Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT104-C001WS

Version	0
Engineer	
Date	2022/11/21

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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General Specifications

Item	Dimension	Unit
Size	10.4	inch
Dot Matrix	1024 x RGB x 768 (TFT)	dots
Module dimension	240.6 x 190.8 x 15.65	mm
Active area	210.432 x 157.824	mm
Pixel pitch	0.2055 X 0.2055	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	80/80/80/80 min	
Aspect Ratio	4:3	
TFT Interface	LVDS	
Backlight Type	LED ,Normally White	
CTP IC	ILI2511 or Equivalent	
CTP Interface	USB	
CTP FW Version	6.0.0.0.0.0.0.3	
CTP Resolution	16384*16384	
With /Without TP	With CTP	
Surface	Glare	
Side screw torque	TBD	
Assembly Instructions	Need to use edge measuring keyholes to perform fixing and support	

*Color tone slight changed by temperature and driving voltage.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-30	—	+80	℃
Storage Temperature	TST	-30	—	+80	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

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Electrical Characteristics

Operating conditions

Item	Symbol	Standard Value			Unit
		Min	Typ	Max	
Power voltage	V_{DD}	3.0	3.3	3.6	V
Supply CTP	USB_VDD 5V	4.4	5.0	5.5	V
	$I_{VDD\ 5V}$	—	95	145	mA
Input logic high voltage	V_{IH}	0.7 V_{DD}	-	V_{DD}	V
Input logic low voltage	V_{IL}	0	-	0.3 V_{DD}	V
Current for Power	I_{VDD}	-	385	424	mA

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Backlight Enable(BLEN)	High Level	1.3	3.3	-	V	Note 2
	Low Level	-	0.8	1.0	V	
PWM Control Level (PWM)	High Level	-	3.3	-	V	Note 3
	Low Level	-	0	-	V	
PWM Control Duty Ratio	-	0	-	100	%	
PWM Control Frequency	-	-	10K	-	Hz	Note 4
LED Life Time	-	-	100,000	-	Hr	Note 1

Note 1 : Ta = 25 ℃

Note 2 : Turn ON the backlight when BLEN =High, Turn OFF when BLEN =Low

Note 3 : PWM High Active Control from lowest brightness to highest brightness

Note 4 : Lower frequency causes the flicker or the image breaking of motion picture. Depending on the PWM signal integrity (jitter etc.), the flicker may be visible. Please evaluate in advance

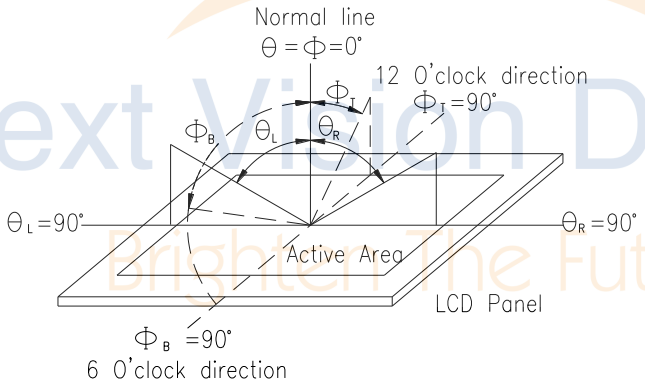
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Optical Characteristics

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Response time		Tr+ Tf	θ=0°、Φ=0°	-	25	35	.ms	Note 3
Contrast ratio		CR	At optimized viewing angle	800	1000	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.269	0.319	0.369	-	Note 2,5,6
		Wy		0.319	0.369	0.419	-	
Viewing angle (Gray Scale Inversion Direction)	Hor.	ΘR	CR≧10	80	-	-	Deg.	Note 1
		ΘL		80	-	-		
	Ver.	ΦT		80	-	-		
		ΦB		80	-	-		
Brightness		-	-	300	400	-	cd/m^2	Center of display
Uniformity		(U)	-	70	-	-	%	Note 5

Ta=25±2℃,

Note 1: Definition of viewing angle range

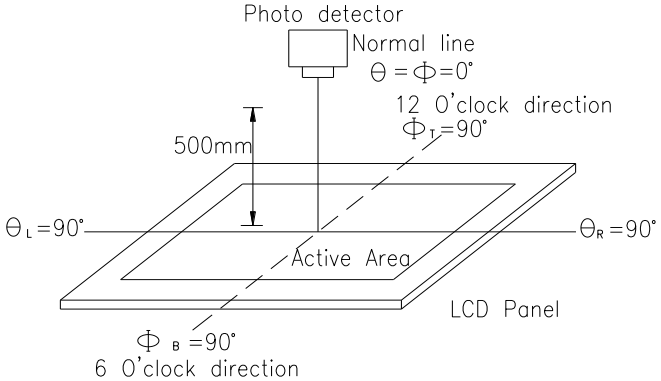


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Fig. 8.1. Definition of viewing angle

Note 2: Test equipment setup:

After stabilizing and leaving the panel alone at a driven temperature for 10 minutes, the measurement should be executed. Measurement should be executed in a stable, windless, and dark room. Optical specifications are measured by Topcon BM-7orBM-5 luminance meter 1.0° field of view at a distance of 50cm and normal direction.



Interface

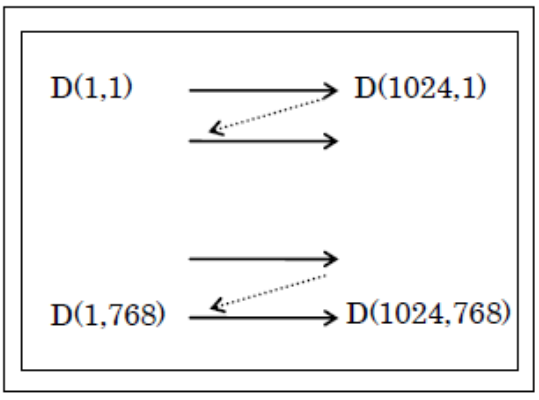
LCM PIN Definition (CON1)

Pin	Symbol	Function	Remark
1-2	VDD	Power supply: + 3.3V	
3-4	GND	Ground	
5	Link0-	0- LVDS differential data input	
6	Link0+	0+ LVDS differential data input	
7	GND	Ground	
8	Link1-	1- LVDS differential data input	
9	Link1+	1+ LVDS differential data input	
10	GND	Ground	
11	Link2-	2- LVDS differential data input	
12	Link2+	2+ LVDS differential data input	
13	GND	Ground	
14	CLKIN-	- LVDS differential clock input	
15	CLKIN+	+ LVDS differential clock input	
16	GND	Ground	
17	Link3-	3- LVDS differential data input	
18	Link3+	3+ LVDS differential data input	
19	MODE	Bit 6:High(6 Bit);Low(8 Bit)	
20	SC	Scan direction selector (Low: Normal ;High: Reverse)	

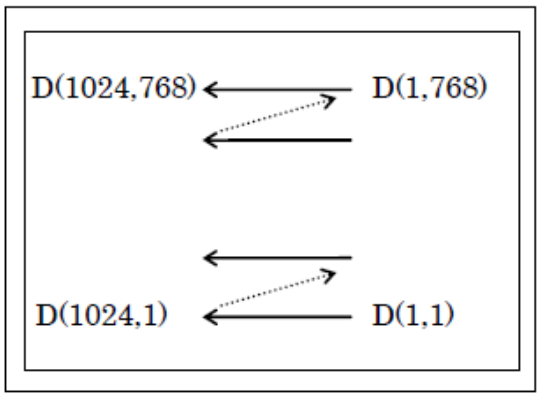
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(1) Display Position and Scan Direction
D(X,Y) shows the data number of input signal.

SC: Low



SC: High



CON2

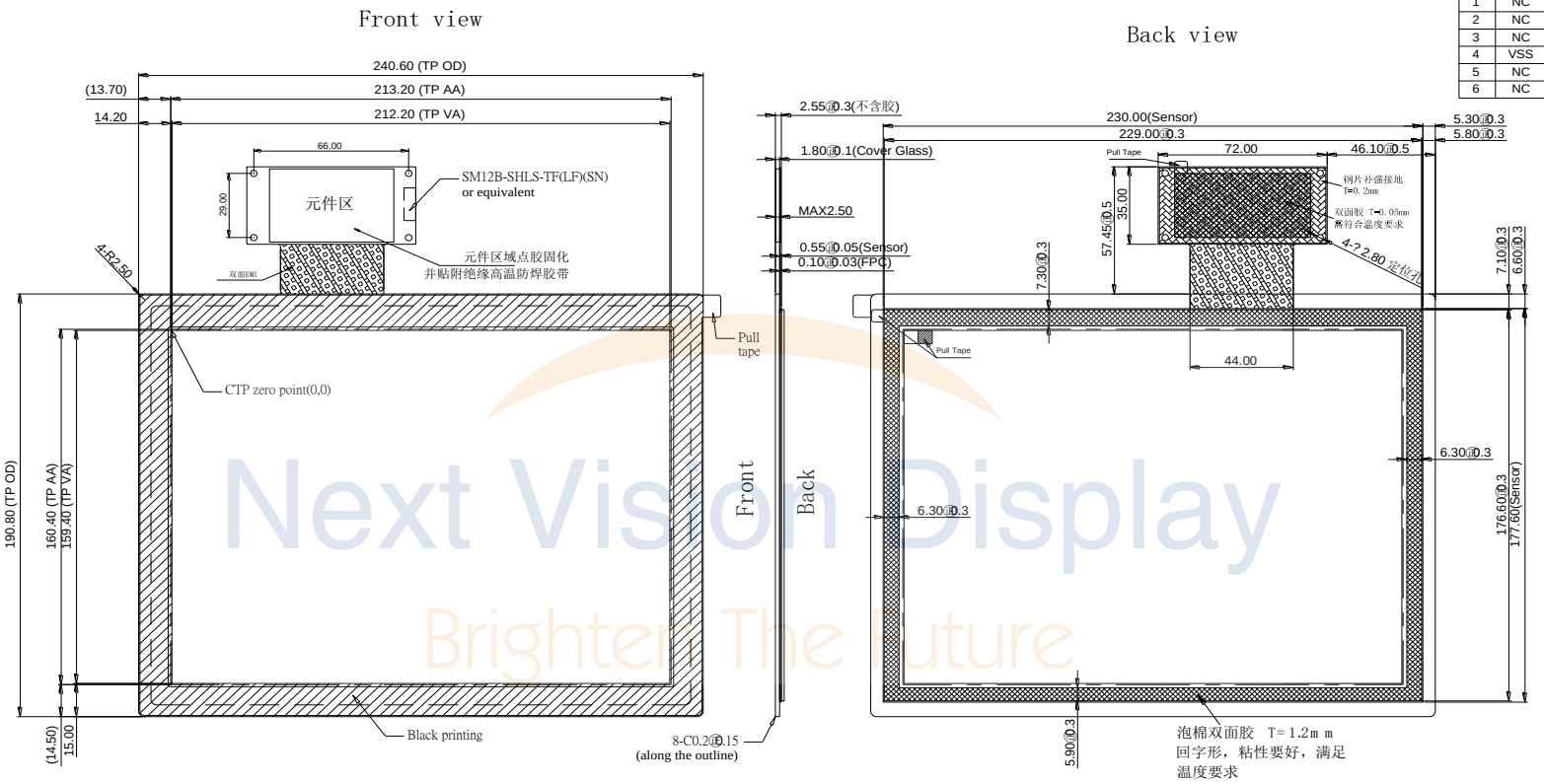
Pin	Symbol	Function	Remark
1-2	VLED 12V	12V input	
3-4	GND	Ground	
5	BLEN	Backlight ON-OFF	
6	LED PWM	Light Dimming Control (PWM) Input Voltage (Low active)	

CON3

Pin	Symbol	Function	Remark
1-3	NC	No connection	
4	Vss	Power ground.	
5-8	NC	No connection	
9	RESET	RST	
10	USB_D-	D-	
11	USB_D+	D+	
12	USB_VDD 5V	Power supply	

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Touch Panel Information



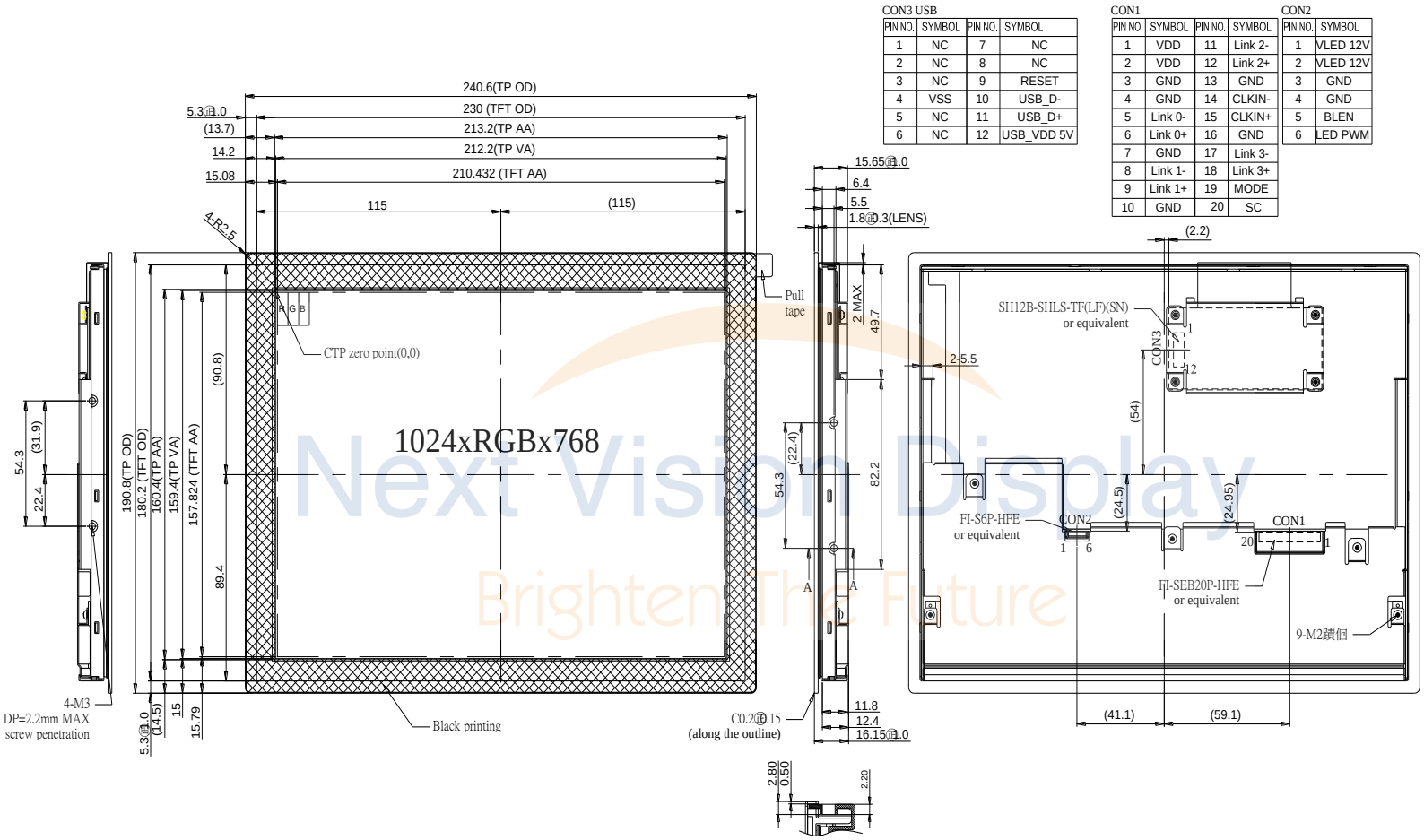
CON3 USB

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	NC	7	NC
2	NC	8	NC
3	NC	9	RESET
4	VSS	10	USB_D-
5	NC	11	USB_D+
6	NC	12	USB_VDD 5V

The non-specified tolerance of dimension is ±0.2 mm .

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Contour Drawing



CON3 USB

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	NC	7	NC
2	NC	8	NC
3	NC	9	RESET
4	VSS	10	USB_D-
5	NC	11	USB_D+
6	NC	12	USB_VDD 5V

CON1

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	VDD	11	Link 2-
2	VDD	12	Link 2+
3	GND	13	GND
4	GND	14	CLKIN-
5	Link 0-	15	CLKIN+
6	Link 0+	16	GND
7	GND	17	Link 3-
8	Link 1-	18	Link 3+
9	Link 1+	19	MODE
10	GND	20	SC

CON2

PIN NO.	SYMBOL
1	VLED 12V
2	VLED 12V
3	GND
4	GND
5	BLEN
6	LED PWM

SECTION A-A
SCALE: 2/1

The non-specified tolerance of dimension is ⓘ0.5 mm .

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