

TFT DISPLAY SPECIFICATION



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SPECIFICATION

MODULE NO.: WF70A8TYFHLHGV#

General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	1024 x RGBx600(TFT)	dots
Module dimension	169.9(W) x 103.4(H) x 26.5 (D)	mm
Active area	154.2144 x 85.92	mm
Pixel pitch	0.1506 x 0.1432	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	85/85/85/85	
Aspect Ratio	16:9	
Controller IC	TFP401 or equivalent	
Backlight Type	LED, Normally White	
TFT Interface	HDMI(only for DVI)	
PCAP IC	ILI2130 or Equivalent	
PCAP Interface	USB	
PCAP FW Version	0x07.0x00.0x00.0x00.0x65.0x90.0x00.0x01	
PCAP Resolution	16384*16384	
Touch Panel	Projected Capacitive Touch Panel (PCAP)	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C

Electrical Characteristics

1. Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For LCM	VDD	—	4.9	5	5.1	V
Supply Current For LCM	IDD	—	—	1453	2180	mA
LED life time	—	—	50,000	—	—	Hr

2. Backlight conditions:

Parameter	Symbol	Min.	Typ.	Max.	Unit
PWM Control Level (Backlight PWM)	High Level	-	3.3	-	V
	Low Level	-	0	-	V
PWM Control Frequency	-	-	1K	-	Hz

Interface

1. LCM PIN Definition(CON6)

Pin	Symbol	Function
1	NC	No connection
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	BL- PWM(GPIO18)	Raspberry Pi:GPIO18 (Backlight PWM)
13	GPIO27	Raspberry Pi:GPIO27
14	GND	Raspberry Pi:GND
15	GPIO22	Raspberry Pi:GPIO22
16	GPIO23	Raspberry Pi:GPIO23
17	NC	No connection
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

2. LCM PIN Definition (CON5)

Pin	Symbol	Function
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	BL- PWM(GPIO18)	Raspberry Pi:GPIO18 (Backlight PWM)
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

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

3. USB

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

4. POWER JACK

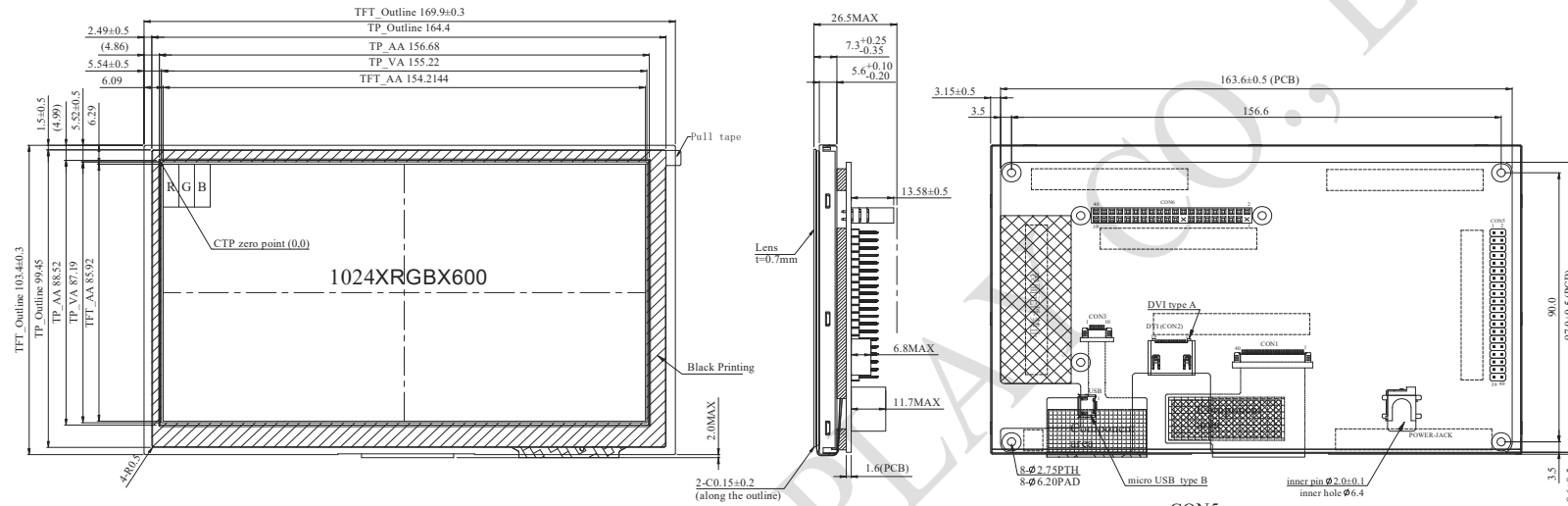
Pin No.	Symbol	I/O	Function
1	5V	P	Power Supply (5V)
2	GND	P	Ground
3	NC		No connection

5. DVI

Pin No.	Symbol	I/O	Function
1	Rx2+	I	Channel-2 positive receiver input; low-voltage signal differential- input pair.
2	GND	P	Ground
3	Rx2-	I	Channel-2 negative receiver input; low-voltage signal differential- input pair.
4	Rx1+	I	Channel-1 positive receiver input; low-voltage signal differential- input pair.
5	GND	P	Ground
6	Rx1-	I	Channel-1 negative receiver input; low-voltage signal differential- input pair.
7	Rx0+	I	Channel-0 positive receiver input; low-voltage signal differential- input pair.
8	GND	P	Ground
9	Rx0-	I	Channel-0 negative receiver input; low-voltage signal differential- input pair.
10	RxC+	I	Clock positive receiver input; low-voltage signal differential- input pair.
11	GND	P	Ground
12	RxC-	I	Clock negative receiver input; low-voltage signal differential- input pair.
13-14	NC	-	No connection
15	SCL	I/O	DDC(Data Display Channel) Clock
16	SDA	I/O	DDC(Data Display Channel) Data
17	GND	P	Ground
18	5V	P	Power Supply
19	Detect	I/O	Hot plug detect

I: input, O: output, P: Power

Contour Drawing



POWER JACK

PIN NO.	SYMBOL
1	5V
2	GND
3	NC

2 - (GND) - 1 (5V)

USB

PIN NO.	SYMBOL
1	5V
2	D-
3	D+
4	NC
5	GND

DVI

PIN NO.	SYMBOL
1	RX2+
2	GND
3	RX2-
4	RX1+
5	GND
6	RX1-
7	RX0+
8	GND
9	RX0-
10	RXC+
11	GND
12	RXC-
13	NC
14	NC
15	SCL
16	SDA
17	GND
18	5V
19	Detect

CON6

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

CON5

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

The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.