



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**



## SPECIFICATION

**MODULE NO.: WF50DTYA3MNG10#**

### General Specifications

Item	Dimension	Unit
Size	5.0	inch
Dot Matrix	720 × 3(RGB) × 1280	dots
Module dimension	73.3 (W) × 127.6 (H) × 3.45	mm
Active area	62.1 (W) × 110.4 (H)	mm
Dot pitch	0.08625(W) × 0.08625(H)	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing angle	80/80/80/80	
Aspect Ratio	16:9	
Backlight Type	LED ,Normally White	
TFT Drive IC	ILI9881C or Equivalent	
TFT Interface	MIPI	
PCAP FW Version	0x5F	
PCAP IC	GT928	
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. Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power supply for analog circuit	VCI	2.5	3.3	3.6	V
Power supply for logic circuit	IOVCC	1.65	1.8	3.6	V
Supply Voltage For Touch Logic	VDDT	2.8	-	3.3	V
Current for Driver	IDD	-	44	-	mA

## 2. Backlight Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	ILED	-	40	-	mA
LED voltage	VLED+	19.6	-	23.8	V
LED Life Time		30,000	-	-	Hr

# Interface

## 1. LCM PIN Definition

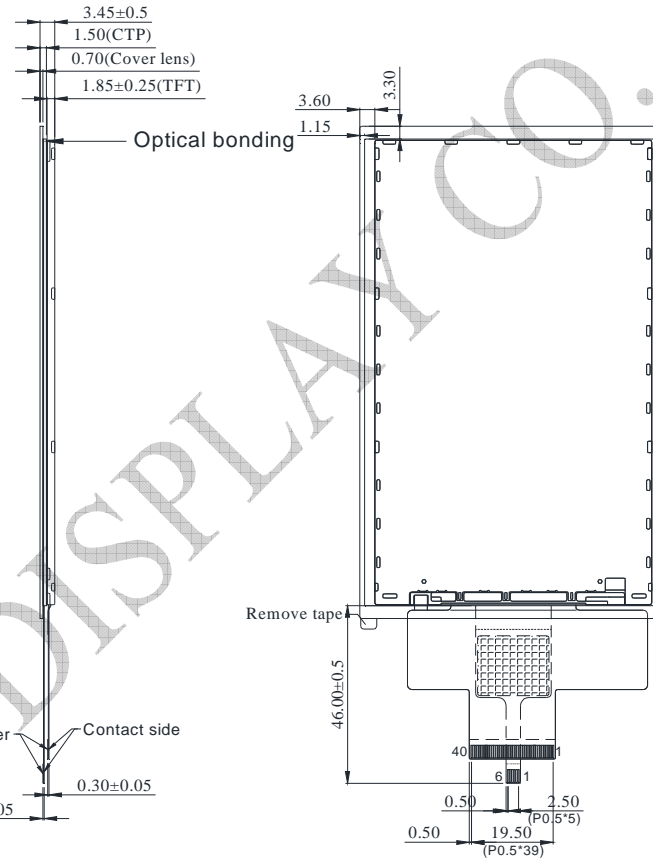
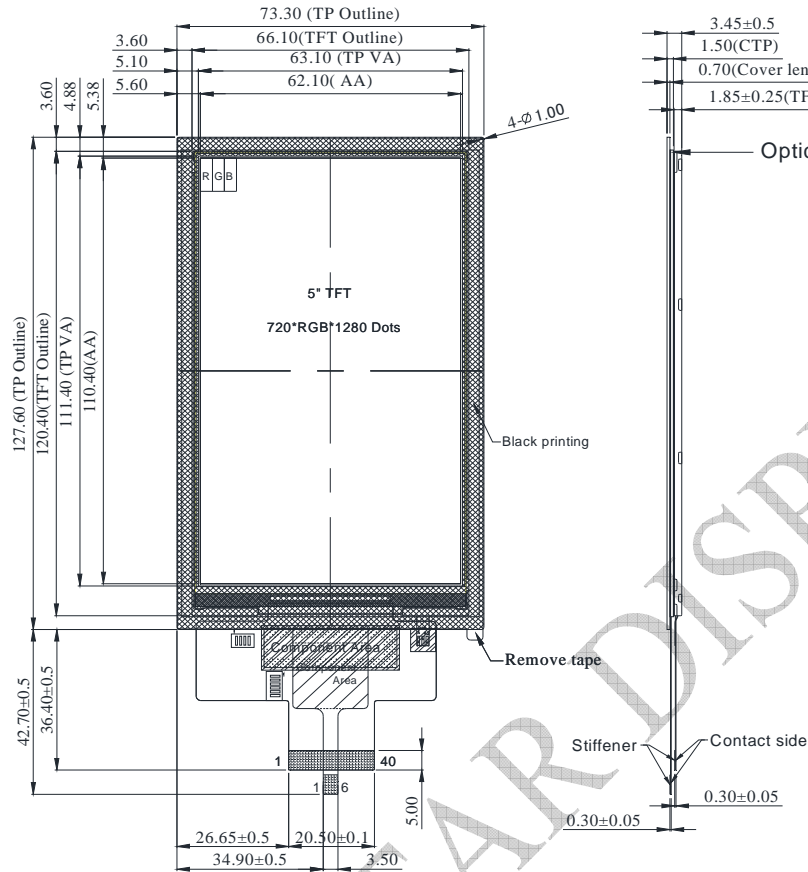
Pin	Symbol	Function
1	NC	No connection
2	NC	No connection
3	NC	No connection
4	NC	No connection
5	NC	No connection
6	NC	No connection
7	NC	No connection
8	NC	No connection
9	NC	No connection
10-11	VCI	Power supply for analog circuits. Connect to an external power supply of 2.5V to 3.6V
12-13	NC	No connection
14	RESET	The external reset input Initializes the chip with a low input. Be sure to execute a power-on reset after supplying power. Fix to VDDI level when not in use.
15	TE	Tearing effect output pin. Leave the pin open when not in use.
16	NC	No connection
17-18	GND	Power ground
19-20	IOVCC	Power supply for analog circuits. Connect to an external power supply of 1.65V to 3.6V
21	GND	Power ground
22	D3P	MIPI DSI differential data pair. (Data lane 3)
23	D3N	
24	GND	Power ground
25	D2P	MIPI DSI differential data pair. (Data lane 2)
26	D2N	
27	GND	Power ground
28	CLKP	MIPI DSI differential clock pair
29	CLKN	
30	GND	Power ground
31	D1P	MIPI DSI differential data pair. (Data lane 1)

32	D1N	
33	GND	Power ground
34	D0P	MIPI DSI differential data pair. (Data lane 0)
35	D0N	
36-37	GND	Power ground
38	LED+	Power for LED backlight anode
39	LED1-	Power for LED1 backlight cathode
40	LED2-	Power for LED2 backlight cathode

## 2. PCAP PIN Definition

Pin	Symbol	Function
1	SDA	I2C data input and output
2	SCL	I2C clock input
3	RST	External Reset, Low is active
4	INT	External interrupt to the host
5	VDD	Power Supply : +3.3V
6	GND	Ground for analog circuit

# Contour Drawing



PIN NO.	SYMBOL	PIN No.	Pin Name
1	SDA	1	NC
2	SCL	2	NC
3	RST	3	NC
4	INT	4	NC
5	VDDT	5	NC
6	GND	6	NC (YU)
		7	NC (XL)
		8	NC (YD)
		9	NC (XR)
		10	VCI
		11	VCI
		12	NC
		13	NC
		14	RESET
		15	TE
		16	NC
		17	GND
		18	GND
		19	IOVCC
		20	IOVCC
		21	GND
		22	D3P
		23	D3N
		24	GND
		25	D2P
		26	D2N
		27	GND
		28	CLKP
		29	CLKN
		30	GND
		31	D1P
		32	D1N
		33	GND
		34	DOP
		35	DON
		36	GND
		37	GND
		38	LED+
		39	LED1-
		40	LED2-

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