-Z09
Item		Specification		Remarks
PCAP Viewing Area		262.20 mm x 164.20 mm		
PCAP Sensor Area		281.60 mm x 184.00 mm		
PCAP FPC Length		95 mm		
PCAP Input method		Finger or exclusive pen		
PCAP Light Transmission		≥85%		
PCAP Operation force		≤10g		Finger Input
PCAP Hardness of surface		≥6H		Pressure 500gf test
PCAP Surface Treatment		Clear Type		



Front View

TBD

Back View

TBD

9. ENGINEERING DRAWING

