TFT DISPLAY SPECIFICATION



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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF104-1024768GH#VSPW8-FC

APPROVED BY: (FOR CUSTOMER USE ONLY)	PCB VERSION:	DATA:

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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ISSUED DATE: 2024/06/17			

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 30.83	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	
Controller IC	TFP401	
Backlight Type	LED ,Normally White	
Electrical Interface (Logic)	HDMI(only for DVI)	
CTP IC	ILI2511 or Equivalent	
CTP Interface	USB	
CTP FW Version	0x06.0x00.0x00.0x00.0x00.0x00.0x00.0x00	
CTP Resolution	16384*16384	
With /Without TP	With CTP	
Surface	Glare	
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	Min	Typ	Max	Unit	Remark
Supply Voltage For LCM	12V	11.4	12.0	12.6	V	—
Supply Current For LCM	I_{12V}	—	940	1410	mA	Note 1
LED life time	—	-	100,000	-	Hr	Note 4

Note 1 : This value is test for VDD =5.0V , Ta=25℃ only

Note 2 : Please make sure to support enough current

Note3 : Touch Panel driver is base on the mouse driver program and through USB port connect to PC or embedded board.Can only support the single touch.

Note 4: The “LED life time” is defined as the module brightness decrease to 50% original brightness at Ta=25℃ and IL =490mA. The LED lifetime could be decreased if operating IL is lager than 490mA.

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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		-	-	700	800	-	cd/m2	Center of display
Uniformity		(U)	-	70	-	-	%	Note 5

Ta=25±2℃,

Note 1: Definition of viewing angle range

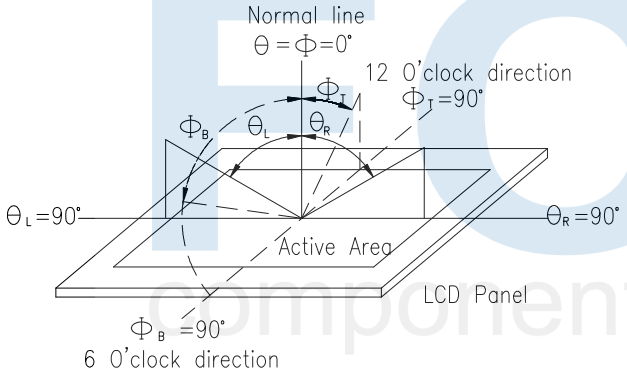
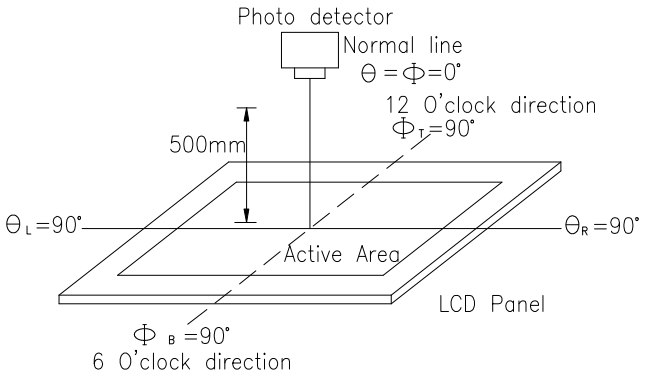


Fig. 6.1. Definition of viewing angle

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

CN4

Pin No.	Symbol	Function	Remark
1	NC	No connection	Note1
2	5V	Raspberry Pi:Power 5V	
3	GPIO02	Raspberry Pi:GPIO02	
4	5V	Raspberry Pi:Power 5V	
5	GPIO03	Raspberry Pi:GPIO03	
6	GND	Raspberry Pi:GND	
7	GPIO04	Raspberry Pi:GPIO04	
8	GPIO14	Raspberry Pi:GPIO14	
9	GND	Raspberry Pi:GND	
10	GPIO15	Raspberry Pi:GPIO15	
11	GPIO17	Raspberry Pi:GPIO17	
12	GPIO18 (PWM_BL)	Backlight Enable,Active_H (Raspberry Pi:GPIO18)	Note 2.3.4
13	GPIO27	Raspberry Pi:GPIO27	
14	GND	Raspberry Pi:GND	
15	GPIO22	Raspberry Pi:GPIO22	
16	GPIO23	Raspberry Pi:GPIO23	
17	NC	No connection	Note1
18	GPIO24	Raspberry Pi:GPIO24	
19	GPIO10	Raspberry Pi:GPIO10	
20	GND	Raspberry Pi:GND	
21	GPIO09	Raspberry Pi:GPIO09	
22	GPIO25	Raspberry Pi:GPIO25	
23	GPIO11	Raspberry Pi:GPIO11	
24	GPIO08	Raspberry Pi:GPIO08	
25	GND	Raspberry Pi:GND	
26	GPIO07	Raspberry Pi:GPIO07	
27	ID_SD	Raspberry Pi:ID_SD	
28	ID_SC	Raspberry Pi:ID_SC	
29	GPIO05	Raspberry Pi:GPIO05	
30	GND	Raspberry Pi:GND	

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31	GPIO06	Raspberry Pi:GPIO06	
32	GPIO12	Raspberry Pi:GPIO12	
33	GPIO13	Raspberry Pi:GPIO13	
34	GND	Raspberry Pi:GND	
35	GPIO19	Raspberry Pi:GPIO19	
36	GPIO16	Raspberry Pi:GPIO16	
37	GPIO26	Raspberry Pi:GPIO26	
38	GPIO20	Raspberry Pi:GPIO20	
39	GND	Raspberry Pi:GND	
40	GPIO21	Raspberry Pi:GPIO21	

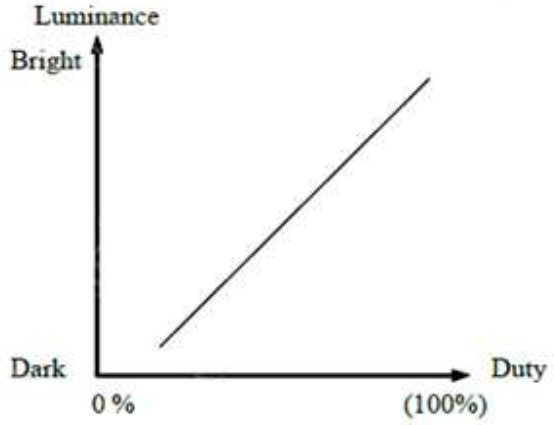
Note1: The 3.3V supply current is limited; please pay special attention to use

CN5

Pin No.	Symbol	Function	Remark
1	3.3V	TFT Module Power limit can only output 3.3V,100mA	
2	5V	Raspberry Pi:Power 5V	
3	GPIO02	Raspberry Pi:GPIO02	
4	5V	Raspberry Pi:Power 5V	
5	GPIO03	Raspberry Pi:GPIO03	
6	GND	Raspberry Pi:GND	
7	GPIO04	Raspberry Pi:GPIO04	
8	GPIO14	Raspberry Pi:GPIO14	
9	GND	Raspberry Pi:GND	
10	GPIO15	Raspberry Pi:GPIO15	
11	GPIO17	Raspberry Pi:GPIO17	
12	GPIO18 (PWM_BL)	Backlight Enable ,Active_H (Raspberry Pi:GPIO18)	Note 2、3、4
13	GPIO27	Raspberry Pi:GPIO27	
14	GND	Raspberry Pi:GND	
15	GPIO22	Raspberry Pi:GPIO22	
16	GPIO23	Raspberry Pi:GPIO23	
17	3.3V	TFT Module Power limit can only output 3.3V,100mA	
18	GPIO24	Raspberry Pi:GPIO24	
19	GPIO10	Raspberry Pi:GPIO10	
20	GND	Raspberry Pi:GND	

21	GPIO09	Raspberry Pi:GPIO09	
22	GPIO25	Raspberry Pi:GPIO25	
23	GPIO11	Raspberry Pi:GPIO11	
24	GPIO08	Raspberry Pi:GPIO08	
25	GND	Raspberry Pi:GND	
26	GPIO07	Raspberry Pi:GPIO07	
27	ID_SD	Raspberry Pi:ID_SD	
28	ID_SC	Raspberry Pi:ID_SC	
29	GPIO05	Raspberry Pi:GPIO05	
30	GND	Raspberry Pi:GND	
31	GPIO06	Raspberry Pi:GPIO06	
32	GPIO12	Raspberry Pi:GPIO12	
33	GPIO13	Raspberry Pi:GPIO13	
34	GND	Raspberry Pi:GND	
35	GPIO19	Raspberry Pi:GPIO19	
36	GPIO16	Raspberry Pi:GPIO16	
37	GPIO26	Raspberry Pi:GPIO26	
38	GPIO20	Raspberry Pi:GPIO20	
39	GND	Raspberry Pi:GND	
40	GPIO21	Raspberry Pi:GPIO21	

Note 2 :Adjust the PWM signal in order to control LED Backlight's brightness. The higher the duty cycle, the lower the brightness.



CTP USB PIN Definition

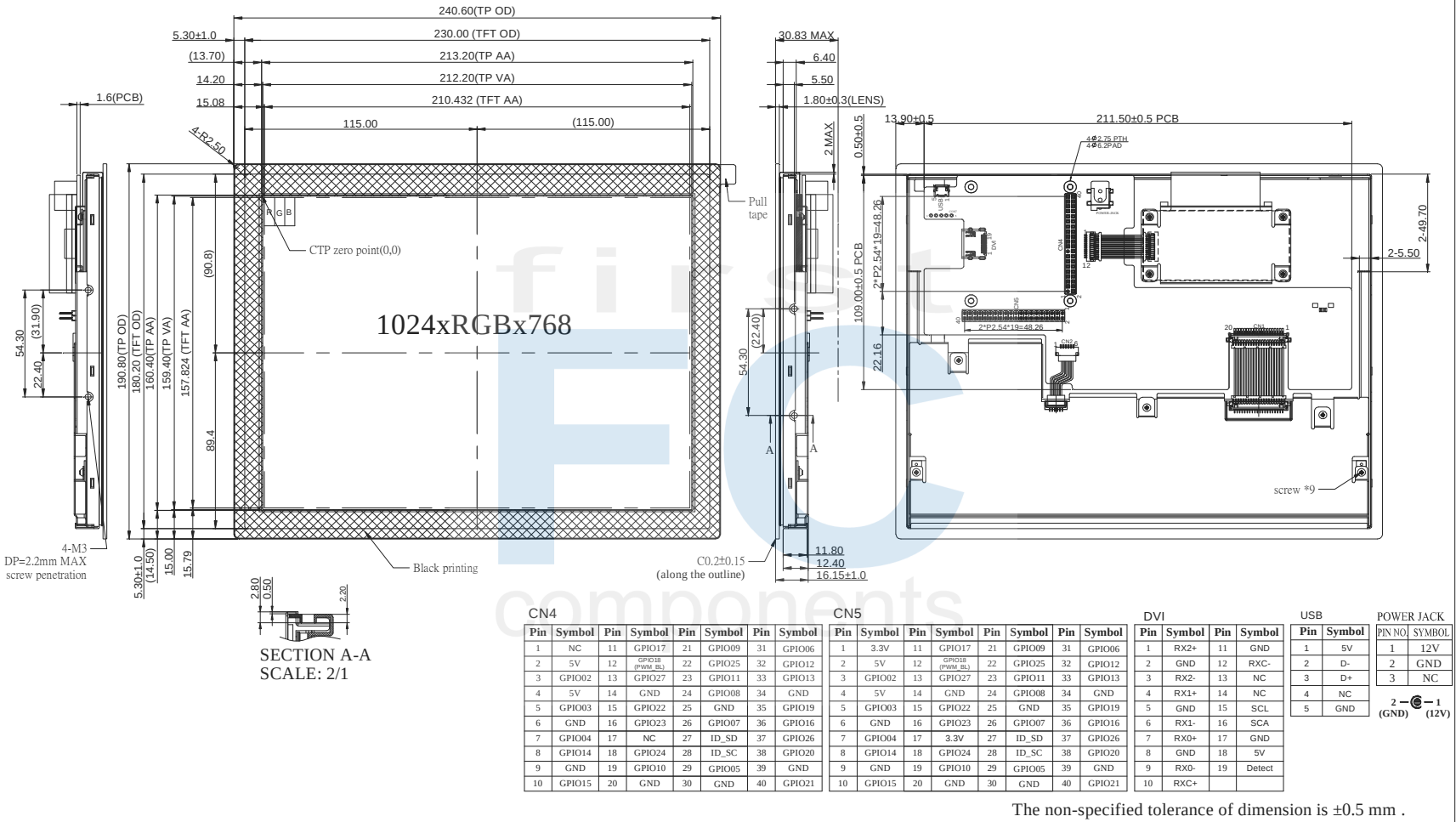
Pin	Symbol	Function	Remark
1	5V	Power Supply (5V)	
2	D-	Data line -	
3	D+	Data line +	
4	NC	No connection	
5	GND	Power Ground	

POWER JACK

Pin	Symbol	Function	Remark
1	12V	Power Supply (12.0V)	
2	GND	Power Ground	
3	NC	No connection	

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Contour Drawing



CN4

Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol
1	NC	11	GPIO17	21	GPIO09	31	GPIO06
2	5V	12	GPIO18 (PWM_BL)	22	GPIO25	32	GPIO12
3	GPIO02	13	GPIO27	23	GPIO11	33	GPIO13
4	5V	14	GND	24	GPIO08	34	GND
5	GPIO03	15	GPIO22	25	GND	35	GPIO19
6	GND	16	GPIO23	26	GPIO07	36	GPIO16
7	GPIO04	17	NC	27	ID_SD	37	GPIO26
8	GPIO14	18	GPIO24	28	ID_SC	38	GPIO20
9	GND	19	GPIO10	29	GPIO05	39	GND
10	GPIO15	20	GND	30	GND	40	GPIO21

CN5

Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol
1	3.3V	11	GPIO17	21	GPIO09	31	GPIO06
2	5V	12	GPIO18 (PWM_BL)	22	GPIO25	32	GPIO12
3	GPIO02	13	GPIO27	23	GPIO11	33	GPIO13
4	5V	14	GND	24	GPIO08	34	GND
5	GPIO03	15	GPIO22	25	GND	35	GPIO19
6	GND	16	GPIO23	26	GPIO07	36	GPIO16
7	GPIO04	17	3.3V	27	ID_SD	37	GPIO26
8	GPIO14	18	GPIO24	28	ID_SC	38	GPIO20
9	GND	19	GPIO10	29	GPIO05	39	GND
10	GPIO15	20	GND	30	GND	40	GPIO21

DVI

Pin	Symbol	Pin	Symbol
1	RX2+	11	GND
2	GND	12	RXC-
3	RX2-	13	NC
4	RX1+	14	NC
5	GND	15	SCL
6	RX1-	16	SCA
7	RX0+	17	GND
8	GND	18	5V
9	RX0-	19	Detect
10	RXC+		

USB

Pin	Symbol
1	5V
2	D-
3	D+
4	NC
5	GND

POWER JACK

PIN NO.	SYMBOL
1	12V
2	GND
3	NC

2 (GND) — 1 (12V)

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