

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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

SPECIFICATION

MODULE NO.: WF50FTWAGDNGB#

General Specifications

Item	Dimension	Unit
Size	5.0	inch
Dot Matrix	800 × 3(RGB) × 480	dots
Module dimension	147.0(W) × 104.0(H) × 4.88	mm
Active area	108.0(W) × 64.8 (H)	mm
Pixel pitch	0.135(W) × 0.135(H)	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
Aspect Ratio	5:3	
TFT Driver IC	ST7262 or equivalent	
TFT Interface	24 bit R.G.B.	
Backlight Type	LED, Normally White	
PCAP IC	GT911 or equivalent	
PCAP Interface	I2C	
PCAP FW Version	65	
PCAP Resolution	800*480	
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	-30	—	+80	°C

Electrical Characteristics

1. Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power voltage	VDD	3.1	3.3	3.6	V
Current for Driver(Black)	IDD	-	65	97.5	mA
Input logic high voltage	VIH	0.7 VDD	-	VDD	V
Input logic low voltage	VIL	0	-	0.3 VDD	V
Supply CTP	VDDT	2.8	-	3.3	V
	ICTP	-	15	22.5	mA

2. Backlight Driving Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Voltage for LED backlight	VL	16.8	19.2	20.4	V
Current for LED backlight	IL	--	60	--	mA
LED life time	-	--	50,000	-	Hr

Interface

1.LCM PIN Definition

FPC Connector is used for the module electronics interface.

Pin	Symbol	Function
1	VLED-	Power for LED backlight (Cathode)
2	VLED+	Power for LED backlight (Anode)
3	GND	Power Ground
4	VDD	Power voltage
5	R0	Red data (LSB)
6	R1	Red data
7	R2	Red data
8	R3	Red data
9	R4	Red data
10	R5	Red data
11	R6	Red data
12	R7	Red data(MSB)
13	G0	Green data(LSB)
14	G1	Green data
15	G2	Green data
16	G3	Green data
17	G4	Green data
18	G5	Green data
19	G6	Green data
20	G7	Green data(MSB)
21	B0	Blue data(LSB)
22	B1	Blue data
23	B2	Blue data
24	B3	Blue data
25	B4	Blue data
26	B5	Blue data
27	B6	Blue data
28	B7	Blue data(MSB)
29	GND	Power Ground

30	CLK	Sample clock(DCLK)
31	DISP	Display on/off
32	NC	No connection
33	NC	No connection
34	DE	Data input enable
35	NC	No connection
36	GND	Power Ground
37	NC	No connection
38	NC	No connection
39	NC	No connection
40	NC	No connection

2. PCAP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT	Power Supply : +3.0V
3	SCL	I2C clock input 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

Outline Drawing

TP_Outline 147.00±0.15
TFT_Outline 120.70±0.3
TP_AA 110.40
TP_VA 109.00
TFT_AA 108.0
13.21±0.5
18.30
19.00
(19.50)
4.88±0.35
2.8±0.2
0.50±0.5 (all around)
12.16±0.5
ADHESIVE (T=0.175mm)
Pull tape
15.11±0.5
12.10±0.5
11.02±0.5
1.40Max
1.30Max
Component Height
Stiffener
0.30±0.05
0.30±0.05
6.00±0.5
10
(CTP FPC)
Stiffener+DST
Bending Area
40
(TFT FPC)
5.00
15.02±0.5
3.50
3.59±0.5
25.80
9.54±0.5
37.48±0.5
22.86±0.5
4.00
0.35±0.05
0.35±0.05
P0.5*39=19.50±0.1
26.30±0.5
20.50±0.1
(TFT FPC)
P0.5*9=4.5±0.1
5.5±0.1
29.36±0.5
(CTP FPC)
Black Printing
CTP zero point(0,0)
800 X RGB X 480
RGB
1 C

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	VLED-	21	
2	VLED+	22	
3	GND	23	
4	VDD	24	
5	R0	25	
6	R1	26	
7	R2	27	
8	R3	28	
9	R4	29	
10	R5	30	
11	R6	31	
12	R7	32	
13	G0	33	
14	G1	34	
15	G2	35	
16	G3	36	
17	G4	37	
18	G5	38	
19	G6	39	
20	G7	40	

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

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

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PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	V _{LED} -	21	B0
2	V _{LED} +	22	B1
3	G _{ND}	23	B2
4	V _{DD}	24	B3
5	R0	25	B4
6	R1	26	B5
7	R2	27	B6
8	R3	28	B7
9	R4	29	GND
10	R5	30	CLK
11	R6	31	DISP
12	R7	32	NC
13	G0	33	NC
14	G1	34	DE
15	G2	35	NC
16	G3	36	GND
17	G4	37	NC
18	G5	38	NC
19	G6	39	NC
20	G7	40	NC

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

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