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SPEC. NUMBER	PRODUCT GROUP TFT-LCD	P0	ISSUE DATE	PAGE 1 OF 36

TITLE : GV101WXM-N85

Product Specification

P0

BUYER	
SUPPLIER	HEFEI BOE Optoelectronics Technology CO., LTD
FG-Code	**GV101WXM-N85**

ITEM	BUYER SIGNATURE	DATE

ITEM	SUPPLIER SIGNATURE	DATE
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HEFEI BOE OPTOELECTRONICS TECHNOLOGY

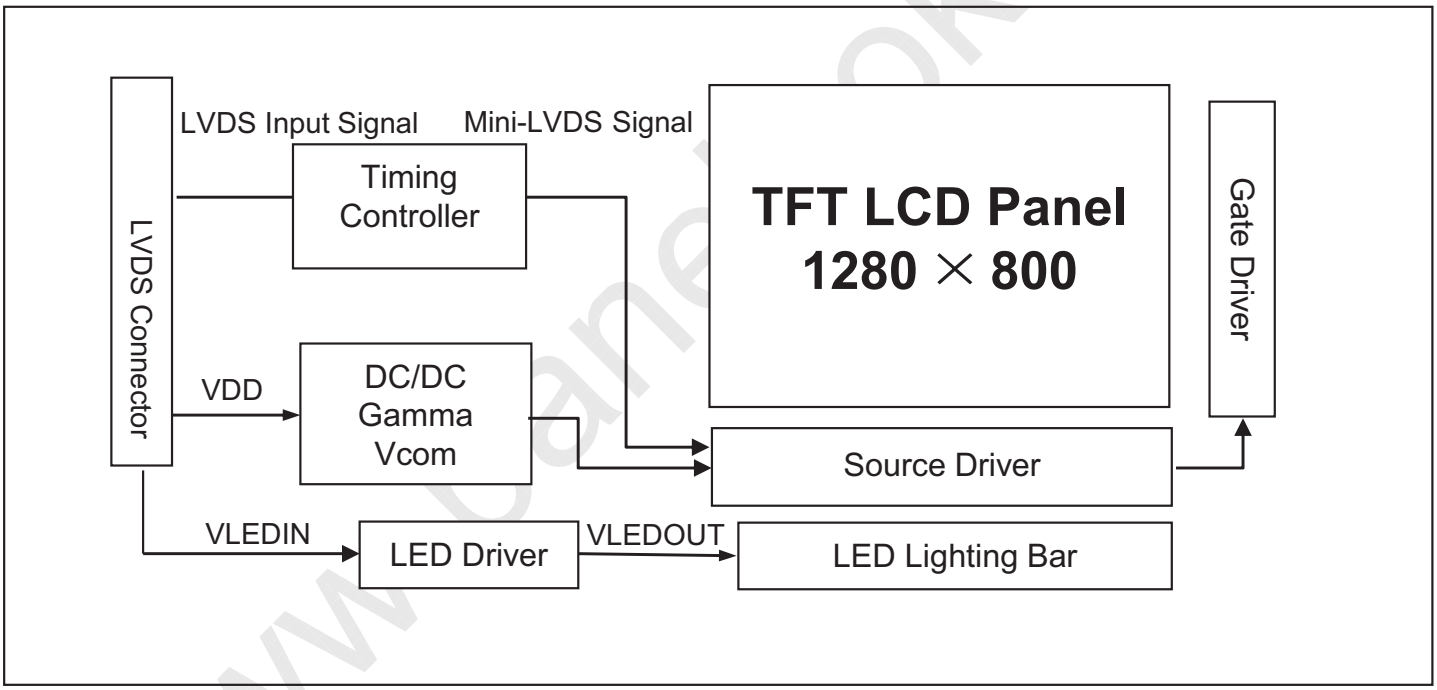
REV.	ECN NO.	DESCRIPTION OF CHANGES	DATE	PREPARED
P0	-	Initial Release	2020.10.10	蒋展望

Contents

1.0 GENERAL DESCRIPTION

1.1 Introduction

10.1WXGA is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 10.07 inch diagonally measured active area with WXGA resolutions (1280 horizontal by 800 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.



1.2 Features

- 4Lane LVDS Interface
- Thin and light weight
- Display 16.7M colors (Hi FRC)
- High luminance and contrast ratio, low reflection and wide viewing angle
- 3.3V for Logic Power
- RoHS Compliant

1.3 Application

1.4 General Specification

< Table 1. General Specifications >

Parameter	Specification	Unit	Remarks
Active area	216.96(H) ×135.60(V)	mm	
Number of pixels	1280(H) ×800(V)	pixels	
Pixel pitch	56.5(H) ×169.5(V)	μm	
Pixel arrangement	Pixels RGB stripe arrangement		
Display colors	16.7M(6bits + Hi-FRC)	colors	
Display mode	Transmission mode. Normally Black		
Outline Dimension	228.2×148.85×2.8max.(W/O PCBA) 228.2×148.85×4.9max.(W/I PCBA)	mm	
Weight	250(max)	gram	
Surface Treatment	AG25		
Back-light	Bottom edge side, 1-LED Lighting Bar Type		40* LED Array

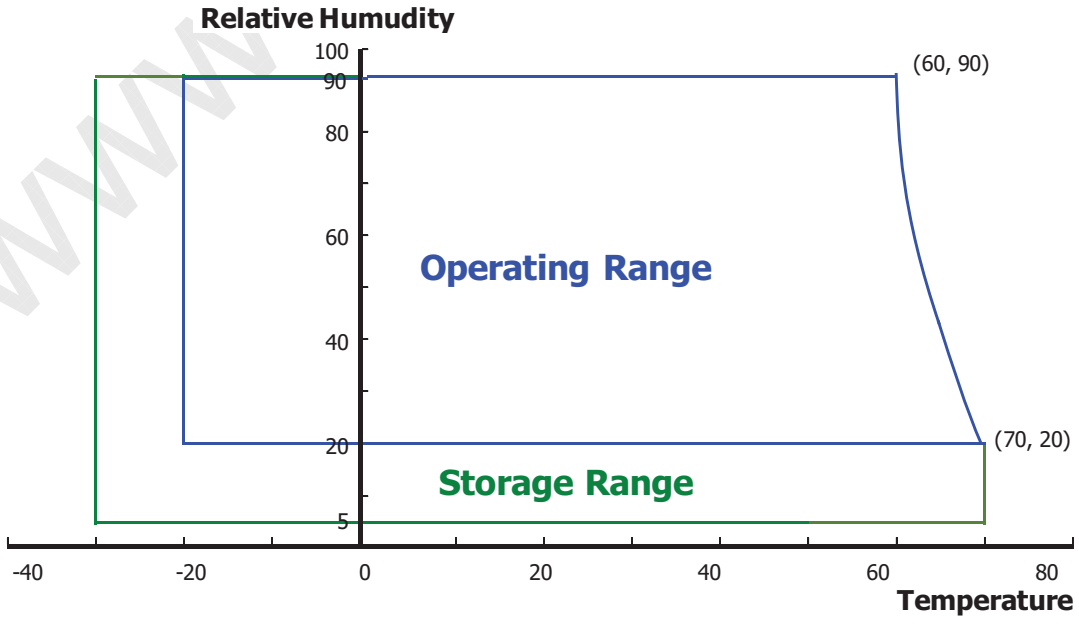
2.0 ABSOLUTE MAXIMUM RATINGS

The followings are maximum values which, if exceed, may cause faulty operation or damage to the unit. The operational and non-operational maximum voltage and current values are listed in Table 2.

< Table 2. LCD Module Electrical Specifications > [Ta =25±2 ℃]

Parameter	Symbol	Min.	Max.	Unit	Remarks
Power Supply Voltage	V_{DD}	-0.3	4.2	V	Note 1
Logic Supply Voltage	V_{IN}	V_{ss}-0.3	V_{DD}+0.3	V	
Operating Temperature	T_{OP}	-20	+70	℃	Note 2
Storage Temperature	T_{ST}	-30	+70	℃	

Note : 1) Temperature and relative humidity range are shown in the figure below.
Wet bulb temperature should be 39 ℃ max. and no condensation of water.



3.0 ELECTRICAL SPECIFICATIONS

3.1 TFT LCD Module

< Table 3. LCD Module Electrical Specifications > [Ta =25±2 ℃]

Parameter		Min.	Typ.	Max.	Unit	Remarks
Power Supply Voltage	V_{DD}	3.0	3.3	3.6	V	Note 1
Power Supply Current	I_{DD}	-	272	303	mA	Note 1
Differential Input high Thres hold Voltage	V_{TH}	-	-	100	mV	V_{IC} = 1.2V typ.
Differential Input low Thresh old Voltage	V_{TL}	-100	-	-	mV	
Differential Input Voltage	V_{ID}	±100	-	±600	mV	
LVDS common mode voltage	V_{IC}	0.7		1.6	V	
Power Consumption	P_D	-	0.9	1	W	Mosaic Pattern
	P_{BL}	-	-	3	W	W/I LED Driver
	P_{total}	-	-	4	W	

Notes : 1. The supply voltage is measured and specified at the interface connector of LCM.
The current draw and power consumption specified is for 3.3V at 25 ℃
Max value at Mosaic Pattern

2. Calculated value for reference (VLED X ILED)

3.2 Back-light Unit

< Table 4. LED Driving guideline specifications > Ta=25+/-2°C

Parameter			Min.	Typ.	Max.	Unit	Remarks
LED Forward Voltage		V_F	-	2.9	3.0	V	-
LED Forward Current		I_F	-	20	-	mA	-
LED Power Consumption		P_{LED}	-	-	2.73	W	Note 1
LED Life-Time		N/A	15000	-	-	Hour	IF = 20mA Note 2
Power supply voltage for LED Driver		V_{LED}	5	12	21	V	
EN Control Level	Backlight on	-	1.9	-	5.0	V	
	Backlight off	-	0	-	0.8	V	
PWM Control Level	PWM High Level	-	1.9	-	5.0	V	
	PWM Low Level	-	0	-	0.8	V	
PWM Control Frequency		F_{PWM}	200	-	10K	Hz	
Duty Ratio		-	1%	-	100%	%	Note 3

Notes : 1. Power supply voltage12V for LED Driver, Driver efficiency 85%,
Calculator Value for reference IF × VF ×36 / 0.85 = PLED
2. The LED Life-time define as the estimated time to 50% degradation of initial luminous.
3. 1% duty cycle is achievable with a dimming frequency less than 1KHz.

4.0 OPTICAL SPECIFICATION

4.1 Overview

The test of Optical specifications shall be measured in a dark room (ambient luminance ≤ 1lux and temperature = 25±2℃) with the equipment of Luminance meter system (Goniometer system and TOPCON BM-5) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of θ and Φ equal to 0°. While scanning θand/or Ø, the center of the measuring spot on the Display surface shall stay fixed. The backlight should be operating for 30 minutes prior to measurement. VDD shall be 3.3+/- 0.3V at 25°C. Optimum viewing angle direction is 6 'clock.

4.2 Optical Specifications

<Table 5. Optical Specifications>

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Viewing Angle range	Horizontal	Θ_3	CR > 10	80	85	-	Deg.	Note 1
		Θ_9		80	85	-	Deg.	
	Vertical	Θ_{12}		80	85	-	Deg.	
		Θ_6		80	85	-	Deg.	
Color Gamut				45	50	-	%	
Luminance Contrast ratio		CR	Θ = 0°	600	800	-		Note 2
Luminance of White	center Points	Y_w	Θ = 0°	380	430	-	cd/m^2	Note 3
White Luminance uniformity	9 Points	ΔY5		75	80	-		Note 4
White Chromaticity		W_x	Θ = 0°	0.283	0.313	0.343		Note 5
		W_y		0.299	0.329	0.359		
Reproduction of color	Red	R_x	Θ = 0°	Typ. -0.03	0.580	Typ. +0.03		
		R_y			0.348			
	Green	G_x			0.338			
		G_y			0.571			
	Blue	B_x			0.159			
		B_y			0.103			
Response Time (Rising + Falling)		T_{RT}	Ta= 25° C Θ = 0°	-	30	35	ms	Note 6
Gamma Scale				2.0	2.2	2.4		
Cross Talk		CT	Θ = 0°	-	-	2.0	%	Note 7

Notes : 1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface (see FIGURE 1).

2. Contrast measurements shall be made at viewing angle of Θ= 0 and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state . (see FIGURE 1) Luminance Contrast Ratio (CR) is defined mathematically.

$$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$

3. Center Luminance of white is defined as luminance values of center point across the LCD surface. Luminance shall be measured with all pixels in the view field set first to white. This measurement shall be taken at the locations shown in FIGURE 2 for a total of the measurements per display, the LED current is set at 20mA.

4. The White luminance uniformity on LCD surface is then expressed as : ΔY = Minimum Luminance of 9 points / Maximum Luminance of 9 points (see FIGURE 3).

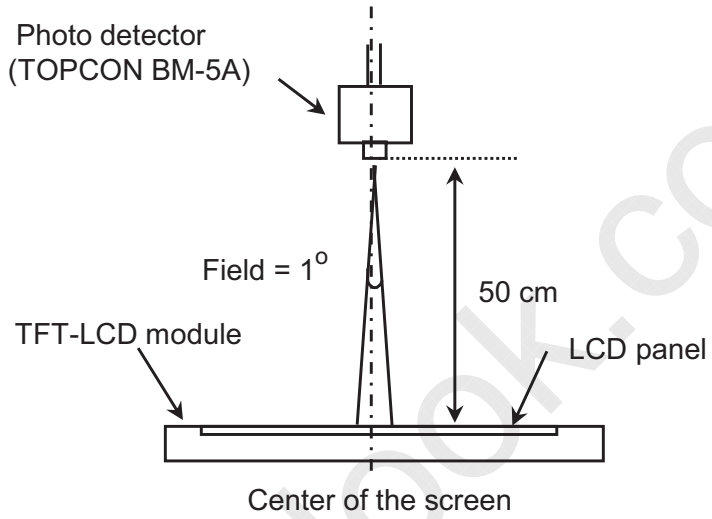
5. The color chromaticity coordinates specified in Table 5 shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.

6. The electro-optical response time measurements shall be made as FIGURE 4 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr, and 90% to 10% is Td.

7. Cross-Talk of one area of the LCD surface by another shall be measured by comparing the luminance (YA) of a 25mm diameter area, with all display pixels set to a gray level, to the luminance (YB) of that same area when any adjacent area is driven dark. (See FIGURE 5).

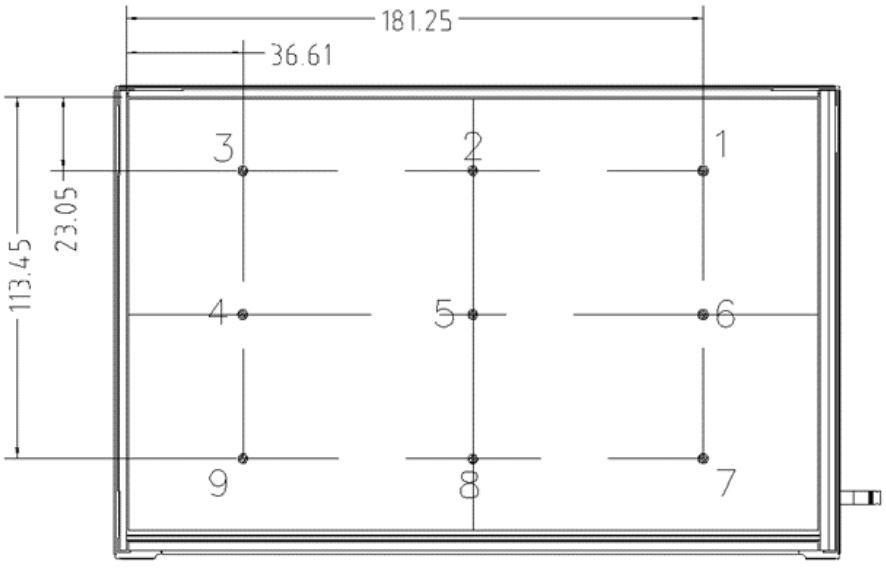
4.3 Optical measurements

Figure 1. Measurement Set Up



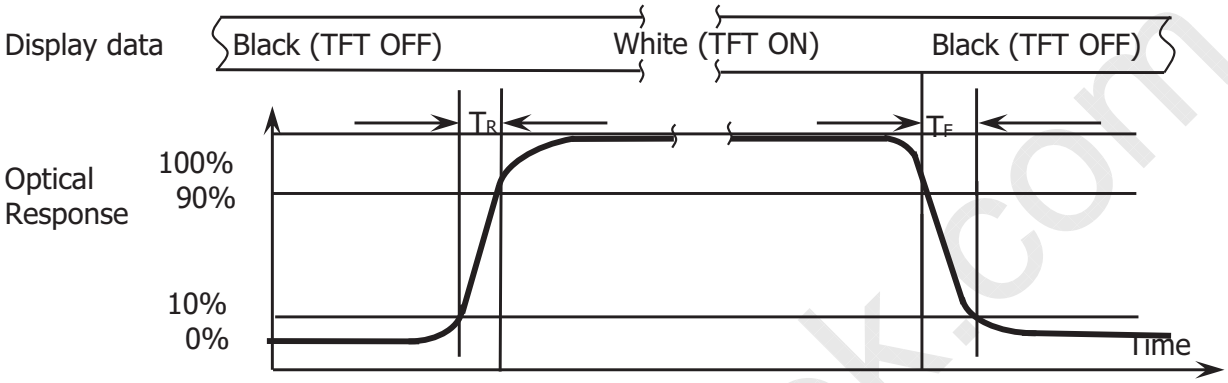
View angel range measurement setup

Figure 2. White Luminance and Uniformity Measurement Locations (5 points)



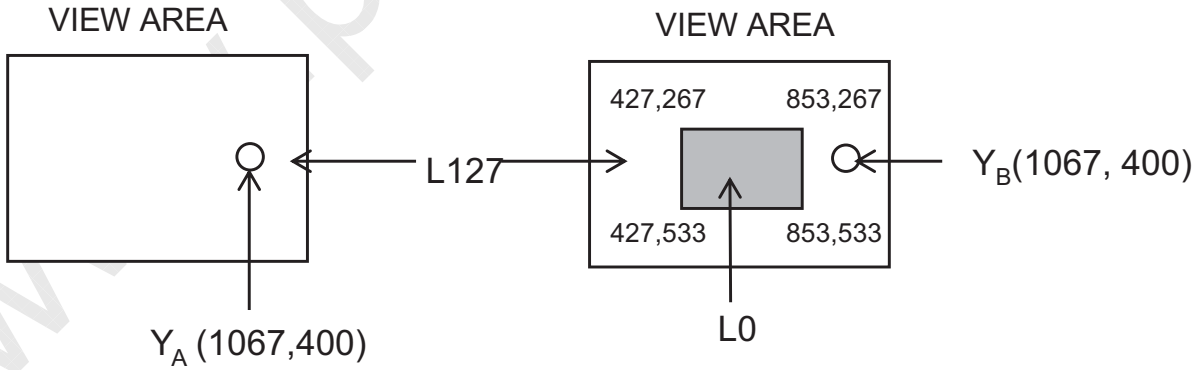
Center Luminance of white is defined as luminance values of center 5 points across the LCD surface. Luminance shall be measured with all pixels in the view field set first to white. This measurement shall be taken at the locations shown in FIGURE 2 for a total of the measurements per display.
The White luminance uniformity on LCD surface is then expressed as : ΔY5 = Minimum Luminance of 5 points / Maximum Luminance of 5points (see FIGURE 2).

Figure 4. Response Time Testing



The electro-optical response time measurements shall be made as shown in FIGURE 4 by switching the “data” input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr and 90% to 10% is Td.

Figure 5. Cross Modulation Test Description



$$\text{Cross-Talk (\%)} = \left| \frac{Y_B - Y_A}{Y_A} \right| \times 100$$

Where:

Y_A = Initial luminance of measured area (cd/m^2)
Y_B = Subsequent luminance of measured area (cd/m^2)

The location measured will be exactly the same in both patterns.

5.0 INTERFACE CONNECTION.

5.1 Electrical Interface Connection

The electronics interface connector is STM MSAK24025P40G.

The connector interface pin assignments are listed in Table 6 and 7.

<Table 6. Pin Assignments for the Interface Connector>

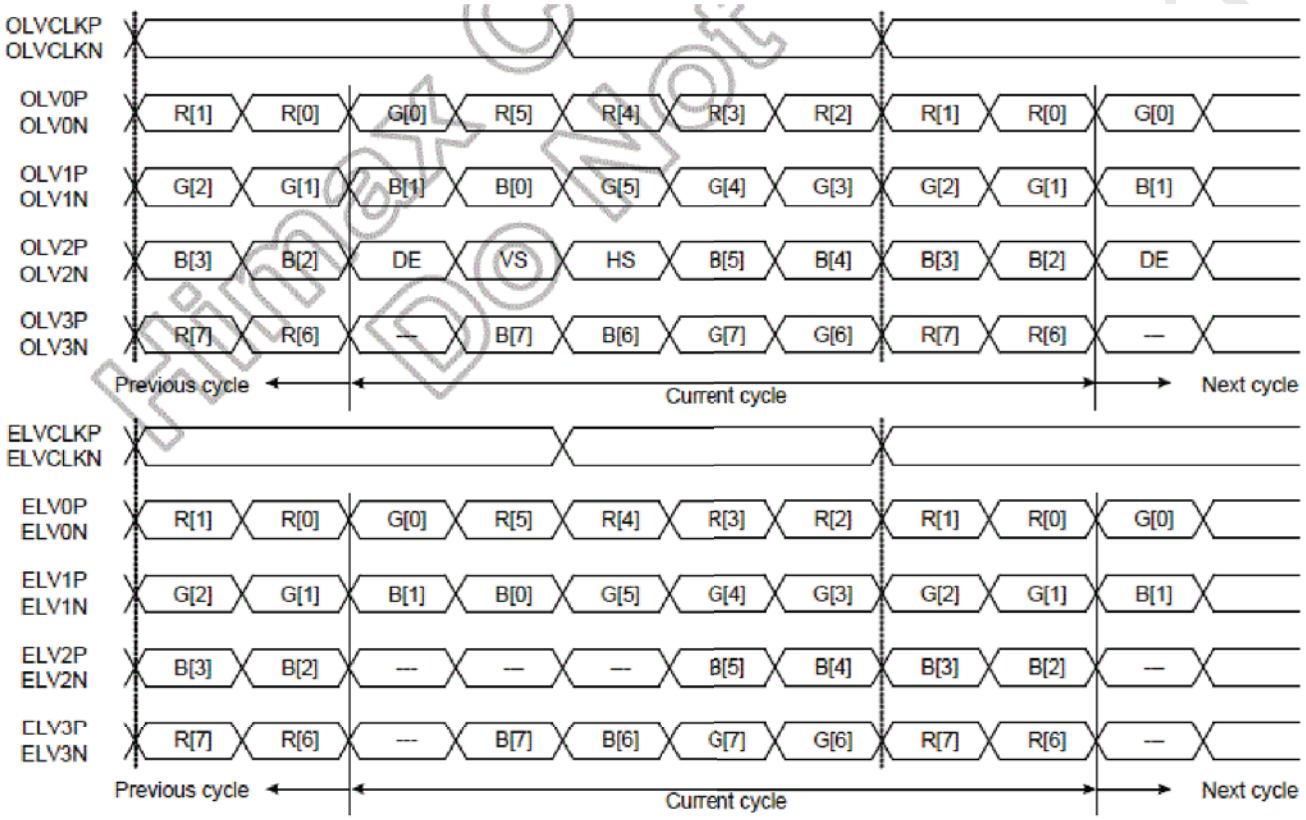
Terminal	Symbol	Functions
Pin No.	Symbol	Description
1	NC	No Connection
2	VDDIN	Power Supply VDDIN=3.3V (typ.)
3	VDDIN	Power Supply VDDIN=3.3V (typ.)
4	VDC	Power Supply VDC=3.3V (typ.)
5	NC	No Connection
6	CLK EDID	CLK for EDID function use
7	Data EDID	CLK for EDID function use
8	LVDS_0N	LVDS Negative data signal (-)
9	LVDS_0P	LVDS Positive data signal (+)
10	GND	Ground
11	LVDS_1N	LVDS Negative data signal (-)
12	LVDS_1P	LVDS Positive data signal (+)
13	GND	Ground
14	LVDS_2N	LVDS Negative data signal (-)
15	LVDS_2P	LVDS Positive data signal (+)
16	GND	Ground
17	LVDS_CLKN	LVDS Negative CLK signal (-)
18	LVDS_CLKP	LVDS Positive CLK signal (+)
19	GND	Ground
20	LVDS_3N	LVDS Negative data signal (-)
21	LVDS_3P	LVDS Positive data signal (+)
22	NC	No Connection
23	NC	No Connection
24	NC	No Connection
25	GND	Ground
26	NC	No Connection
27	NC	No Connection
28	GND	Ground
29	NC	No Connection
30	NC	No Connection
31	LED_GND	LED Ground
32	LED_GND	LED Ground
33	LED_GND	LED Ground
34	NC	No Connection
35	LED_PWM	LED driver PWM Signal
36	LED_EN	LED driver enable (+3.3V Input)
37	NC	No Connection
38	VLED	LED Power Supply 5V-21V
39	VLED	LED Power Supply 5V-21V
40	VLED	LED Power Supply 5V-21V

BLU Interface Connector: STM MSAK24037P9 .

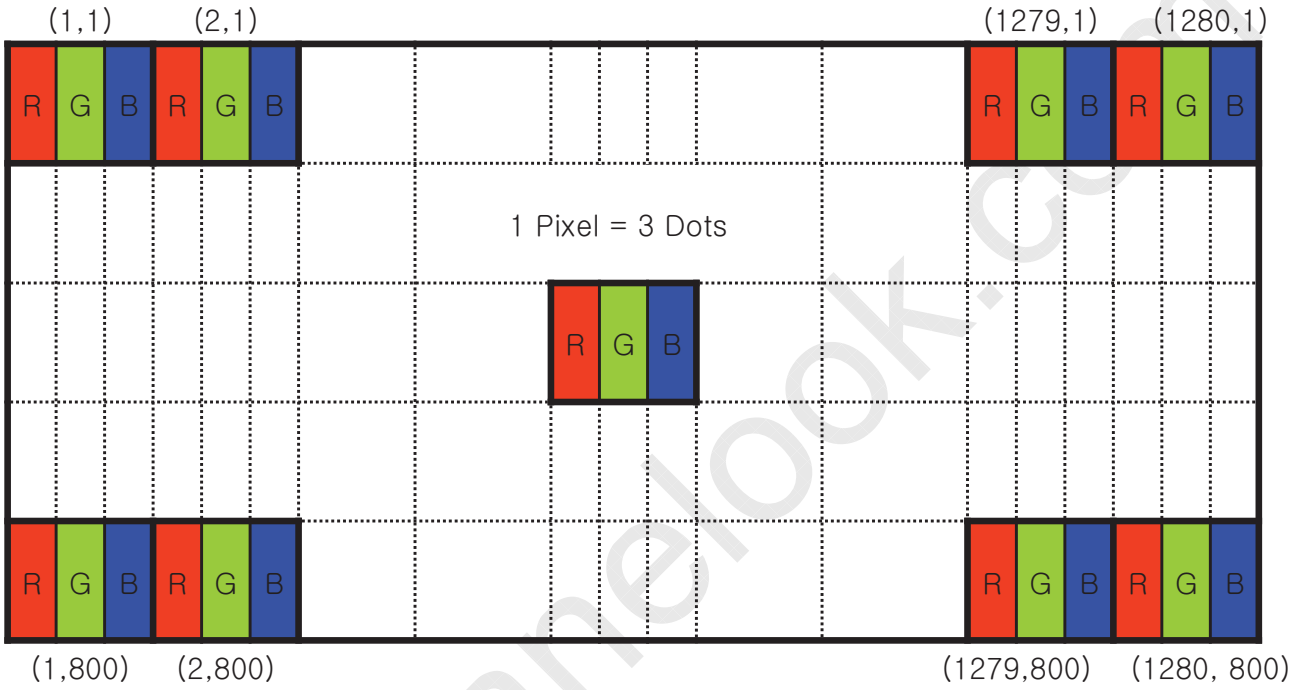
<Table 7. Pin Assignments for the Interface Connector>

Terminal	Symbol	Functions
Pin No.	Symbol	Description
1	LED1	LED cathode connection
2	LED2	LED cathode connection
3	LED3	LED cathode connection
4	LED4	LED cathode connection
5	NC	No Connection
6	NC	No Connection
7	VLEDOUT	LED anode connection
8	VLEDOUT	LED anode connection
9	VLEDOUT	LED anode connection

5.2 LVDS Input signal



5.3 Data Input Format



Display Position of Input Data (V-H)

6.0 SIGNAL TIMING SPECIFICATION

6.1 Signal timing

ITEM	Symbol		Min	Typ	Max	Unit	Note
CLK	Frequency	-	-	450	500	Mbps	
Horizontal Active Display Term	Valid	t_{HV}	-	1280	-	t_{CLK}	
	Total	t_{HP}	1360	1408	1560	t_{CLK}	
Vertical Active Display Term	Valid	t_{VV}	-	800	-	t_{HP}	
	Total	t_{VP}	810	820	860	t_{HP}	

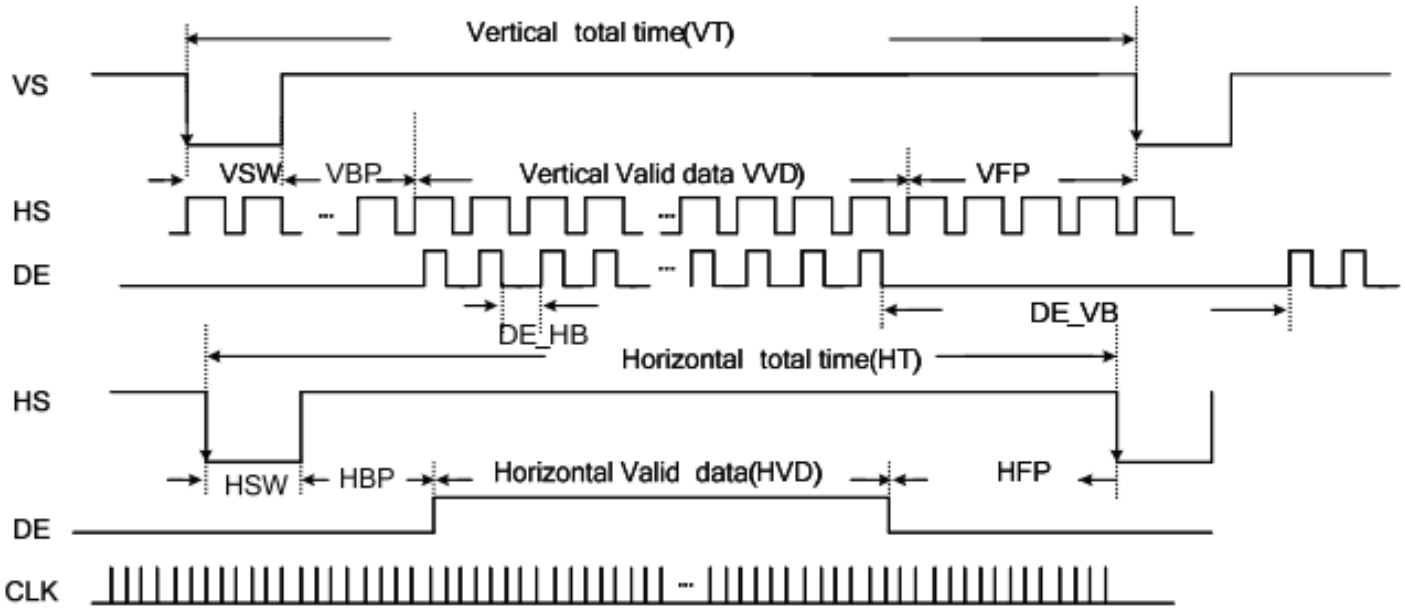
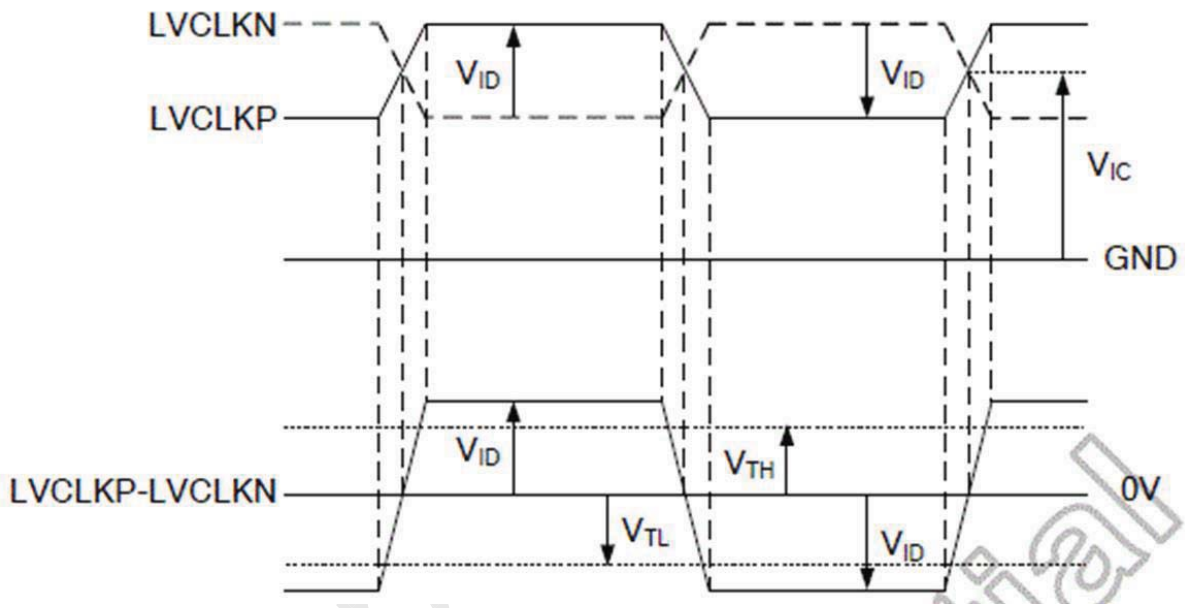


Figure 6.5: Input video signal format

6.2 LVDS Interface Timing Parameter

The specification of the LVDS interface timing parameter is shown in Table 8.

<Table 8. LVDS Interface Timing Specification>



LVDS V_{ID} and V_{IC} definition

DC electrical character

DATA SHEET V01

7.3 DC electrical characteristics

Parameter	Symbol	Condition	Spec. Min.	Spec. Typ.	Spec. Max.	Unit
Supply current	I_{DD}	F=75MHz, PI=14KΩ, RL=100Ω pixel checker pattern	-	100	-	mA
CMOS/TTL DC specifications						
High level input voltage	V_{IH}	-	0.7VDD	-	VDD	V
Low level input voltage	V_{IL}	-	VSS	-	0.3VDD	V
High level output voltage	V_{OH}	-	0.8VDD	-	VDD	V
Low level output voltage	V_{OL}	-	VSS	-	0.2VDD	V
Input current	I_{IN}	-	-10	-	10	μA
Pull low resistance	R_{PD}	AGMODE (Pin 3) TEST (Pin 62)	50	100	150	KΩ
LVDS DC specifications						
Differential input high threshold	V_{TH}	V_{IC}=1.2V	-	-	+100	mV
Differential input low threshold	V_{TL}		-100	-	-	mV
LVDS common mode voltage	V_{IC}	-	0.7	-	1.6	V
LVDS swing voltage	V_{ID}	-	±100	-	±600	mV
mini-LVDS DC specifications						
Output differential voltage range	V_{OD}	PI=14KΩ, RL=100Ω (T_A=25℃)	±170	±200	±230	mV
Output differential voltage deviation			V_{OD_CODE} *0.8 (1)		V_{OD_CODE} *1.2 (1)	mV
Output offset voltage range	V_{OS}		1.0	1.2	1.4	V
Output offset voltage deviation			V_{OS_CODE} -0.2 (1)		V_{OS_CODE} +0.2 (1)	V

Note: (1) The V_{OD_CODE} and V_{OS_CODE} are programmable by different panel characteristics through ROM code.

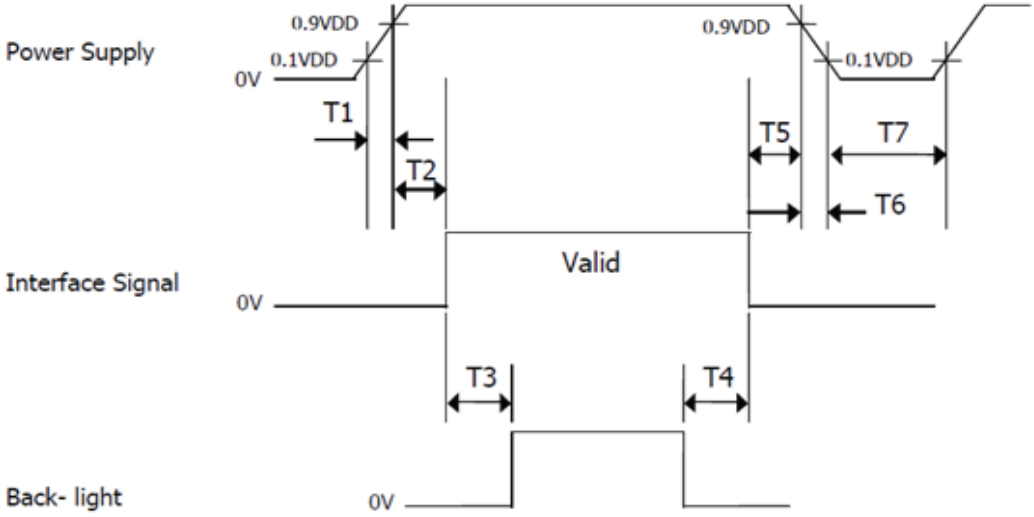
7.0 INPUT SIGNALS, BASIC DISPLAY COLORS & GRAY SCALE OF COLORS

Color & Gray Scale		Input Data Signal																							
		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
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
	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
	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
	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
	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
	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	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	△	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Darker	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	△	↑								↑								↑							
	▽	↓								↓								↓							
	Brighter	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	▽	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	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	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	△	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Darker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	△	↑								↑								↑							
	▽	↓								↓								↓							
	Brighter	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0
	▽	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	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	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	△	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Darker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	△	↑								↑								↑							
	▽	↓								↓								↓							
	Brighter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1
	▽	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Gray Scale of White	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	△	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	Darker	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
	△	↑								↑								↑							
	▽	↓								↓								↓							
	Brighter	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1
	▽	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	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

8.0 POWER SEQUENCE

To prevent a latch-up or DC operation of the LCD module, the power on/off sequence shall be as shown in below

Power-On/Off Timing Sequence:



Parameter	Values			Units
	Min	Typ	Max	
T1	0.5	-	10	ms
T2	0	-	50	ms
T3	200	-	-	ms
T4	200	-	-	ms
T5	0	-	50	ms
T6	0.5	-	10	ms
T7	500	-	-	ms

Notes:

1. When the power supply VDD is 0V, keep the level of input signals on the low or keep high impedance.
2. Do not keep the interface signal high impedance when power is on. Back Light must be turn on after power for logic and interface signal are valid.

9.0 CONNECTOR DESCRIPTION

Physical interface is described as for the connector on LCM.
These connectors are capable of accommodating the following signals and will be following components.

9.1 TFT LCD Module

Connector Name /Description	For Signal Connector
Manufacturer	STM or Compatible
Type/ Part Number	MSAK24025P40G or Compatible

10.0 MECHANICAL CHARACTERISTICS

10.1 Dimensional Requirements

FIGURE 5 shows mechanical outlines for the model TV101WXM-NP1.
Other parameters are shown in Table 9.

<Table 9. Dimensional Parameters>

Parameter	Specification	Unit
Active Area	216.96 (H) ×135.6 (V)	
Number of pixels	1280(H) X800 (V) (1 pixel = R + G + B dots)	
Pixel pitch	0.1695mm	
Pixel arrangement	RGB Vertical stripe	
Display colors	16.7M	
Display mode	Normally Black	
Dimensional outline	228.2×148.85×2.8max.(W/O PCBA) 228.2×148.85×4.9max.(W/I PCBA)	mm
Weight	250 (Max)	gram
Back-light	LED, Horizontal-LED Array type	

10.2 Mounting

See FIGURE 6.

10.3 Glare and Polarizer Hardness.

The surface of the LCD has an low reflection coating and hard coating to reduce scratching.

10.4 Light Leakage

There shall not be obvious visible light from the back-lighting system around the edges of the screen as seen from a distance 50cm from the screen with an overhead light level of 150lux.

11.0 RELIABILITY TEST

The Reliability test items and its conditions are shown in below.

<Table 10. Reliability test>

No	Conditions	
1	高温 (HTS)/Stg	70℃, 240hr
2	低温 (LTS)/Stg	-30℃, 240hr
3	高温 (HTO)/Op	70℃, 240hr
4	低温 (LTO)/Op	-20℃, 240hr
5	高温高湿 (THO)/Op	60℃, 90%,240hr
6	冷热冲击 (TST)	-30~80℃, 1hr/Cycle, 100Cycles
7	Image Sticking	Burn in:5*5 Chess,1h@25C. Inspection Pattern:50% grey, Perpendicular view, after 5sec,the mura <L2
8	静电放电 (ESD)	C=150pF, R=330Ω, Contact ±8KV ; Air ±15KV

12.0 HANDLING & CAUTIONS

(1) Cautions when taking out the module

- Pick the pouch only, when taking out module from a shipping package.

(2) Cautions for handling the module

- As the electrostatic discharges may break the LCD module, handle the LCD module with care. Peel a protection sheet off from the LCD panel surface as slowly as possible.
- As the LCD panel and back - light element are made from fragile glass material, impulse and pressure to the LCD module should be avoided.
- As the surface of the polarizer is very soft and easily scratched, use a soft dry cloth without chemicals for cleaning.
- Do not pull the interface connector in or out while the LCD module is operating.
- Put the module display side down on a flat horizontal plane.
- Handle connectors and cables with care.

(3) Cautions for the operation

- When the module is operating, do not lose CLK, ENAB signals. If any one of these signals is lost, the LCD panel would be damaged.
- Obey the supply voltage sequence. If wrong sequence is applied, the module would be damaged.

13.0 PRODCUT SERIAL NUMBER

- Label Size :48mm*12mm / Thickness: 0.08mm
- Contents
  1. FG-CODE: GV101WXM-N85
  2. MDL ID Barcode
  3. MDL ID

MDL ID Naming Rule:

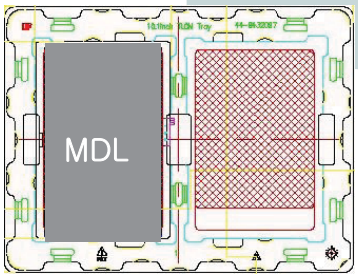
序列号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
代码	X	X	X	3	X	X	X	3	8	5	0	X	X	X	X	X	X
描述	GBN代码		等级	B3	年份		月	FG Code后四位				序列号					

14.0 PACKING INFORMATION

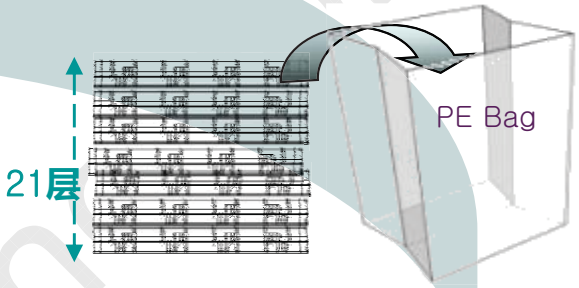
BOE provides the standard shipping container for customers, unless customer specifies their packing information. The standard packing method and Barcode information are shown in below.

10.1 Packing Order

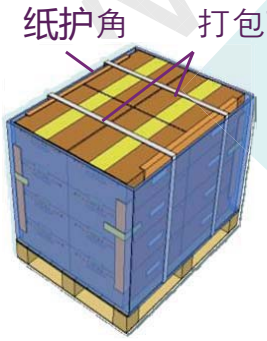
−. 将 2pcs LCM平放入Tray, Panel向上放置;
-. 产品上放1pcs垫片



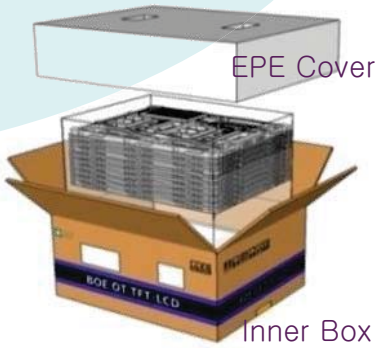
-. 将21pcs PET Tray 平放入PE Bag
-. Tray 无需旋转码放
-. 顶部1pcs 空Tray



-. 每个Pallet上放3层Box 1层4箱,共计12ea Box
-. Pallet外进行缠膜包装
-. 480pcs Panel / Pallet



- .将PET Tray堆码后平放入Inner Box 上下放置EPE Board
-. 40pcs/Box



10.2 Packing Note

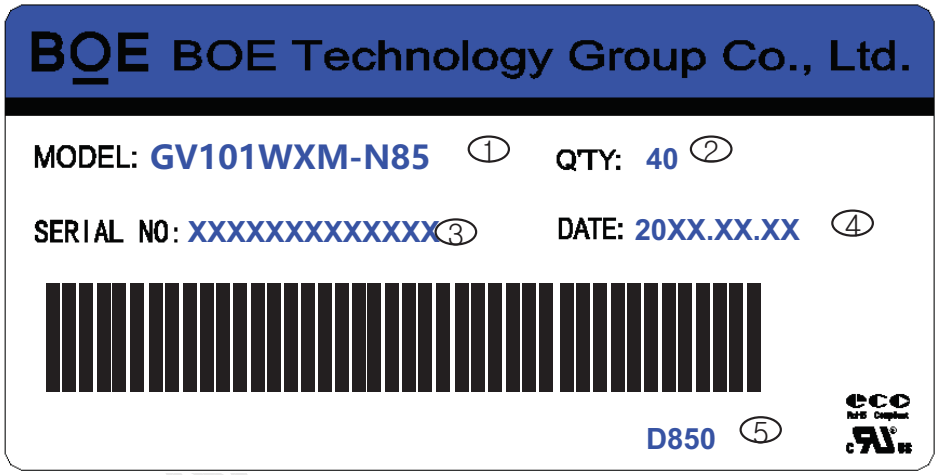
- Box Dimension : 500mm(L)×400mm(W)×290mm(H)
- Package Quantity in one Box : 40pcs

10.3 Box Label

蓝色字体为后打印标识, 说明如下:

Label Size: 110mm*55mm

1. **FG-CODE: GV101WXM-N85**
2. **Box 产品数量**
3. **Box ID, 编码规则如下**
4. **Box Packing 日期**
5. **FG-CODE 后四位**



序列号	1	2	3	4	5	6	7	8	9	10	11	12	13
代码	X	X	X	3	X	X	X	X	X	X	X	X	X
描述	GBN代码		等级	B3	年份		月	Rev	序列号				

15.0 MECHANICAL OUTLINE DIMENSION

Figure 6. TFT-LCD Module Outline Dimension (Front View)

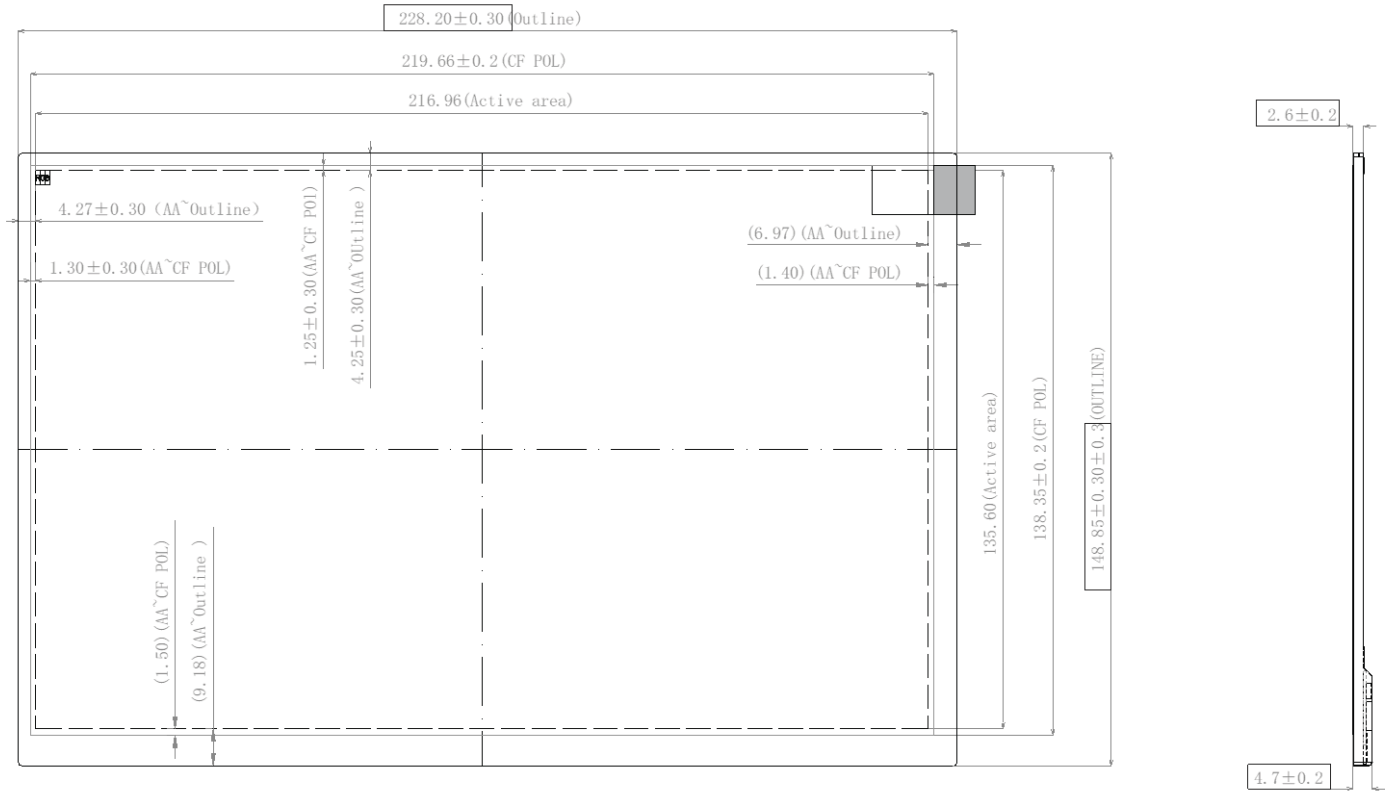
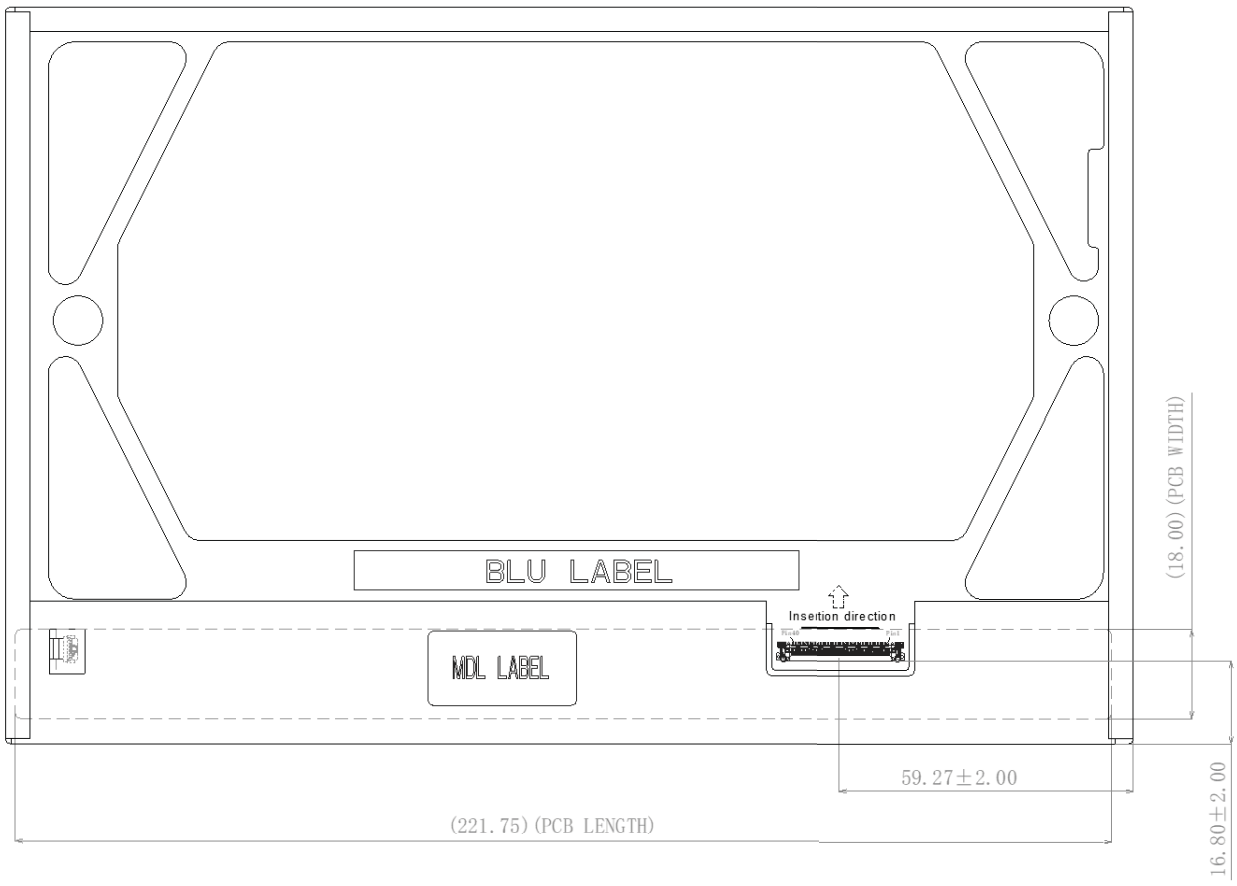


Figure 7. TFT-LCD Module Outline Dimensions (Rear view)



16.0 EDID TAB

EDID Table

Address (HEX)	Function	Hex	Dec	Input values.	Notes
00	Header	00	0	0	EDID Header
01		FF	255	255	
02		FF	255	255	
03		FF	255	255	
04		FF	255	255	
05		FF	255	255	
06		FF	255	255	
07		00	0	0	
08	ID Manufacturer Name	09	9	BOE	ID = BOE
09		E5	229		
0A	ID Product Code	50	80	2384	ID = 2384
0B		09	9		
0C	32-bit serial No.	00	0	0	
0D		00	0	0	
0E		00	0	0	
0F		00	0	0	
10	Week of manufacture	01	1	1	
11	Year of Manufacture	1E	30	2020	Manufactured in 2020
12	EDID Structure Ver.	01	1	1	EDID Ver 1.0
13	EDID revision #	04	4	4	EDID Rev. 0.4
14	Video input definition	A5	165	-	Refer to right table
15	Max H image size	16	22	22	22 cm (Approx)
16	Max V image size	0E	14	14	14 cm (Approx)
17	Display Gamma	78	120	2.2	Gamma curve = 2.2
18	Feature support	02	2	-	Refer to right table
19	Red/Green low bits	EC	236	-	Red / Green Low Bits
1A	Blue/White low bits	E0	224	-	Blue / White Low Bits
1B	Red x high bits	96	150	0.589	Red (x) = 10010110 (0.589)
1C	Red y high bits	5B	91	0.358	Red (y) = 01011011 (0.358)
1D	Green x high bits	55	85	0.332	Green (x) = 01010101 (0.332)
1E	Green y high bits	91	145	0.567	Green (y) = 10010001 (0.567)
1F	Blue x high bits	28	40	0.156	Blue (x) = 00101000 (0.156)
20	BLue y high bits	1D	29	0.116	Blue (y) = 00011101 (0.116)
21	White x high bits	50	80	0.313	White (x) = 01010000 (0.313)
22	White y high bits	54	84	0.329	White (y) = 01010100 (0.329)

23	Established timing 1	00	0	-	Refer to right table
24	Established timing 2	00	0	-	
25	Established timing 3	00	0	-	
26	Standard timing #1	01	1		Not Used
27		01	1		
28	Standard timing #2	01	1		Not Used
29		01	1		
2A	Standard timing #3	01	1		Not Used
2B		01	1		
2C	Standard timing #4	01	1		Not Used
2D		01	1		
2E	Standard timing #5	01	1		Not Used
2F		01	1		
30	Standard timing #6	01	1		Not Used
31		01	1		
32	Standard timing #7	01	1		Not Used
33		01	1		
34	Standard timing #8	01	1		Not Used
35		01	1		
36	Detailed timing/monitor descriptor #1	12	18	69.3	69.3MHz Main clock
37		1B	27		
38		00	0	1280	Hor Active = 1280
39		80	128	128	Hor Blanking = 128
3A		50	80	-	4 bits of Hor. Active + 4 bits of Hor. Blanking
3B		20	32	800	Ver Active = 800
3C		14	20	20	Ver Blanking = 20
3D		30	48	-	4 bits of Ver. Active + 4 bits of Ver. Blanking
3E		44	68	68	Hor Sync Offset = 68
3F		20	32	32	H Sync Pulse Width = 32
40		A3	163	10	V sync Offset = 10 line
41		00	0	3	V Sync Pulse width : 3 line
42		D9	217	217	Horizontal Image Size = 217 mm (Low 8 bits)
43		88	136	136	Vertical Image Size = 136 mm (Low 8 bits)
44		00	0	-	4 bits of Hor Image Size + 4 bits of Ver Image Size
45		00	0	0	Hor Border (pixels)
46		00	0	0	Vertical Border (Lines)
47		1A	26	-	Refer to right table

48	Detailed timing/monitor descriptor #2	00	0	0.0	0MHz Main clock
49		00	0		
4A		00	0	0	Hor Active = 0
4B		00	0	0	Hor Blanking = 0
4C		00	0	-	4 bits of Hor. Active + 4 bits of Hor. Blanking
4D		00	0	0	Ver Active = 0
4E		00	0	0	Ver Blanking = 0
4F		00	0	-	4 bits of Ver. Active + 4 bits of Ver. Blanking
50		00	0	0	Hor Sync Offset = 0
51		00	0	0	H Sync Pulse Width = 0
52		00	0	0	V sync Offset = 0 line
53		00	0	0	V Sync Pulse width : 0 line
54		00	0	0	Horizontal Image Size = 0 mm (Low 8 bits)
55		00	0	0	Vertical Image Size = 0 mm (Low 8 bits)
56		00	0	-	4 bits of Hor Image Size + 4 bits of Ver Image Size
57		00	0	0	Hor Border (pixels)
58		00	0	0	Vertical Border (Lines)
59		00	0		
5A	Detailed timing/monitor descriptor #3	00	0	0.0	0MHz Main clock
5B		00	0		
5C		00	0	0	Hor Active = 0
5D		00	0	0	Hor Blanking = 0
5E		00	0	-	4 bits of Hor. Active + 4 bits of Hor. Blanking
5F		00	0	0	Ver Active = 0
60		00	0	0	Ver Blanking = 0
61		00	0	-	4 bits of Ver. Active + 4 bits of Ver. Blanking
62		00	0	0	Hor Sync Offset = 0
63		00	0	0	H Sync Pulse Width = 0
64		00	0	0	V sync Offset = 0 line
65		00	0	0	V Sync Pulse width : 0 line
66		00	0	0	Horizontal Image Size = 0 mm (Low 8 bits)
67		00	0	0	Vertical Image Size = 0 mm (Low 8 bits)
68		00	0	-	4 bits of Hor Image Size + 4 bits of Ver Image Size
69		00	0	0	Hor Border (pixels)
6A		00	0	0	Vertical Border (Lines)
6B		00	0		

6C	Detailed timing/monitor descriptor #4	00	0		Indicates descriptor #4 is a display Descriptor
6D		00	0		
6E		00	0		Reserved
6F		FE	254		Tag：ASCII String
70		00	0		Reserved
71		4E	78	N	Model name : GV101WXM-N85
72		56	86	V	
73		31	49	1	
74		30	48	0	
75		31	49	1	
76		57	87	W	
77		58	88	X	
78		4D	77	M	
79		2D	45	-	
7A		4E	78	N	
7B		30	48	0	
7C		31	49	1	
7D		0A	10		
7E	Extension flag	00	0	0	0 ： 1個EDID；N：N+1个EDID
7F	Checksum	C3	195	-	