



- ☒ Draft Specifications
- ☐ Preliminary Specifications
- ☐ Final Specifications

Title	21.5-inches Touch Display Product Specifications
Model Name	F215PET-TE1
Version	0

Customer

Approved by

Date

Notice: This Specification is subject to change without notice.

Approved By	Prepared By
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2026-06-05	2026-06-05



REVISION HISTORY

Version	ECN No.	Description of Changes	Date	Prepared
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1. GENERAL DESCRIPTION

1.1. INTRODUCTION

F215PET-TE1 is a 21.5" TFT LCD IA module G215HCJ-LH1 with projected capacitive multi-touch B215PBU-E05 air bonding and with touch control board ETP-MB-EXC84H5680STAG.

The display format is intended to support the 1920 x 1080 FHD mode screen and Dual channel 30 pins LVDS interface, 16.7M colors, with white LEDs backlight. The converter module for Backlight is built in.

1.2. FEATURES

- FHD (1920 x 1080 pixels) resolution
- LVDS Interface with 2 pixel / clock
- 8-bit color depth, display 16.7M colors
- High Brightness
- DE (Data Enable) only
- RoHS compliance

1.3. APPLICATION

- TFT LCD Monitor
- Factory Application
- Amusement

1.4. GENERAL SPECIFICATION

Parameter	Specification	Unit	Remarks
Active Area Size	21.5	inch	
Display Area	476.60 (H) x 268.10 (V)	mm	
Outline Dimension	517.00 (H) x 315.00 (V) x 20.11 (D)	mm	D:PCAP+LCM
Weight	3100	g	Typ.
Driver Element	a-Si TFT active matrix	-	
Display Colors	16.7M	Colors	
Number of Pixels	1920 (H) x 1080 (V)	pixels	
Pixel Pitch	0.278(H) x 0.278(W)	mm	
Pixel Arrangement	RGB vertical stripe	-	
Display Mode	Normal Black	-	
Touch Technology	Projected Capacitive Multi-Touch Panel	-	
Touch Method	Finger or exclusive pen	-	
Numbers of Touch	10	Points	
Touch Driver	ETP-MB-EXC84H5680STAG : USB	-	
Touch Sensor Glass Type	Strengthening Glass	-	
Touch Controller IC	EETI, EXC80H84	-	
Touch Driver Interface	USB 2.0	-	
Support OS	Windows (Embedded/CE/XP/2000/Vista/7/8/10) / Linux / Android / MAC / QNX	-	

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	Notes
Power Supply Voltage	V _{DD}	-0.3	6.0	V	1
Logic Input Voltage	V _{IN}	-0.3	3.6	V	
Converter Voltage	V _I	-0.3	18	V	1, 2
Enable Voltage	EN	-0.3	5.5	V	
Backlight Adjust	Dimming	-0.3	5.5	V	
Operating Temperature	T _{op}	-20	70	°C	2
Operating Humidity	H _{op}	20	90	%RH	
Storage Temperature	T _{st}	-30	80	°C	
Storage Temperature	H _{st}	20	90	%RH	
Touch DC Supply Voltage	USB_V _{DD}	-0.3	6.0	V	

Note:

1. Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.
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.

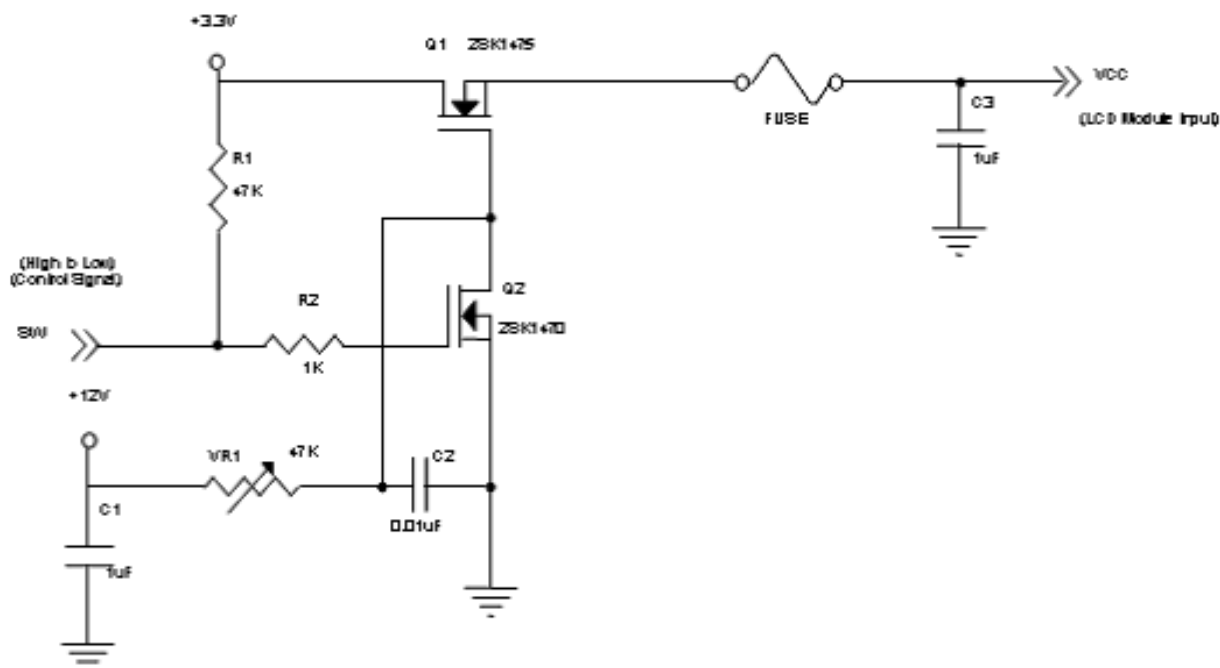
3. ELECTRICAL CHARACTERISTICS

3.1. LCD MODULE

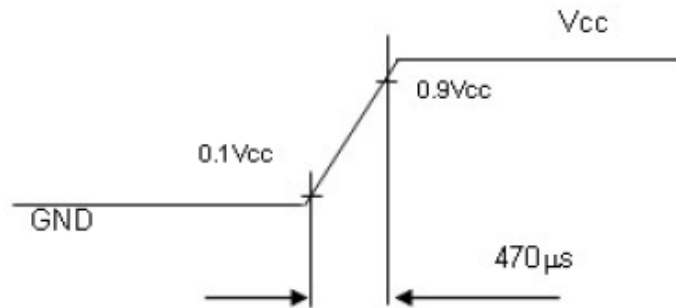
Parameter		Symbol	Values			Unit	Notes
			Min.	Typ.	Max.		
Power Supply Voltage		V _{CC}	4.5	5.0	5.5	V	
Ripple Voltage		V _{RP}	-	-	300	mV _{p-p}	
Inrush Current		I _{NRUSH}	-	-	3.0	A	2
Power Supply Current	White	I _{CC}	-	0.8	0.96	A	3a
	Black		-	0.4	0.48	A	3b
	Vertical Stripe		-	0.6	0.73	A	3c
LVDS Differential input voltage		V _{id}	100	-	600	mV	
LVDS common input voltage		V _{ic}	1.0	1.2	1.4	V	
Differential Input Voltage for LVDS Receiver Threshold	“H” Level	V _{IH}	-	-	100	mV	
	“L” Level	V _{IL}	-100	-	-	mV	
Terminating Resister		R _T	-	100	-	Ohm	

Note1. The module should be always operated within above ranges.

Note2. Measurement conditions:

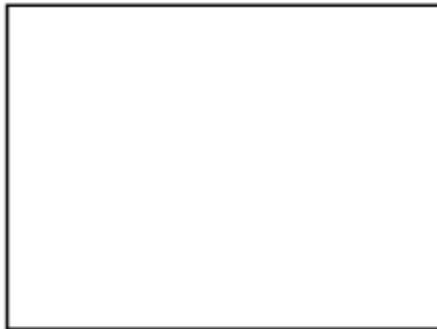


Vcc rising time is 470 μ s



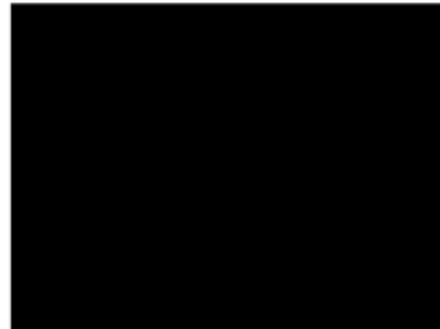
Note3. The specified power supply current is under the conditions at Vcc=5V, Ta=25 $\pm$ 2 $^{\circ}$ C, DC current and fv=60Hz, whereas a power dissipation check pattern below is displayed.

a. White Pattern



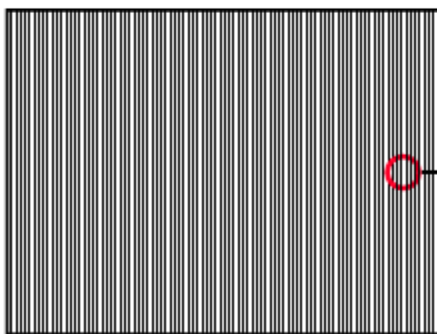
Active Area

b. Black Pattern

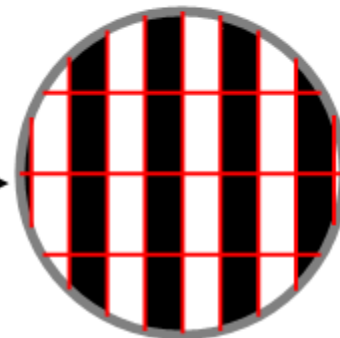


Active Area

c. Vertical Stripe Pattern



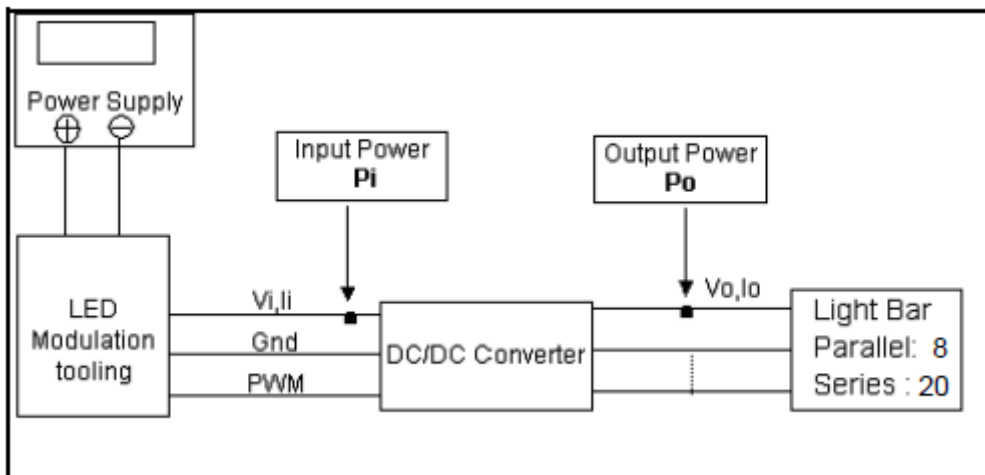
Active Area



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 Voltage		V_{iRP}	-	-	500	mV	
Convertor Input Current		I_i	2.6	3.3	4.0	A _{DC}	@ $V_i=12V$ Duty 100%
Converter Inrush Current		I_{iRUSH}	-	-	10.0	A	@ V_i rising time=10ms $V_i=12V$
Input Power Consumption		P_i	-	40	48	W	1
EN Control Level	Backlight ON	ENLED (BLON)	2.0	3.3	5.5	V	
	Backlight Off		0	-	0.3	V	
PWM Control Level	PWN High level	Dimming (E_PWM)	2.0	-	5.0	V	
	PWM Low Level		0	-	0.15	V	
PWM Noise Range		V_{Noise}	-	-	0.1	V	
PWM Control Frequency		f_{PWM}	190	200	20k	Hz	3
PWM Dimming Control Duty Ratio		-	5	-	100	%	3, @190Hz< f_{PWM} <1kHz
			20	-	100	%	2, @1kHz≤ f_{PWM} <20kHz
LED Life Time		L_{LED}	50000	-	-	Hrs	2

Note1. LED current is measured by utilizing a high frequency current meter as shown below:



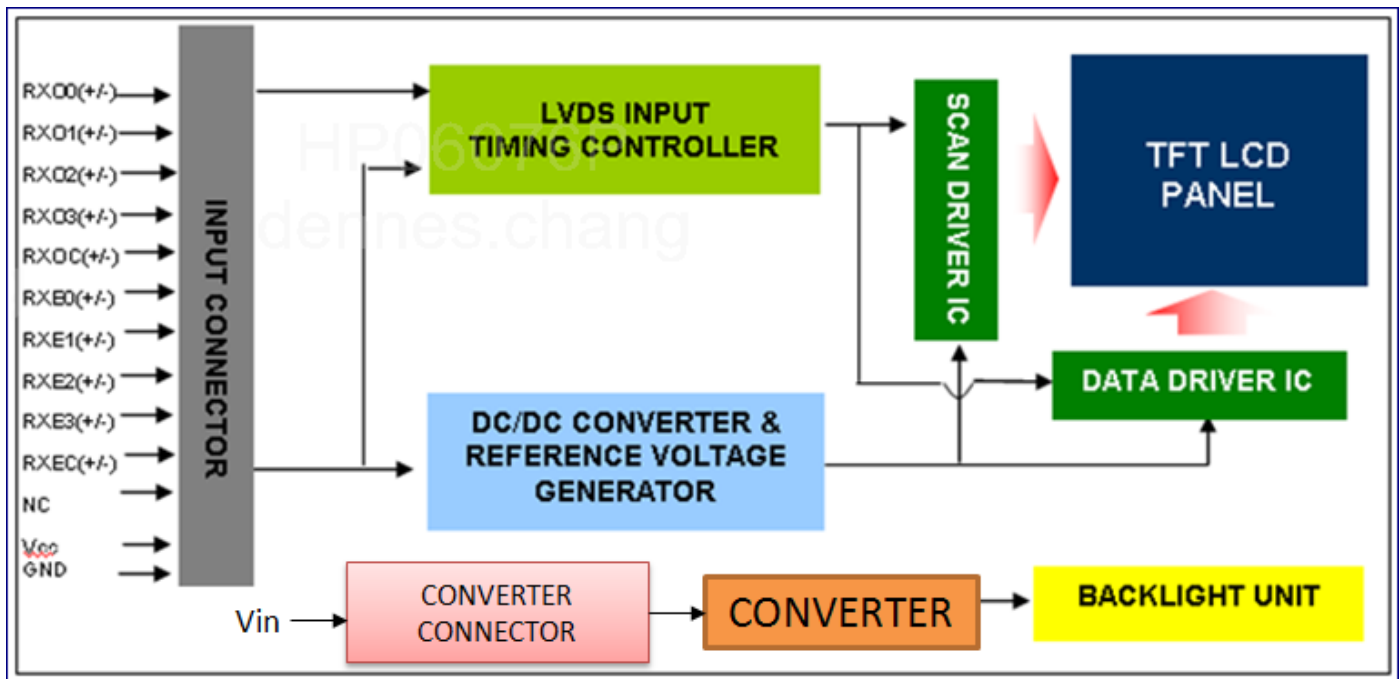
Note2. The lifetime of LED is estimated data and defined as the time when it continuous to operate under the condition at $T_a = 25 \pm 2^\circ C$ and Duty 100% until the brightness becomes $\leq 50\%$ of its original value. Operated LED ar high temperature condition will reduce life time and lead to color shift.

Note3. At 190 ~1k Hz PWM control frequency, duty ratio range is restricted from 5% to 100%.

1K ~20k Hz 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 20 KHZ, The “non-linear” phenomenon on the Backlight Unit may be found. So it's a **suggestion** that PWM control frequency should be **less than 1 KHz**.

3.3. LCD BLOCK DIAGRAM



3.4. LCD INPUT TERMINAL PIN ASSIGNMENT

Pin	Symbol	Description
1	RX00-	Negative LVDS differential data input Channel O0 (odd)
2	RX00+	Positive LVDS differential data input Channel O0 (odd)
3	RX01-	Negative LVDS differential data input Channel O1 (odd)
4	RX01+	Positive LVDS differential data input Channel O1 (odd)
5	RX02-	Negative LVDS differential data input Channel O2 (odd)
6	RX02+	Positive LVDS differential data input Channel O2 (odd)
7	GND	Ground
8	RXOC-	Negative LVDS differential clock input (odd)
9	RXOC+	Positive LVDS differential clock input (odd)
10	RX03-	Negative LVDS differential data input Channel O3 (odd)
11	RX03+	Positive LVDS differential data input Channel O3 (odd)
12	RXE0-	Negative LVDS differential data input Channel E0 (even)
13	RXE0+	Positive LVDS differential data input Channel E0 (even)
14	GND	Ground
15	RXE1-	Negative LVDS differential data input Channel E1 (even)
16	RXE1+	Positive LVDS differential data input Channel E1 (even)
17	GND	Ground
18	RXE2-	Negative LVDS differential data input Channel E2 (even)
19	RXE2+	Positive LVDS differential data input Channel E2 (even)
20	RXEC-	Negative LVDS differential clock input (even)
21	RXEC+	Positive LVDS differential clock input (even)
22	RXE3-	Negative LVDS differential data input Channel E3 (even)
23	RXE3+	Positive LVDS differential data input Channel E3 (even)
24	GND	Ground
25	NC	For LCD internal use only. Do not connect
26	NC	For LCD internal use only. Do not connect
27	NC	For LCD internal use only. Do not connect
28	V _{CC}	+5.0V power supply
29	V _{CC}	+5.0V power supply
30	V _{CC}	+5.0V power supply

Note (1) Connector Part No.: FCN: WF13-428-3033 or P-TWO: 187098-30091 or equivalent..

Note (2) User's connector Part No.:

Mating Wire Cable Connector Part No.: FI-X30H (JAE) or FI-X30HL (JAE)

Mating FFC Cable Connector Part No.: 217007-013001 (P-TWO) or JF05X030-1 (JAE).

Note (3) "Low" stands for 0V. "High" stands for 3.3V. "NC" stands for "No Connection".

Note (4) Pin25, Pin26, Pin27 input signals should be set to no connection, this module would operate normally.

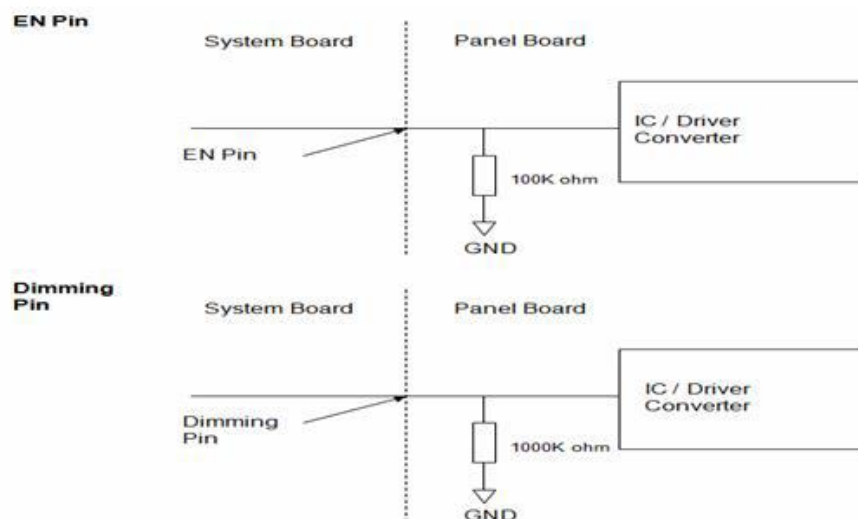
3.5. LCD BACKLIGHTUNIT

3.5.1. CONVERTER CONNECTOR PIN

Pin	Symbol	Description	Remark
1	Vi	Converter input voltage	12V
2	Vi	Converter input voltage	12V
3	Vi	Converter input voltage	12V
4	Vi	Converter input voltage	12V
5	V _{GND}	Converter ground	Ground
6	V _{GND}	Converter ground	Ground
7	V _{GND}	Converter ground	Ground
8	V _{GND}	Converter ground	Ground
9	EN	Enable pin	3.3V
10	Dimming	Backlight Adjust	PWM Dimming (Hi: 3.3V _{DC} , Lo: 0V _{DC})

Note (1) Connector Part No.: CI0110M1HR0-NH (Cvilux) or equivalent.

Note (2) User's connector Part No.: Cvilux CI01 or equivalent



3.6. LCD COLOR DATA INPUT ASSIGNMENT

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 the assignment of 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
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(255)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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	1	0	0
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	...	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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

Note (1)0: Low Level Voltage, 1: High Level Voltage

3.7. LCD TIMING CHARACTERISTICS

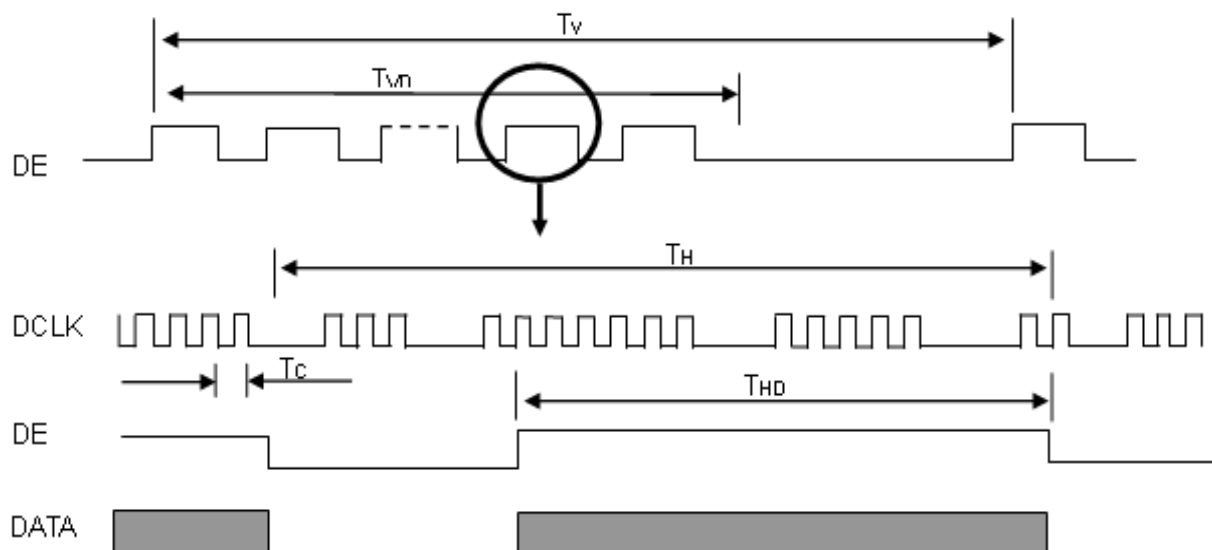
The input signal timing specifications are shown as the following table and timing diagram.

Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Notes
LVDS Clock	Frequency	F _c	58.54	74.25	97.98	MHz	
	Period	T _c	-	13.47	-	ns	
	Input cycle to cycle jitter	T _{rdl}	-	-	200	ns	(a)
	Input clock to data skew	TLVCCS	-0.02*T _c	-	0.02*T _c	ps	(b)
	Spread spectrum modulation range	F _{clkin_mod}	0.987*F _c	-	1.013*F _c	MHz	(c)
	Spread spectrum modulation frequency	F _{SSM}	-	-	200	KHz	
Frame Rate	Frequency	Fr	50	60	75	Hz	T _v = T _{vd} + T _{vb}
Vertical Section	Period	T _v	1110	1125	1220	Th	
	Active Display	T _{vd}	1080	1080	1080	Th	
	Blank	T _{vb}	T _v -T _{vd}	45	T _v -T _{vd}	Th	
Horizontal Display Term	Period	T _h	1050	1100	1150	T _c	T _h = T _{hd} + T _{hb}
	Active Display	T _{hd}	960	960	960	T _c	
	Blank	T _{hb}	T _h -T _{hd}	140	T _h -T _{hd}	T _c	

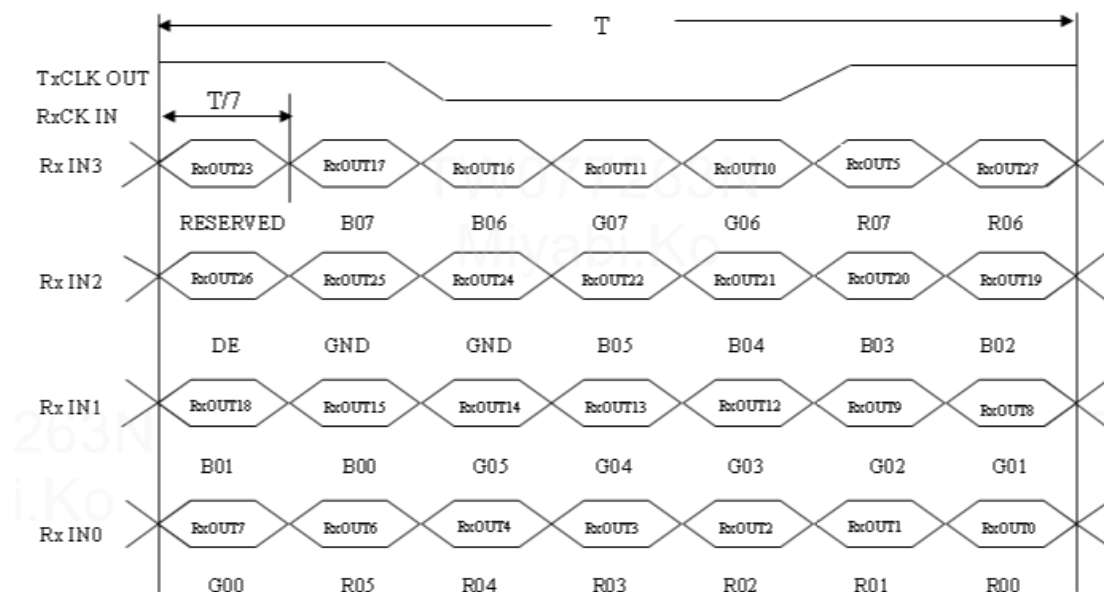
Note (1) Because this module is operated by DE mode only, Hsync and Vsync input signals should be set to low logic level or ground. Otherwise, this module would operate abnormally.

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

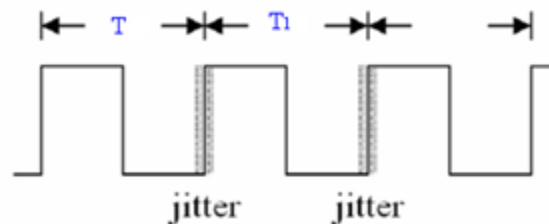
INPUT SIGNAL TIMING DIAGRAM



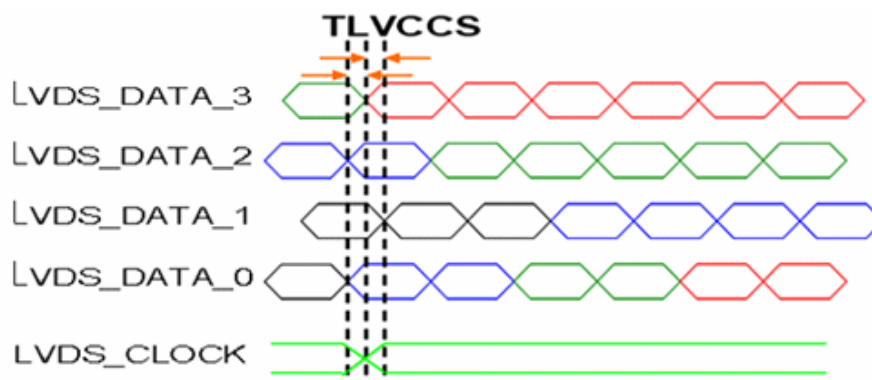
TIMING DIAGRAM of LVDS



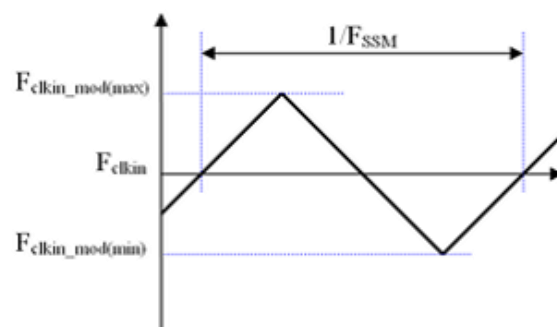
Note (a) the input clock cycle-to-cycle jitter is defined as below figures. $Trcl = |T1 - T|$



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

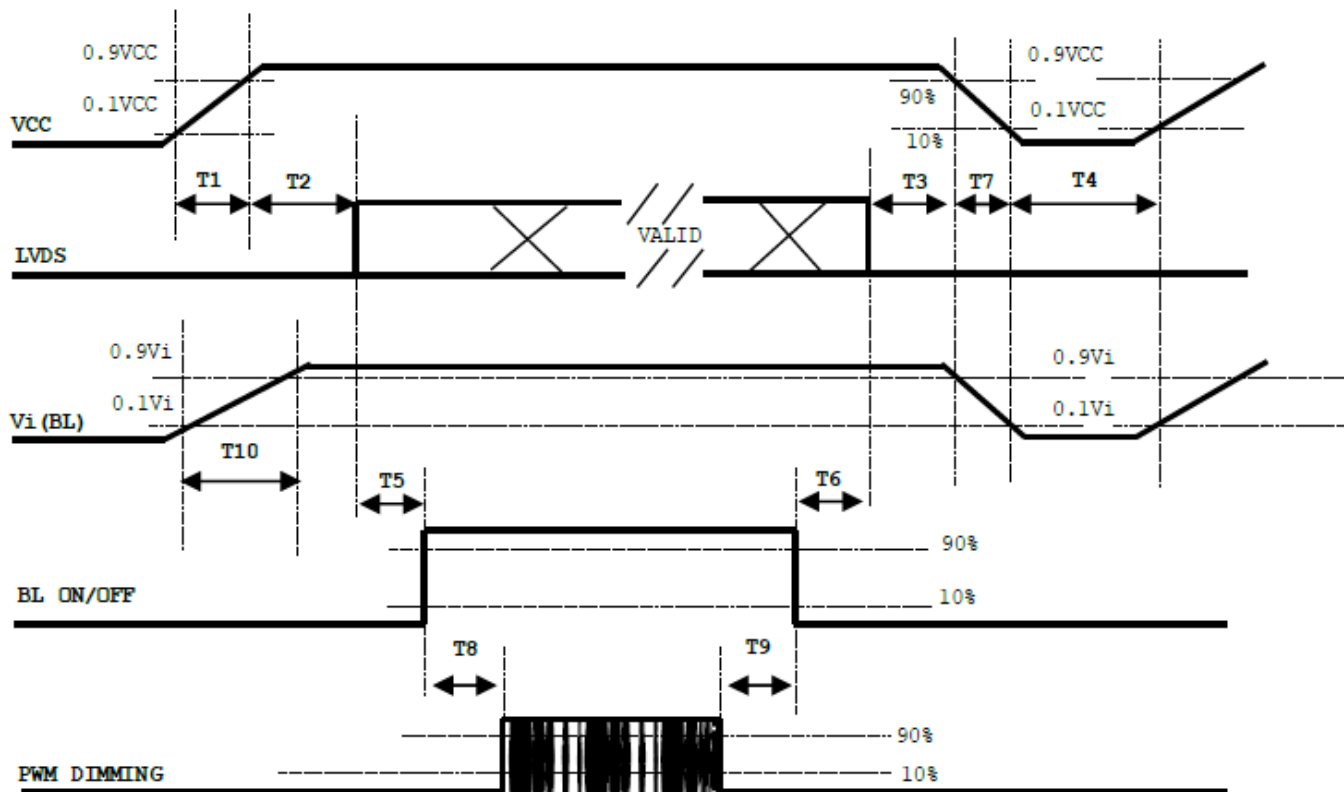


Note (C) the SSCG (Spread spectrum clock generator) is defined as below figures.



3.8. 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.



Parameter	Value			Units
	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".

3.9. SCANNING DIRECTION

The following figures show the image see from the front view. The arrow indicates the direction of scan.



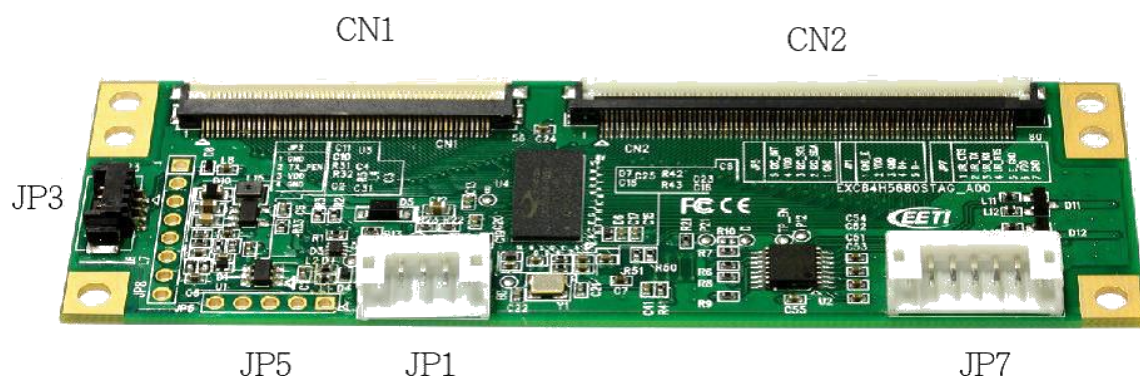
PCBA on the top side

4. TOUCH CONTROL BOARD

Parameter	Values			Unit	Notes
	Min.	Typ.	Max.		
Input Voltage	3.5	5	5.5	V	
Touch Controller	EETI, EXC80H84			-	
Interface	USB 2.0 compliant full speed with LPM L1 supported. Configurable Serial Interface. UART : baud rate 115200, none parity, 8 data bits, 1 stop bit, support hardware flow control I2C: up to 400KHz, voltage Level 3.3V.			-	
Resolution	16384 x 16384 resolution			-	
Channels of panel	Max. TX: 48 Rx:80 channels			mm	Including shielding pin
Linearity	Line drawing accuracy: 1pt $\pm$ 1 mm offset /10 mm Touch (point) accuracy: 1pt $\pm$ 1mm			mm	
Power consumption (mA)	Active Mode: <90 mA Idle Mode: depends on firmware			mA	
Report rate (points/sec)	≥ 100			Hz	
Response time	Average <25			ms	

ETP-MB-EXC84H5680STAG

4.1. TOUCH CONTROL BOARD PIN ASSIGNMENT



FPC Pin Description

CN1					
PN		PN		PN	
1	NC	21	TX34	41	TX14
2	NC	22	TX33	42	TX13
3	NC	23	TX32	43	TX12
4	NC	24	TX31	44	TX11
5	NC	25	TX30	45	TX10
6	NC	26	TX29	46	TX9
7	NC	27	TX28	47	TX8
8	NC	28	TX27	48	TX7
9	TX_S1	29	TX26	49	TX6
10	TX45	30	TX25	50	TX5
11	TX44	31	TX24	51	TX4
12	TX43	32	TX23	52	TX3
13	TX42	33	TX22	53	TX2
14	TX41	34	TX21	54	TX1
15	TX40	35	TX20	55	TX0
16	TX39	36	TX19	56	TX_S0
17	TX38	37	TX18		
18	TX37	38	TX17		
19	TX36	39	TX16		
20	TX35	40	TX15		

CN2							
PN		PN		PN		PN	
1	RX_S1	21	RX58	41	RX38	61	RX18
2	RX77	22	RX57	42	RX37	62	RX17
3	RX76	23	RX56	43	RX36	63	RX16
4	RX75	24	RX55	44	RX35	64	RX15
5	RX74	25	RX54	45	RX34	65	RX14
6	RX73	26	RX53	46	RX33	66	RX13
7	RX72	27	RX52	47	RX32	67	RX12
8	RX71	28	RX51	48	RX31	68	RX11
9	RX70	29	RX50	49	RX30	69	RX10
10	RX69	30	RX49	50	RX29	70	RX9
11	RX68	31	RX48	51	RX28	71	RX8
12	RX67	32	RX47	52	RX27	72	RX7
13	RX66	33	RX46	53	RX26	73	RX6
14	RX65	34	RX45	54	RX25	74	RX5
15	RX64	35	RX44	55	RX24	75	RX4
16	RX63	36	RX43	56	RX23	76	RX3
17	RX62	37	RX42	57	RX22	77	RX2
18	RX61	38	RX41	58	RX21	78	RX1
19	RX60	39	RX40	59	RX20	79	RX0
20	RX59	40	RX39	60	RX19	80	RX_S0

Connector Pin Configuration

JP1 USB connector

JP1	
1	GND_E
2	VDD
3	GND
4	D +
5	D -

JP5 I2C connector

JP5	
1	GND
2	I2C_SDA
3	I2C_SCL
4	VDD
5	I2C_INT

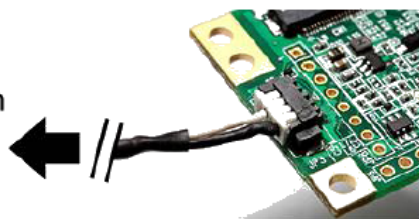
JP7 RS232 connector

JP7	
1	UR_CTS
2	UR_TX
3	UR_RX
4	UR_RTS
5	GND_E
6	VDD
7	GND

JP3 Tethered active stylus connector

JP3	
1	GND_D
2	TX_PEN
3	VDD
4	GND_D

eGalaxPen
Type E
Type T



*JP3 connector is reserved for EETI tethered active stylus
Type E : Entry-type active stylus
Type T : Tethered USB active stylus

JP1 : USB
Brand: JST
Part number: SM05B-SRSS-TB or equivalence

5. OPTICAL CHARACTERISTICS

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Color Coordinates	Red	R _x	θX=0°, θY=0° Grayscale Maximum	0.602	0.652	0.702	-	1, 5
		R _y		0.288	0.338	0.388		
	Green	G _x		0.280	0.330	0.380		
		G _y		0.559	0.609	0.659		
	Blue	B _x		0.101	0.151	0.201		
		B _y		0.004	0.054	0.104		
	White	W _x		0.263	0.313	0.363		
		W _y		0.279	0.329	0.379		
	Center Luminance of White			L _C	1120	1400		
Contrast Ratio		CR	800	1000	-		2, 5	
Response Time		T _R	θX=0°, θY=0°	-	13	18	ms	3
		T _F		-	12	17	ms	
White Variation		δW	θX=0°, θY=0°	75	80		%	5, 6
Viewing Angle	Horizontal	θX+	CR≥10	80	89	-	Deg.	1, 5
		θX-		80	89	-		
	Vertical	θY+		80	89	-		
		θY-		80	89	-		

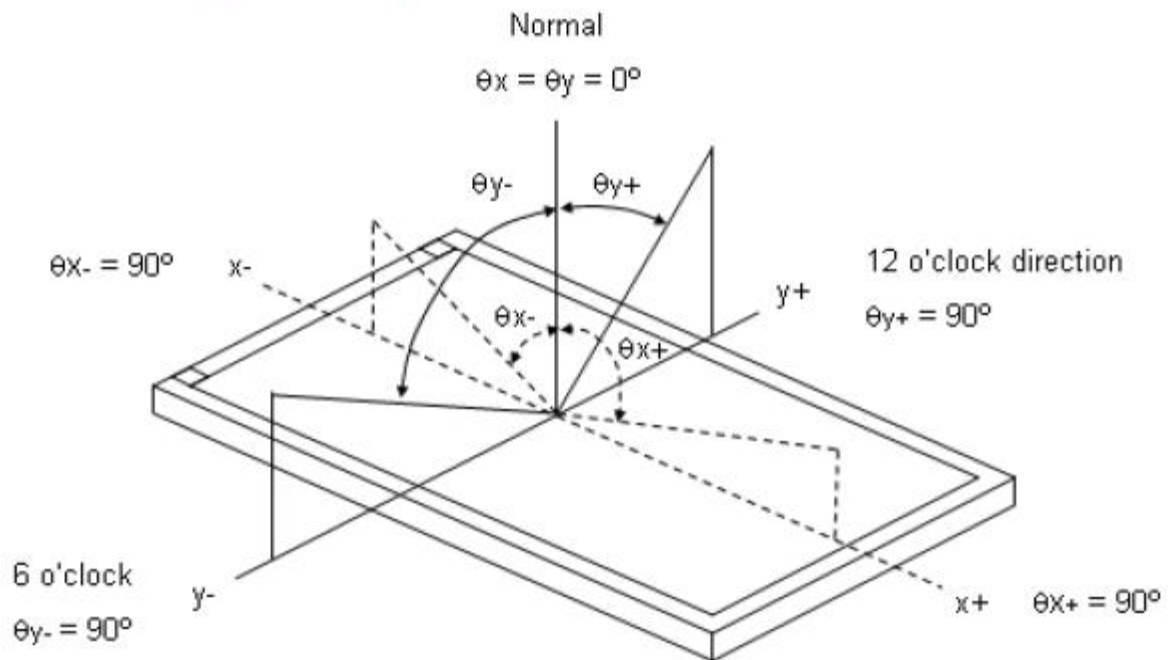
Definition :

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):

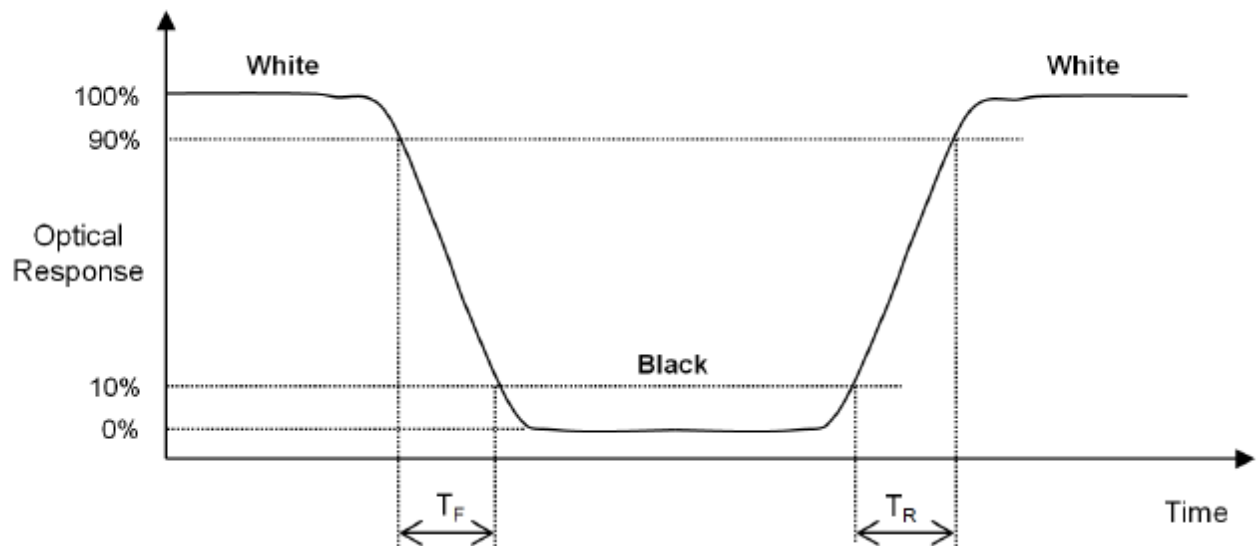


Note (2) Definition of Contrast Ratio (CR):

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

$$\text{Contrast Ratio (CR)} = \text{White} / \text{Black}$$

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

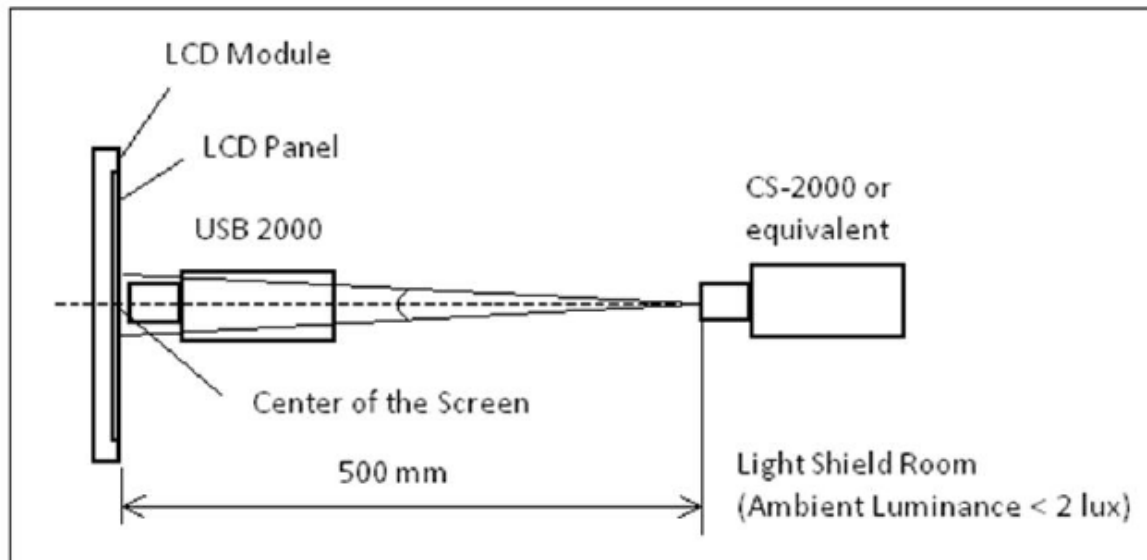


Note (4) Definition of Luminance of White (L_c):

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.

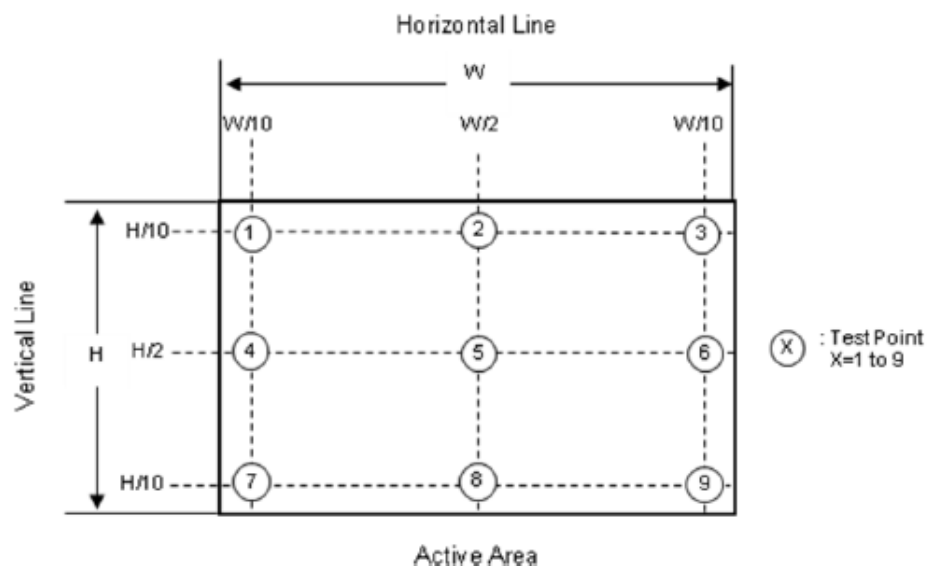


Note (6) Definition of White Variation (δW):

Measure the luminance of White at 9 points.

Luminance of White : $L(X)$, where X is from 1 to 9.

$$\delta W = \frac{\text{Minimum [} L(1) \text{ to } L(9) \text{]}}{\text{Maximum [} L(1) \text{ to } L(9) \text{]}} \times 100\%$$



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/Humidity operation test	60°C, 90%RH, 240hrs
4	High temperature operation test	70°C, 240hrs
5	Low temperature operation test	-20°C, 240hrs
6	Thermal Cycle storage test	-20°C(30min)~60°C(30min), 10cycles

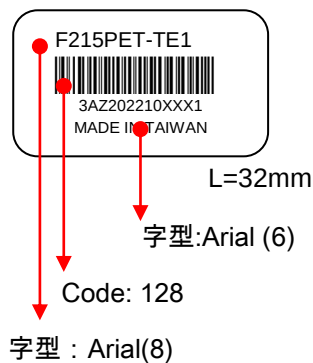
7. LABEL

Model No. F215PET-TE1

條碼

SN 3A Z 20 2 21 0 XXX1

W=14mm



Code1, 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

Colde 10, 11, 12, 13 Serial number

8. MECHANICAL CHARACTERISTICS

Item		Dimension	Unit	Note
Outline Dimension	Horizontal	517.00	mm	PCAP : B215PBU-E05
	Vertical	315.00	mm	
	Depth	4.00	mm	
	Horizontal	495.60	mm	LCD : G215HCJ-LH1
	Vertical	292.20	mm	
	Depth	24.05	mm	
	Horizontal	100.00	mm	Touch Driver : ETP-MB-EXC84H5680STAG
	Vertical	33.00	mm	
	Depth	7.50	mm	
Weight		3100	g	F215PET-TE1
Item		Specification		Remarks
PCAP Viewing Area		477.70mm x 269.40 mm		
PCAP Sensor Area		493.79 mm x 293.07 mm		
PCAP FPC Length		91.75 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

