

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODULE NO.: WF70A9SWAGDNG0#

General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	800 x RGB x 480(TFT)	dots
Module dimension	165.8 (W) x 106.61 (H) x 8.5(D)	mm
Active area	152.40 x 91.44	mm
Pixel pitch	0.1905 x 0.1905	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
TFT Interface	24-bit RGB	
TFT Driver IC	HX8249-A + HX8678-C or Equivalent	
Aspect Ratio	15:9	
Backlight Type	LED, Normally White	
CTP IC	ILI 2130 or equivalent	
CTP Interface	I2C	
CTP FW Version	0x07.0x00. 0x00. 0x00. 0x00. 0x07. 0x68. 0xA1	
CTP 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	-30	—	+80	°C
Storage Temperature	TST	-40	—	+85	°C

Electrical Characteristics

1. Operating conditions

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage	Vcc	2.7	3.3	3.6	V
Current of power supply	Icc	—	101	150	mA
Supply CTP	VDDT	3.1	3.3	3.5	V
	I _{VDDT}	—	62	93	mA

2. LED driving conditions

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	450	—	mA
LED voltage	VLED+	8.1	9.3	10.2	V
LED Life Time	—	40000	—	—	Hr

Interface

1. LCM PIN Definition

Pin	Symbol	Function
1-4	NC	No connection
5	GND	Power Ground
6	NC	No connection
7	VCC	Power voltage
8	NC(MODE)	No connection, Input timing is Sync mode. The pin is already connected to VCC internally.
9	DE	Data enable signal for TTL mode.
10	VS	Vertical sync input
11	HS	Horizontal sync input
12	B7	Blue data(MSB)
13	B6	Blue data
14	B5	Blue data
15	B4	Blue data
16	B3	Blue data
17	B2	Blue data
18	B1	Blue data
19	B0	Blue data(LSB)
20	G7	Green data(MSB)
21	G6	Green data
22	G5	Green data
23	G4	Green data
24	G3	Green data
25	G2	Green data
26	G1	Green data
27	G0	Green data(LSB)
28	R7	Red data(MSB)
29	R6	Red data
30	R5	Red data
31	R4	Red data
32	R3	Red data

33	R2	Red data
34	R1	Red data
35	R0	Red data (LSB)
36	GND	Power Ground
37	DCLK	Sample clock
38	GND	Power Ground
39	NC(L/R)	No connection, Horizontal scan direction (Left to right). The pin is already connected to VCC internally.
40	NC(U/D)	No connection, Vertical scan direction (Top to bottom). The pin is already connected to VCC internally.
41	NC	No connection
42	NC	No connection
43	NC	No connection
44	RESET	Reset pin. The chip is in reset state when RESETB=0.
45	NC	No connection
46	NC	No connection
47	STBYB	STBYB Standby mode setting pin. The chip is in standby mode when STBYB=0.
48	GND	Power Ground
49	NC	No connection
50	NC	No connection

2. Backlight PIN Definition

Pin	Symbol	Description
1	VLED+	Red, LED_ Anode
2	VLED-	Black, LED_ Cathode

3. CTP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT	Power Supply : +3.3V
3	SCL	I2C clock input
4	NC	No connect
5	SDA	I2C data input and output
6	NC	No connect
7	/RST	External Reset, Low is active
8	NC	No connect

9	/INT	External interrupt to the host
10	VSS	Ground for analog circuit

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Technical drawing of a TFT module assembly, showing dimensions and pin configurations.

Dimensions (mm):

- Overall width: 165.80 (TFT OD), 164.00 (TP OD), 153.30 (TP VA), 152.40 (AA)
- Overall height: 106.61 (TFT OD), 104.00 (TP OD), 92.24 (TP VA), 91.44 (AA)
- Internal dimensions: 1.80±0.5, 4.85±0.5, 5.35, 5.29, 4.89±0.5, 2.13±0.5
- Component Area (TFT): 800 X RGB X 480
- CTP zero point(0,0)
- CTP FPC: 25.50±0.1 (TFT FPC), 4.00, 0.35±0.05, 5.50±0.1, 96.30±0.5
- CTP FPC: 8.82±0.5, 15.00±0.5, 15.00±0.5, 1.50 MAX, 1.8 MAX, 0.30±0.05, 0.30±0.05
- CTP FPC: 8.82±0.5, 3.145±0.5, 6.00, 5.00, 10 (CTP FPC)
- CTP FPC: 3.8±0.3, 0.35±0.05, P 0.5*49=24.5±0.1, 0.5±0.1

Pin Configurations:

CTP FPC

PIN NO.	SYMBOL
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	/RST
8	NC
9	/INT
10	VSS

TFT FPC

PIN NO.	SYMBOL
1	NC
2	NC
3	NC
4	NC
5	GND
6	NC
7	VCC
8	NC (MODE)
9	DE
10	VS
11	HS
12	B7
13	B6
14	B5
15	B4
16	B3
17	B2
18	B1
19	B0
20	G7
21	G6
22	G5
23	G4
24	G3
25	G2
26	G1
27	G0
28	R7
29	R6
30	R5
31	R4
32	R3
33	R2
34	R1
35	R0
36	GND
37	DCCLK
38	GND
39	NC(L/R)
40	NC(U/D)
41	NC
42	NC
43	NC
44	RESET
45	NC
46	NC
47	STBYB
48	GND
49	NC
50	NC

Other Labels:

- Pull tape
- 2-C0.15 all around
- Lens t=1.1mm
- JST BHSR-02VS-1 or equivalent
- Red(+)
- Black(-)
- 90.0±7.5
- 2-8.00±1.0
- TAPE
- Black Tape
- Steel Stiffener + D.S.T.
- 5.00
- 6.00
- 3.145±0.5
- 8.82±0.5
- Bending Area
- CTP FPC
- 10
- 0.35±0.05
- P 0.5*49=24.5±0.1
- 0.5±0.1
- 3.8±0.3
- 0.35±0.05

Scale: A:SCALE:5X

Note: The non-specified tolerance of dimension is ±0.3 mm .