



FOR MESSRS : _____

DATE : Dec. 03rd, 2025

TECHNICAL DATA

LAM215N128A

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ACCEPTED BY: _____

PROPOSED BY: Oblack Tsai

JDI Taiwan Inc. Kaohsiung Branch	SHEET NO.	JDC900000009-2	PAGE	1-1/1
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2. RECORD OF REVISION

DATE	SHEET No.	SUMMARY
Dec.03,'25	JDC900000009-2 Page 10-1/3~3/3	Add 10. APPEARANCE STANDARD
	JDC900000009-2 Page 11-1/2~2/2	Add 11. PRECAUTIONS

3. GENERAL DATA

3.1 DISPLAY FEATURES

This module is a 21.5" Full HD format amorphous silicon TFT. The pixel format is vertical stripe and sub pixels are arranged as R (red), G (green), B (blue) sequentially. This display is RoHS compliant; LED backlight are applied on this display.

Part Name	LPM215N128A
Module Dimensions	495.6(W) mm x 292.2(H) mm x 24.05 (D) mm
LCD Active Area	476.64(W) mm x 268.11(H) mm
Pixel Pitch	0.248(W) mm x 0.248 (H) mm
Resolution	1920 x 3(RGB)(W) x 1080(H) Dots
Color Pixel Arrangement	R, G, B Vertical Stripe
LCD Type	Transmissive Color TFT; Normally Black
Display Type	Active Matrix
Number of Colors	16.7M Colors (8-bit RGB)
Backlight	Light Emitting Diode (LED)
Weight	1571 g
Interface	LVDS; 30 pins
Power Supply Voltage	5V for LCD; 12V for Backlight
Power Consumption	4W for LCD; 40W for Backlight
Viewing Direction	Super Wide Version (In-Plane Switching)

4. ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit	Remarks
Supply Voltage	V _{DD}	-0.3	6.0	V	-
Input Voltage of Logic	V _I	-0.3	3.6	V	Note 1
Operating Temperature	T _{op}	-30	80	°C	Note 2
Storage Temperature	T _{st}	-30	80	°C	Note 2
Backlight Input Voltage	V _{LED}	-0.3	18	V	-

Note 1: The rating is defined for the signal voltages of the interface such as CLK and pixel data pairs.

Note 2: The maximum rating is defined as above based on the glass surface temperature, which might be different from ambient temperature after assembling the panel into the application.

Moreover, some temperature-related phenomenon as below needed to be noticed:

- Background color, contrast and response time would be different in temperatures other than 25 °C.
- Operating under high temperature will shorten LED lifetime.

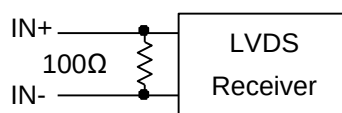
5. ELECTRICAL CHARACTERISTICS

5.1 LCD CHARACTERISTICS

$T_a = 25\text{ }^{\circ}\text{C}$, $V_{SS} = 0\text{V}$

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Remarks
Power Supply Voltage	V_{DD}	-	4.5	5.0	5.5	V	-
Differential Input Voltage for LVDS Receiver Threshold	V_I	"H" level	-	-	+100	mV	Note 1
		"L" level	-100	-	-		
Power Supply Current	I_{DD}	$V_{DD}-V_{SS}=5\text{V}$	-	600	750	mA	
Frame Frequency	f_{Frame}	-	50	60	70	Hz	
DCLK Frequency	f_{CLK}	-	60	74.25	95	MHz	

Note 1: VCM 1.2V is common mode voltage of LVDS transmitter and receiver. The input terminal of LVDS transmitter is terminated with 100Ω .



Note 2: An all white check pattern is used when measuring I_{DD} . f_{Frame} is set to 60 Hz.

5.2 BACKLIGHT CHARACTERISTICS

$T_a = 25\text{ }^{\circ}\text{C}$

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Remarks
LED Input Voltage	V_{LED}	-	10.8	12.0	13.2	V	Note1
LED Forward Current (Dim Control)	I_{LED}	5% duty	-	(0.66)	-	A	Note 2
		100% duty	2.5	3.3	4.1		
LED lifetime	-	$I_{LED} = 390\text{ mA}$	-	50K	-	hrs	Note 3

Note 1: As Fig. 5.1 shown, LED current is constant, 3.3A, controlled by the LED driver when applying 12V.

Note 2: Dimming function can be obtained by applying PWM signal from the display interface CN2. The recommended PWM signal is 200 ~ 1K Hz with 3.3V amplitude.

Note 3: The estimated lifetime is specified as the time to reduce 50% brightness by applying 3.3A at 25 $^{\circ}\text{C}$.

6. OPTICAL CHARACTERISTICS

The optical characteristics are measured based on the conditions as below:

- Supplying the signals and voltages defined in the section of electrical characteristics.
- The backlight unit needs to be turned on for 30 minutes.
- The ambient temperature is 25°C.
- In the dark room less than 100 lx, the equipment has been set for the measurements as shown in Fig 6.1.

$$T_a = 25^{\circ}\text{C}, f_{\text{Frame}} = 60 \text{ Hz}, \text{VDD}=5\text{V}$$

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Remarks
Brightness of White		-	$\phi = 0^{\circ}, \theta = 0^{\circ}$, I _{LED} = 3.3A	1100	1400	-	cd/m ²	Note 1
Brightness Uniformity		-		75	80	-	%	Note 2
Contrast Ratio		CR		800	1000	-	-	Note 3
Response Time		T _r + T _f	$\phi = 0^{\circ}, \theta = 0^{\circ}$	-	25	35	ms	Note 4
NTSC Ratio		-	$\phi = 0^{\circ}, \theta = 0^{\circ}$	-	72	-	%	-
Viewing Angle		θ x	$\phi = 0^{\circ}, \text{CR} \geq 10$	80	89	-	Degree	Note 5
		θ x'	$\phi = 180^{\circ}, \text{CR} \geq 10$	80	89	-		
		θ y	$\phi = 90^{\circ}, \text{CR} \geq 10$	80	89	-		
		θ y'	$\phi = 270^{\circ}, \text{CR} \geq 10$	80	89	-		
Color Chromaticity	Red	X	$\phi = 0^{\circ}, \theta = 0^{\circ}$	0.602	0.652	0.702	-	Note 6
		Y		0.288	0.338	0.388		
	Green	X		0.280	0.330	0.380		
		Y		0.559	0.609	0.659		
	Blue	X		0.101	0.151	0.201		
		Y		0.004	0.054	0.104		
	White	X		0.263	0.313	0.363		
		Y		0.279	0.329	0.379		

Note 1: The brightness is measured from the center point of the panel, P5 in Fig. 6.2, for the typical value.

Note 2: The brightness uniformity is calculated by the equation as below:

$$\text{Brightness uniformity} = \frac{\text{Min. Brightness}}{\text{Max. Brightness}} \times 100\%$$

which is based on the brightness values of the 9 points in active area measured by BM-5 as shown in Fig. 6.2.

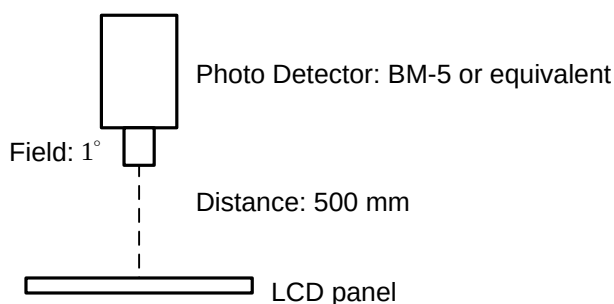


Fig 6.1

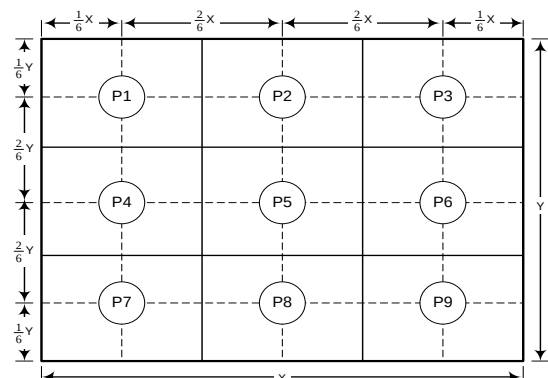


Fig 6.2

Note 3: The Contrast Ratio is measured from the center point of the panel, P5, and defined as the following equation:

$$CR = \frac{\text{Brightness of White}}{\text{Brightness of Black}}$$

Note 4: The definition of response time is shown in Fig. 6.3. The rising time is the period from 10% brightness to 90% brightness when the data is from black to white. Oppositely, Falling time is the period from 90% brightness falling to 10% brightness.

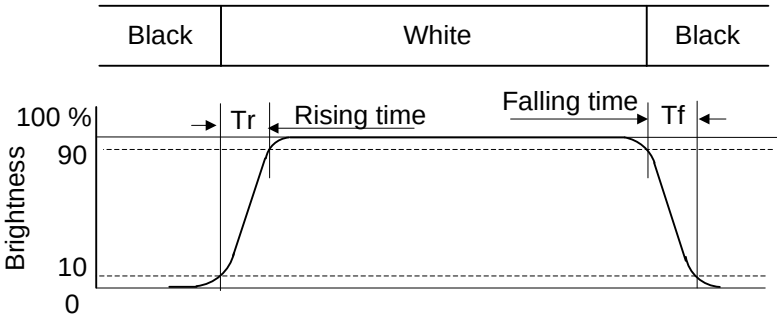


Fig.6.3

Note 5: The definition of viewing angle is shown in Fig. 6.4. Angle ϕ is used to represent viewing directions, for instance, $\phi = 270^\circ$ means 6 o'clock, and $\phi = 0^\circ$ means 3 o'clock. Moreover, angle θ is used to represent viewing angles from axis Z toward plane XY.

The display is super wide viewing angle version, so that the best optical performance can be obtained from every viewing direction.

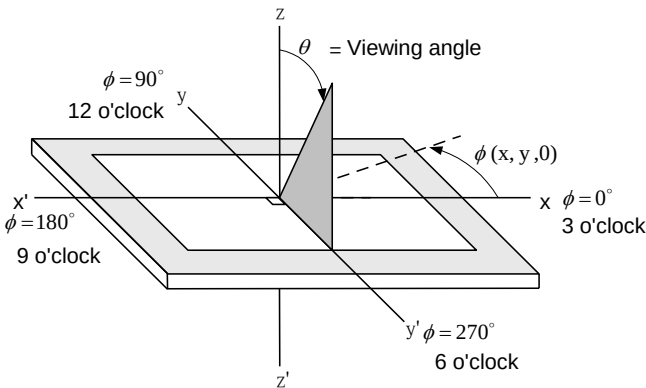
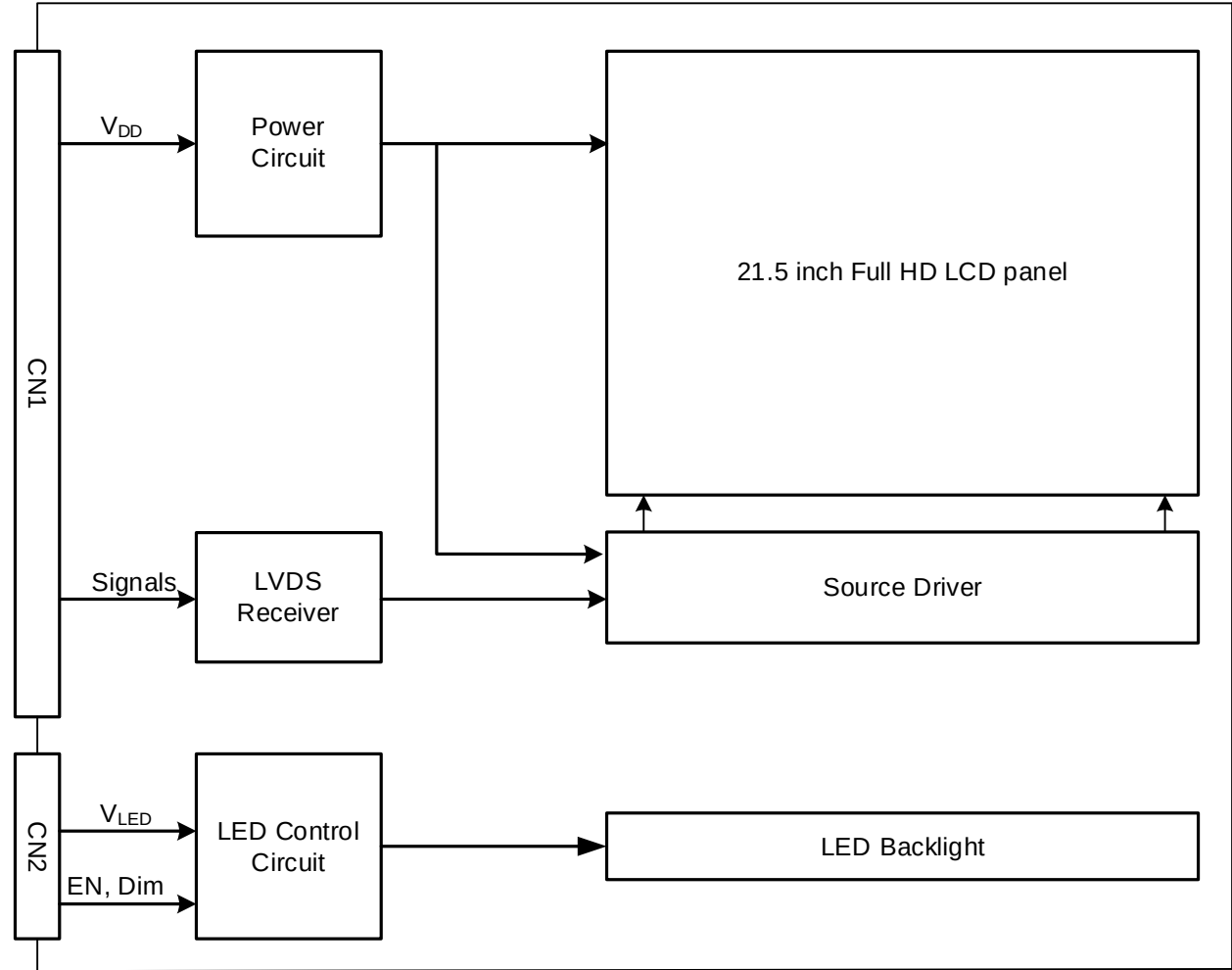


Fig 6.4

Note 6: The color chromaticity is measured from the center point of the panel, P5, as shown in Fig. 6.2.

7. BLOCK DIAGRAM



Note 1: Signals are CLK and pixel data pairs.

8. LCD INTERFACE

8.1 INTERFACE PIN CONNECTIONS

The display interface connector (CN1) is WF13-428-3033 made by FCN or 187098-30091 made by P-TWO and pin assignment is as below:

Pin No.	Symbol	Signal
1	RO0-	-LVDS differential data input, Chan 0- odd
2	RO0+	+LVDS differential data input, Chan 0+ odd
3	RO1-	-LVDS differential data input, Chan 1- odd
4	RO1+	+LVDS differential data input, Chan 1+ odd
5	RO2-	-LVDS differential data input, Chan 2- odd
6	RO2+	+LVDS differential data input, Chan 2+ odd
7	GND	Ground
8	CLKO-	-LVDS clock input (odd)
9	CLKO+	+LVDS clock input (odd)
10	RO3-	-LVDS differential data input, Chan 3- odd
11	RO3+	+LVDS differential data input, Chan 3+ odd
12	RE0-	-LVDS differential data input, Chan 0- even
13	RE0+	+LVDS differential data input, Chan 0+ even
14	GND	Ground
15	RE1-	-LVDS differential data input, Chan 1- even
16	RE1+	+LVDS differential data input, Chan 1+ even
17	GND	Ground
18	RE2-	-LVDS differential data input, Chan 2- even
19	RE2+	+LVDS differential data input, Chan 2+ even
20	CLKE-	-LVDS clock input (even)
21	CLKE+	+LVDS clock input (even)
22	RE3-	-LVDS differential data input, Chan 3- even
23	RE3+	+LVDS differential data input, Chan 3+ even
24	GND	Ground
25	NC	Not connected
26	NC	Not connected
27	NC	Not connected
28	V _{DD}	Power Supply for Logic : 5V
29	V _{DD}	Power Supply for Logic : 5V
30	V _{DD}	Power Supply for Logic : 5V

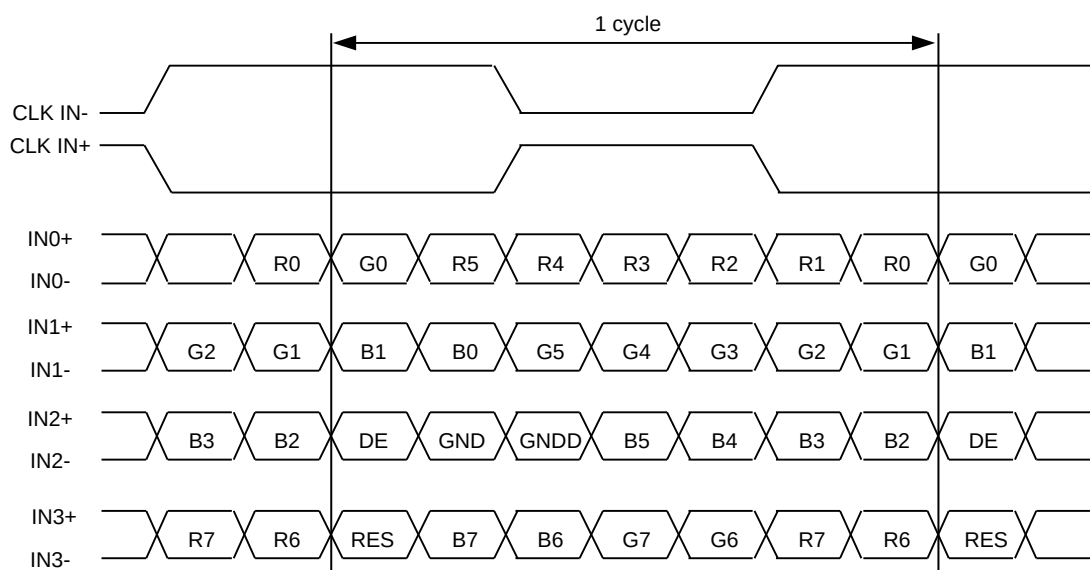
Note 1: IN n- and IN n+ (n=0, 1, 2), CLK IN- and CLK IN+ should be wired by twist-pairs or side-by-side FPC patterns, respectively.

Note 2: Normal brightness: 100% PWM duty; Brightness control: 5% to 100%(200Hz to 1KHz) PWM duty.

The backlight connector (CN2) is CI0110M1HR0-NH made by Cvilux, and pin assignment is as below:

Pin No.	Signal	Signal
1	V _{LED}	Power Supply for LED : 12V
2	V _{LED}	Power Supply for LED : 12V
3	V _{LED}	Power Supply for LED : 12V
4	V _{LED}	Power Supply for LED : 12V
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	EN	Enable pin : 3.3V
10	Dimming	PWM Dimming

8.2 LVDS DATA FORMAT



8.3 TIMING CHART

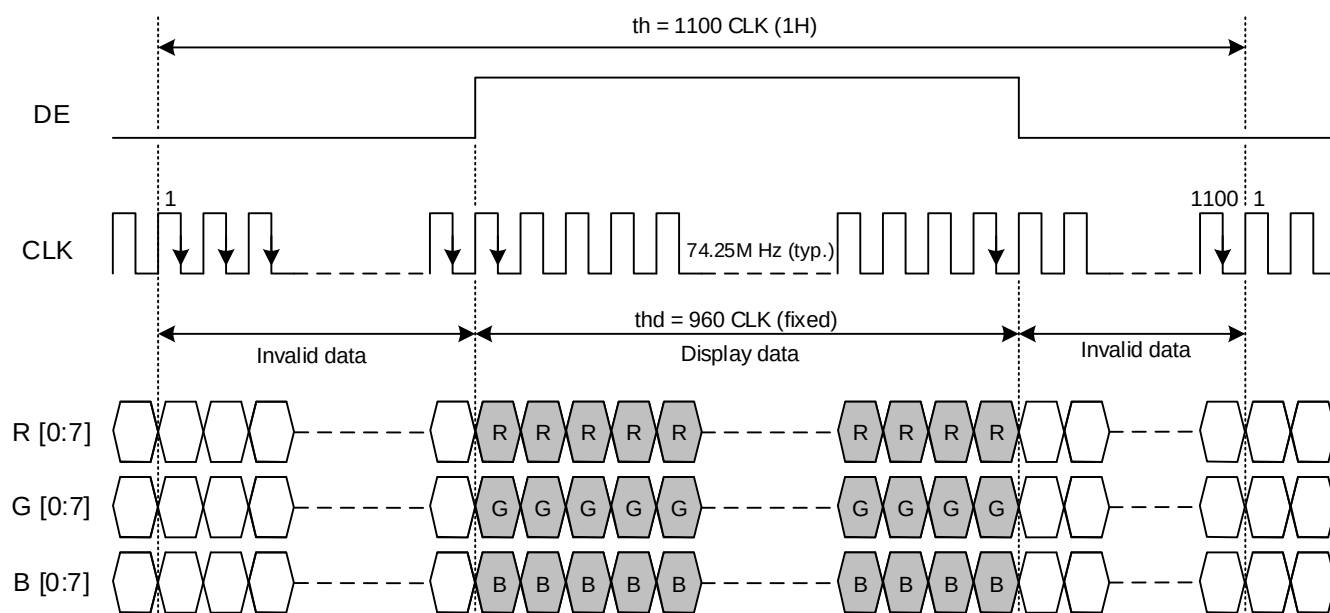


Fig. 8.1 Horizontal Timing

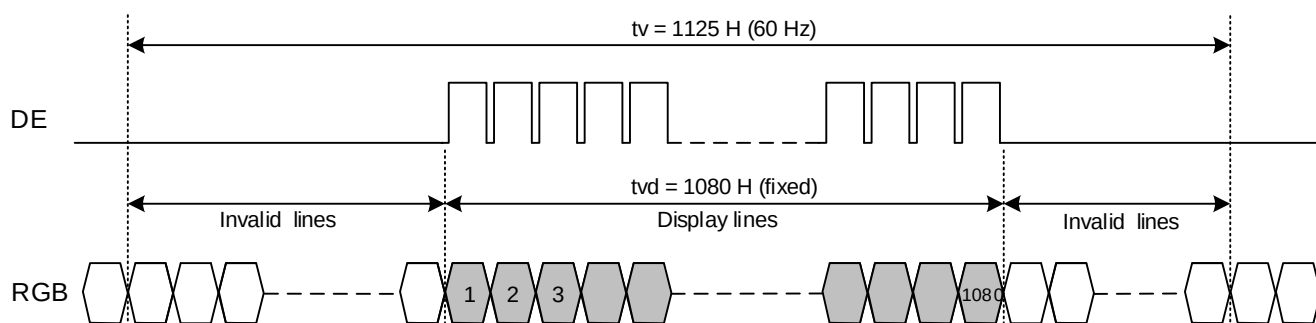


Fig. 8.2 Vertical Timing

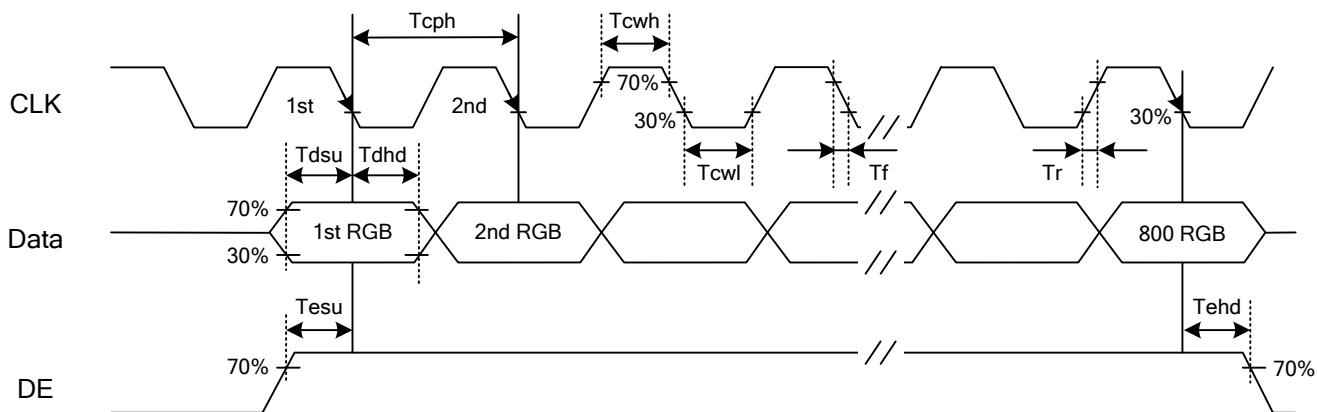


Fig. 8.3 Setup & Hold Time

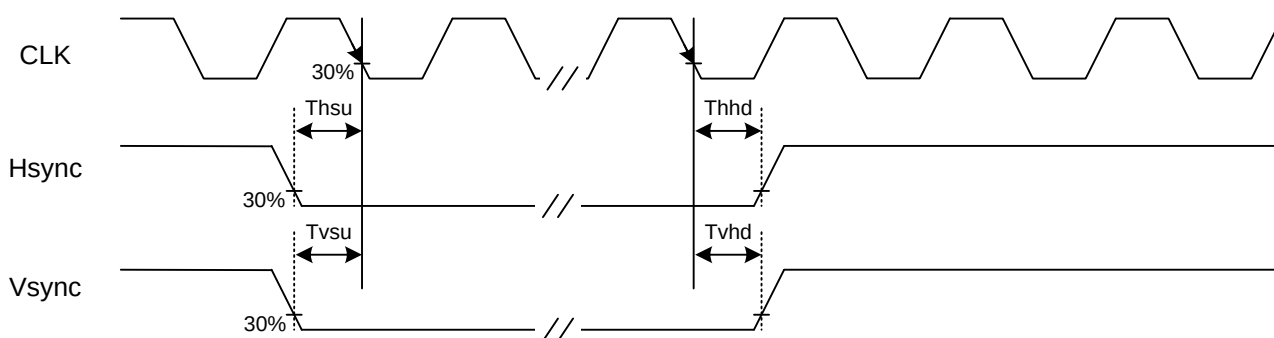


Fig. 8.4 Setup & Hold Time

8.4 TIMING TABLE

The column of timing sets including minimum, typical, and maximum as below are based on the best optical performance, frame frequency (f_{Frame}) = 60Hz to define. If 60 Hz is not the aim to set, less than 65 Hz for f_{Frame} is recommended to apply for better performance by other parameter combination as the definitions in section 5.1.

Horizontal and Vertical Timing

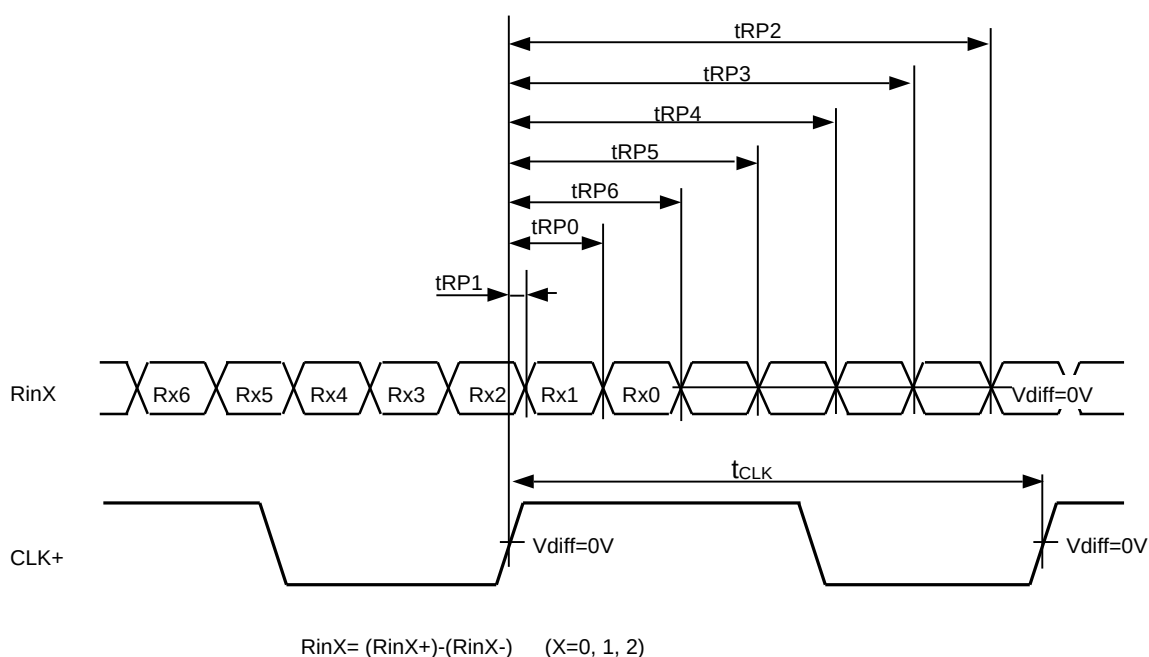
Item		Symbol	Min.	Typ.	Max.	Unit
Horizontal	CLK Frequency	fclk	60	74.25	95	MHz
	Display Data	thd	960			CLK
	Cycle Time	th	1050	1100	1150	
Vertical	Display Line	tvd	1080			H
	Cycle Time	tv	1110	1125	1200	

Note 1: The rise and fall times (t_r , t_f) of CLK is equal or less than 3ns.

Other signals are equal or less than 10ns.

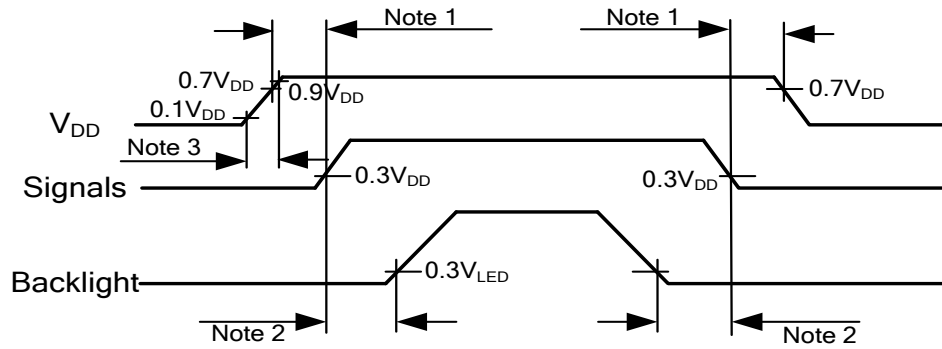
Note 2: For timing of input signals, they are set using 30% and 70% of VDD as the base reference

8.5 LVDS RECEIVER TIMING



	Item	Symbol	Min.	Typ.	Max.	Unit
CLK	Cycle frequency	$1/t_{CLK}$	60	74.25	95	MHz
R_{inX} (X=0,1,2)	0 data position	t_{RP0}	$1/7 * t_{CLK} - 0.49$	$1/7 * t_{CLK}$	$1/7 * t_{CLK} + 0.49$	ns
	1st data position	t_{RP1}	-0.49	0	+0.49	
	2nd data position	t_{RP2}	$6/7 * t_{CLK} - 0.49$	$6/7 * t_{CLK}$	$6/7 * t_{CLK} + 0.49$	
	3rd data position	t_{RP3}	$5/7 * t_{CLK} - 0.49$	$5/7 * t_{CLK}$	$5/7 * t_{CLK} + 0.49$	
	4th data position	t_{RP4}	$4/7 * t_{CLK} - 0.49$	$4/7 * t_{CLK}$	$4/7 * t_{CLK} + 0.49$	
	5th data position	t_{RP5}	$3/7 * t_{CLK} - 0.49$	$3/7 * t_{CLK}$	$3/7 * t_{CLK} + 0.49$	
	6th data position	t_{RP6}	$2/7 * t_{CLK} - 0.49$	$2/7 * t_{CLK}$	$2/7 * t_{CLK} + 0.49$	

8.6 POWER SEQUENCE



Note 1: In order to avoid any damages, V_{DD} has to be applied before all other signals. The opposite is true for power off where V_{DD} has to be remained on until all other signals have been switch off. The recommended time period is 1 second.

Note 2: In order to avoid showing uncompleted patterns in transient state. It is recommended that switching the backlight on is delayed for 1 second after the signals have been applied. The opposite is true for power off where the backlight has to be switched off 1 second before the signals are removed.

Note 3: In order to avoid high Inrush current, V_{DD} rising time need to set between 0.5ms and 10ms.

8.7 DATA INPUT for DISPLAY COLOR

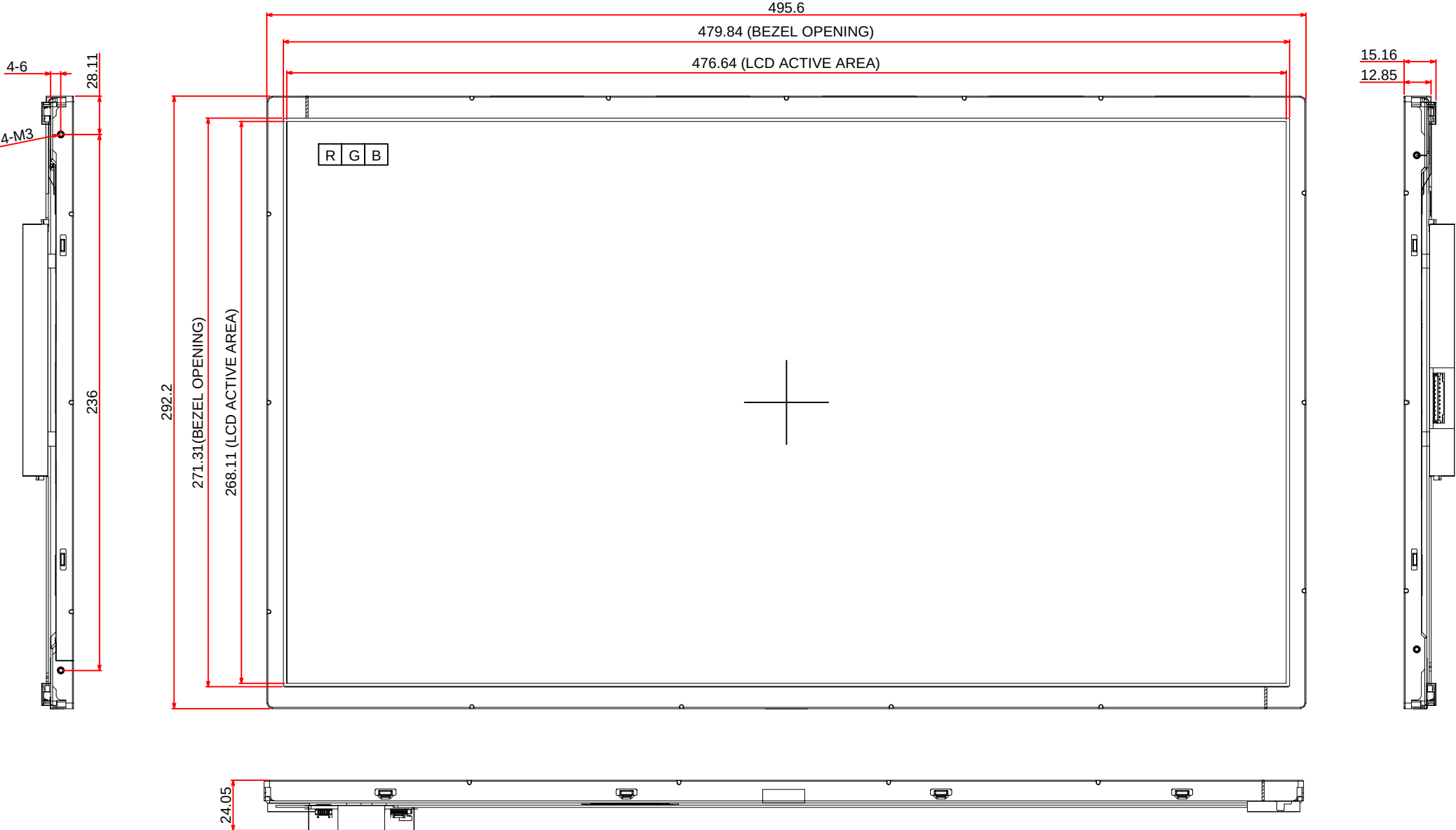
Input color		Red Data								Green Data								Blue Data							
		R7	R6	R5	R4	R3	R2	R1	R0	G7	G6	G5	G4	G3	G2	G1	G0	B7	B6	B5	B4	B3	B2	B1	B0
		MSB				LSB				MSB				LSB				MSB				LSB			
Basic Color	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(255)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
	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
	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
Red	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)	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
Green	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
	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	1	0	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
Blue	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
	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	
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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: Definition of gray scale : Color(n) Number in parenthesis indicates gray scale level. Larger number corresponds to brighter level.

Note 2: Data Signal : 1 : High, 0 : Low

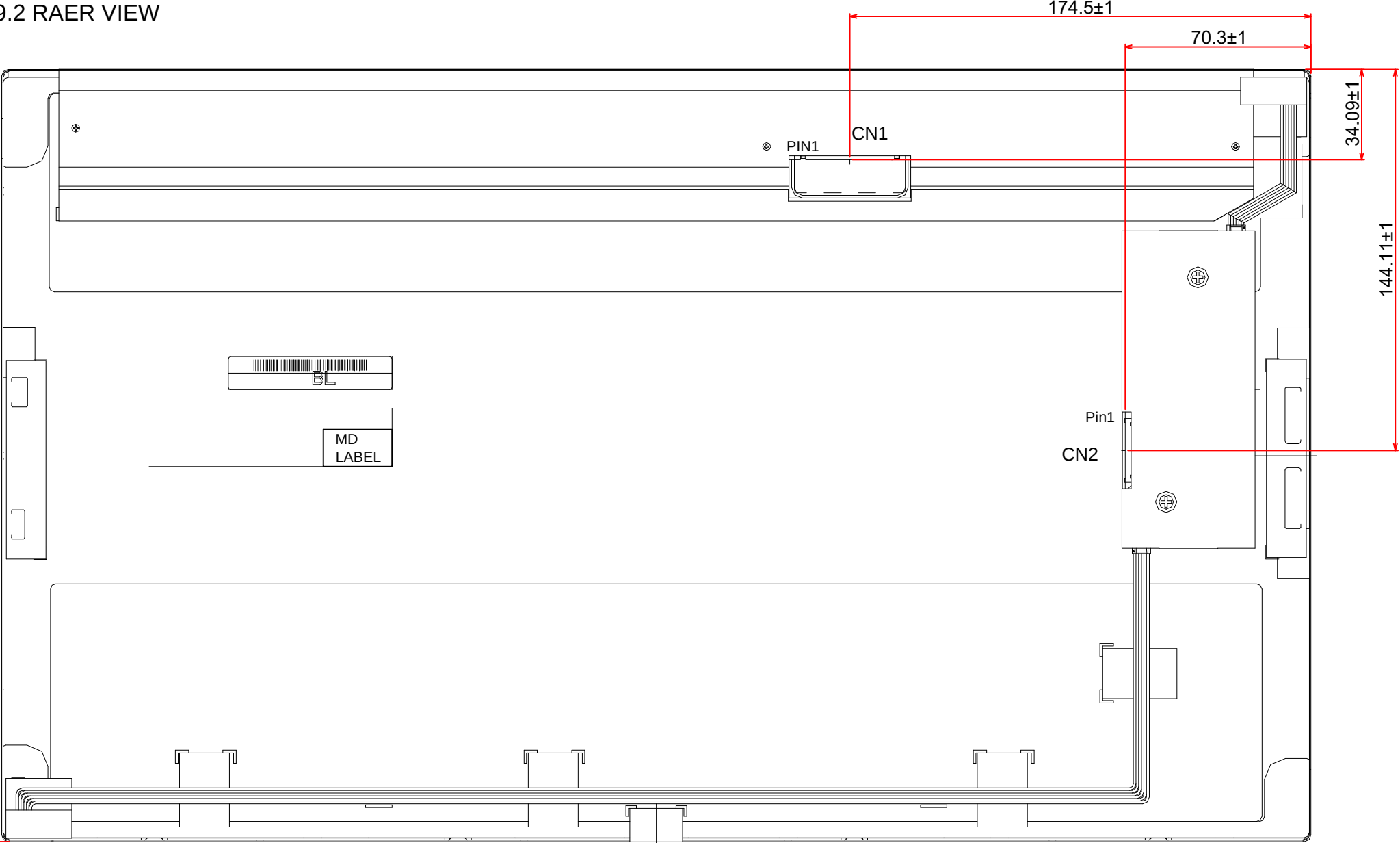
9. OUTLINE DIMENSIONS

9.1 FRONT VIEW



General Tolerance:±0.5mm
Scale : NTS
Unit : mm

9.2 RAER VIEW



General Tolerance: ± 0.5 mm
Scale : NTS
Unit : mm

10. APPEARANCE STANDARD

The appearance inspection is performed in a room around 500~1000 lx based on the conditions as below:

- The distance between inspector's eyes and display is 50 cm.
- The viewing zone is defined with angle θ shown in Fig. 10.1 The inspection should be performed within 45° when display is shut down. The inspection should be performed within 5° when display is power on.

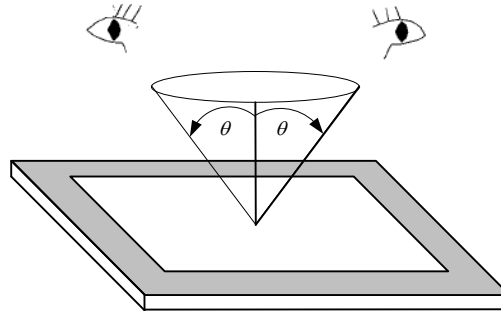


Fig. 10.1

10.1 THE DEFINITION OF LCD ZONE

LCD panel is divided into 2 areas as shown in Fig.10.2 for appearance specification in next section. A zone is the LCD active area (dot area); B zone is the area between A zone and metal frame.

In terms of housing design, B zone is the recommended window area customers' housing should be located in.

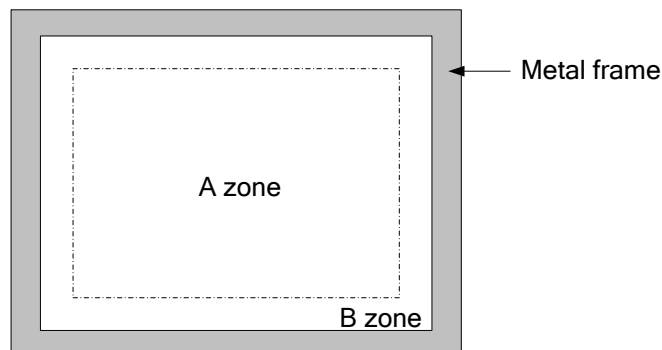


Fig. 10.2

10.2 LCD APPEARANCE SPECIFICATION

The specification as below is defined as the amount of unexpected phenomenon or material in different zones of LCD panel. The definitions of length, width and average diameter using in the table are shown in Fig. 10.3 and Fig. 10.4.

Item	Criteria				Applied zone
Scratches	Length (mm)	Width (mm)	Maximum number	Minimum space	A
	Ignored	$W \leq 0.07$	Ignored	-	
	$0.5 < L \leq 10$	$0.07 < W \leq 0.1$	4	-	
	$L > 10$	$W > 0.1$	0	-	
	Round (Dot Shape)				
	Average diameter (mm)	Maximum number	Minimum space		
	$D \leq 0.2$	Ignored	-		
	$0.2 < D \leq 0.6$	4	-		
	$D > 0.6$	0	-		
	Dent	Serious one is not allowed			
Wrinkles in polarizer	Serious one is not allowed				A
Bubbles on polarizer	Average diameter (mm)		Maximum number		A
	$D \leq 0.2$		Ignored		
	$0.2 < D \leq 0.6$		4		
	$D > 0.6$		Not allowed		
1) Stains 2) Foreign Materials 3) Dark /Bright Spot	Filamentous (Line shape)				A
	Length (mm)	Width (mm)	Maximum number		
	Ignored	$W \leq 0.07$	Ignored		
	$0.5 < L \leq 5$	$0.07 < W \leq 0.1$	4		
	$L > 5$	$W > 0.1$	0		
	Round (Dot shape)				A
	Average diameter (mm)	Maximum number	Minimum Space		
	$D \leq 0.2$	Ignored	-		
	$0.2 < D \leq 0.6$	4	-		
	$D > 0.6$	0	-		
	Those wiped out easily are acceptable				
	Dot-Defect (Note 1)		Type	Maximum number	
Bright dot-defect		1 dot	2		
		2 dots adjacent	1		
		3 dots adjacent	0		
Dark dot-defect		1 dot	5		
		2 dots adjacent	2		
		3 dots adjacent	1		
In total			5		

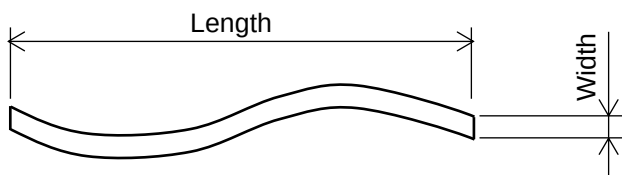


Fig 10.3



Fig 10.4

Note 1: The definitions of dot defect are as below:

- For bright dot-defect, showing black pattern, defect size over 1/2 dot area is defined.
- For dark dot-defect, showing white pattern, defect size over 1/2 dot area is defined.
- The definition of 1-dot-defect is the defect-dot, which is isolated and no adjacent defect-dot.
- The definition of adjacent dot is shown as Fig. 10.5.
- The Density of dot defect is defined in the area within diameter $\phi \geq 10\text{mm}$.

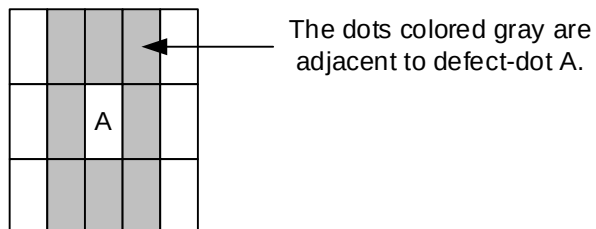


Fig. 10.5

11. PRECAUTIONS

11.1 PRECAUTIONS of ESD

- 1) Before handling the display, please ensure your body has been connected to ground to avoid any damages by ESD. Also, do not touch display's interface directly when assembling.
- 2) Please remove the protection film very slowly before turning on the display to avoid generating ESD.

11.2 PRECAUTIONS of HANDLING

- 1) In order to keep the appearance of display in good condition; please do not rub any surfaces of the displays by sharp tools harder than 3H, especially touch panel, metal frame and polarizer.
- 2) Please do not pile the displays in order to avoid any scars leaving on the display. In order to avoid any injuries, please pay more attention for the edges of glasses and metal frame, and wear finger cots to protect yourself and the display before working on it.
- 3) Touching the display area or the terminal pins with bare hand is prohibited. This is because it will stain the display area and cause poor insulation between terminal pins, and might affect display's electrical characteristics furthermore.
- 4) Do not use any harmful chemicals such as acetone, toluene, and isopropyl alcohol to clean display's surfaces.
- 5) Please use soft cloth or absorbent cotton with ethanol to clean the display by gently wiping. Moreover, when wiping the display, please wipe it by horizontal or vertical direction instead of circling to prevent leaving scars on the display's surface, especially polarizer.
- 6) Please wipe any unknown liquids immediately such as saliva, water or dew on the display to avoid color fading or any permanently damages.
- 7) Maximum pressure to the surface of the display must be less than 1.96×10^4 Pa. If the area of adding pressure is less than 1 cm^2 , the maximum pressure must be less than 1.96N.

11.3 PRECAUTIONS of OPERATING

- 1) Please input signals and voltages to the displays according to the values defined in the section of electrical characteristics to obtain the best performance. Any voltages over than absolute maximum rating will cause permanent damages to this display. Also, any timing of the signals out of this specification would cause unexpected performance.
- 2) When the display is operating at significant low temperature, the response time will be slower than it at 25°C . In high temperature, the color will be slightly dark and blue compared to original pattern. However, these are temperature-related phenomenon of LCD and it will not cause permanent damages to the display when used within the operating temperature.
- 3) The use of screen saver or sleep mode is recommended when static images are likely for long periods of time. This is to avoid the possibility of image sticking.
- 4) Spike noise can cause malfunction of the circuit. The recommended limitation of spike noise is no bigger than $\pm 100 \text{ mV}$.

11.4 PRECAUTIONS of STORAGE

If the displays are going to be stored for years, please be aware the following notices.

- 1) Please store the displays in a dark room to avoid any damages from sunlight and other sources of UV light.
- 2) The recommended long-term storage temperature is between 10°C ~35°C and 55%~75% humidity to avoid causing bubbles between polarizer and LCD glasses, and polarizer peeling from LCD glasses.
- 3) It would be better to keep the displays in the container, which is shipped from JDI, and do not unpack it.
- 4) Please do not stick any labels on the display surface for a long time, especially on the polarizer.

11.5 PRECAUTIONS of IMAGE STICKING

- 1) Do not display the fixed image or very frequently repeated clips in a long period of time, it may cause image sticking on display. Even a video of several minutes, which is played in a loop, is considered as repetitive.
- 2) Screensaver or power saving mode is recommended to avoid image sticking effectively. Using moving images, scrolling text and alternating a fixed image with a moving image, are the ideal ways to reduce the possibility of image sticking.
- 3) Additionally, it is important to avoid using static bars at image boundaries. Typically, such bars are a result of difference in aspect ratio (e.g., playing 4:3 content on a 16:9 display).

12. DESIGNATION of LOT MARK

1) The lot mark is showing in Fig.12.1. First 4 digits are used to represent production lot, T represented product of JDI Taiwan, and the last 6 digits are the serial number.

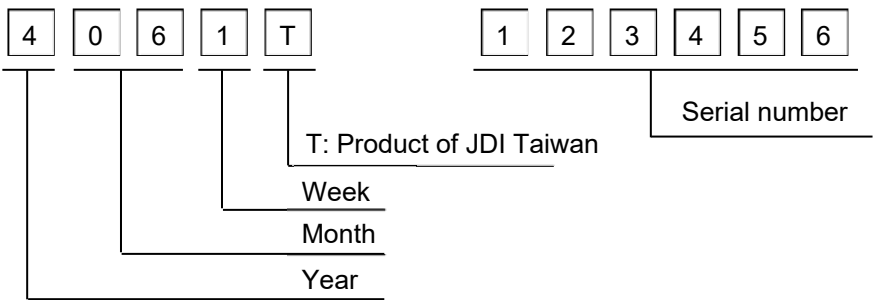


Fig. 12.1

2) The tables as below are showing what the first 4 digits of lot mark are shorted for.

Year	Lot Mark	Month	Lot Mark	Month	Lot Mark	Week	Lot Mark
2024	4	Jan.	01	Jul.	07	1~7 days	1
2025	5	Feb.	02	Aug.	08	8~14 days	2
2026	6	Mar.	03	Sep.	09	15~21 days	3
2027	7	Apr.	04	Oct.	10	22~28 days	4
2028	8	May	05	Nov.	11	29~31 days	5
		Jun.	06	Dec.	12		

3) Except letters I and O, revision number will be shown on lot mark and following letters A to Z.

4) The location of the lot mark is on the back of the display shown in Fig. 12.2.

Label example :



Fig. 12.2