

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



Winstar Display Co., LTD

華凌光電股份有限公司



WEB: <https://www.winstar.com.tw> E-mail: sales@winstar.com.tw

SPECIFICATION

MODULE NO.: WF70D5SWAHLNGA#

General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	1024 x RGB x 600(TFT)	dots
Module dimension	202.0(W) x 135.5(H) x 8.4(D)	mm
Active area	154.2144 x 85.92	mm
Pixel pitch	0.1506 x 0.1432	mm
LCD type	TFT, Normally Black, Transmissive	
View Angle	80/80/80/80	
TFT Driver IC	JD9165BA or Equivalent	
Backlight Type	LED, Normally White	
TFT Interface	LVDS	
PCAP IC	GT911 or equivalent	
PCAP Interface	I2C	
PCAP FW Version	67	
PCAP Resolution	1024*600	
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	—	+85	°C
Storage Temperature	TST	-30	—	+85	°C

Electrical Characteristics

1. Operating conditions:

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power voltage	VDD	3.0	3.3	3.6	V
Analog Power	AVDD	-	11	-	V
TFT Gate ON Voltage	VGH	19.5	20	20	V
TFT Gate OFF Voltage	VGL	-8.5	-8	-7.5	V
TFT Common Voltage	Vcom	-	4.9	-	V
Power Current	IDD	-	18	27	mA
Analog Power Current	IAVDD	-	20.94	-	mA
TFT Gate ON Current	IVGH	-	1.5	-	mA
TFT Gate OFF Current	IVGL	-	1.5	-	mA
TFT Common Current	IVCOM	-	1	-	uA
Supply CTP	VDDT	3.1	3.3	3.5	V
	I _{CTP}	—	16	24	mA

2. LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	—	—	240	—	mA
LED voltage	VLED+	16.2	19.2	21.0	V
LED Life Time	—	50,000	—	—	Hr

Interface

1. LCM PIN Definition

Pin No.	Symbol	Function
1	VCOM	Common Voltage
2	VDD	Digital circuit
3	VDD	Digital circuit
4	NC	No connection
5	RESET	Global reset pin
6	STBYB	Standby mode, Normally pulled high STBYB = "1", normal operation STBYB = "0", timing controller, source driver will turn off, all output are High-Z
7	GND	Ground
8	RXIN0-	Negative LVDS differential data input
9	RXIN0+	Positive LVDS differential data input
10	GND	Ground
11	RXIN1-	Negative LVDS differential data input
12	RXIN1+	Positive LVDS differential data input
13	GND	Ground
14	RXIN2-	Negative LVDS differential data input
15	RXIN2+	Positive LVDS differential data input
16	GND	Ground
17	RXCLKIN-	Negative LVDS differential clock input
18	RXCLKIN+	Positive LVDS differential clock input
19	GND	Ground
20	RXIN3-	Negative LVDS differential data input
21	RXIN3+	Positive LVDS differential data input
22	GND	Ground
23	NC	No connection
24	NC	No connection
25	GND	Ground
26	NC	No connection
27	NC	No connection
28	SELB	6bit/8bit mode select H:6bit / L:8bit

29	AVDD	Power for Analog Circuit
30	GND	Ground
31	VLED-	LED_ Cathode
32	VLED-	LED_ Cathode
33	L/R	Horizontal inversion
34	U/D	Vertical inversion
35	VGL	Negative power for TFT
36	NC	No connection
37	NC	No connection
38	VGH	Positive power for TFT
39	VLED+	LED_ Anode
40	VLED+	LED_ Anode

2. PCAP 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

TP Outline 202.00±0.15

TFT Outline 169.90±0.3

TP_AA 156.22

TP_VA 155.22

TFT_AA 154.2144

1024xRGBx600

CTP Zero point(0,0)

Black Printing

Pull tape

Adhesive (T=0.175mm)

Stiffener+DST

Stiffener

Contact side

CTP FPC

TP Outline 135.50±0.15

TFT Outline 103.40±0.3

TP_AA 87.92

TP_VA 86.92

TFT_AA 85.92

4.9±0.1

18.50±0.5

23.79

24.29

24.79

17.80±0.5

22.89

23.39

(23.90)

38.55±0.5

4.00

2.05±0.2

0.35±0.05

P0.5*39=19.50±0.1

69.50±0.5

150.91±0.5

20.50±0.1

0.50±0.1

0.25±0.05

P0.5*9=4.50±0.1

5.50±0.1

(CTP FPC)

2.40±0.15±0.1 (all around)

8.40^{+0.25}_{-0.35}

5.60^{+0.10}_{-0.20}

Lens

t=1.8mm

1.40Max

1.65Max

7.96±0.5

4.50±0.5

21.50±0.5

12.60

4.50±0.5

44.50±0.15

1.50

1

40

P1.00

(TFT FPC)

16.00

201.00 (ADHESIVE)

170.90 (ADHESIVE)

0.50±0.5 (all around)

16.80±0.5

175.00±0.5

104.40 (ADHESIVE)

134.50 (ADHESIVE)

Pull tape

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	VCOM
2	VDD
3	VDD
4	NC
5	RESET
6	STBYB
7	GND
8	RXIN0-
9	RXIN0+
10	GND
11	RXIN1-
12	RXIN1+
13	GND
14	RXIN2-
15	RXIN2+
16	GND
17	RXCLKIN-
18	RXCLKIN+
19	GND
20	RXIN3-
21	RXIN3+
22	GND
23	NC
24	NC
25	GND
26	NC
27	NC
28	SELB
29	AVDD
30	GND
31	VLED-
32	VLED-
33	L/R
34	U/D
35	VGL
36	NC
37	NC
38	VGH
39	VLED+
40	VLED+

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