

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODULE NO.: WF57XTIACDNG0#

General Specifications

Item	Dimension	Unit
Size	5.7	inch
Dot Matrix	320 x RGBx240(TFT)	dots
Module dimension	126.00(W) x 101.55(H) x 7.79(D)	mm
Active area	115.2 x 86.40	mm
Dot pitch	0.12 x 0.36	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	12 o'clock	
Gray Scale Inversion Direction	6 o'clock	
TFT Drive IC	HX8218+HX8615 or Equivalent	
Interface	24-bit RGB	
Aspect Ratio	4:3	
Backlight Type	LED, Normally White	
PCAP FW Version	0x07.0x00.0x00.0x00.0xA2.0x01.0x57.0x00	
PCAP IC	ILI2130 or Equivalent	
PCAP Interface	I2C	
PCAP Resolution	16384*16384	
Touch Panel	With PCAP	
Surface	Glare	

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	VCC	—	3.2	3.3	3.4	V
	AVDD		4.5	5.0	5.5	V
Supply PCAP	VDDT	—	3.1	3.3	3.5	V
	I _{CTP}	—	—	56	84	mA
Input High Volt.	V _{IH}	—	0.7 VCC	—	VCC	V
Input Low Volt.	V _{IL}	—	0	—	0.3 VCC	V
LCD Driving Supply Voltage	V _{GH} *1	Ta=25°C	15	16	17	V*3
	V _{GL} *2		-6	-5	-4	
	V _{comH}		—	4.5	—	
	V _{comL}		—	-0.5	—	
Supply Current For LCM	I _{VCC}	VCC=3.3V	—	30	45	mA

2. LED driving conditions :

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	—	—	140	—	mA
Power Consumption	—	1204	—	1470	mW
LED voltage	V _{BL+}	8.6	9.5	10.5	V
LED Life Time	—	—	50,000	—	Hr

Interface

1. LCM PIN Definition

Pin No.	Symbol	I/O	Description
1	IF1	I	Input data format control (Note1)
2	IF2	I	Input data format control (Note1)
3	POL	O	Polarity Signal connect to VCOM driving circuit.
4	RESET	I	Hardware reset.
5	SPENA	I	Chip select
6	SPCL	I	Serial Clock
7	SPDA	I/O	Serial Data
8	B0	I	Blue Data bit (LSB)
9	B1	I	Blue Data bit
10	B2	I	Blue Data bit
11	B3	I	Blue Data bit
12	B4	I	Blue Data bit
13	B5	I	Blue Data bit
14	B6	I	Blue Data bit
15	B7	I	Blue Data bit(MSB)
16	G0	I	Green Data bit(LSB)
17	G1	I	Green Data bit
18	G2	I	Green Data bit
19	G3	I	Green Data bit
20	G4	I	Green Data bit
21	G5	I	Green Data bit
22	G6	I	Green Data bit
23	G7	I	Green Data bit(MSB)
24	R0	I	Red Data bit(LSB)
25	R1	I	Red Data bit
26	R2	I	Red Data bit
27	R3	I	Red Data bit
28	R4	I	Red Data bit
29	R5	I	Red Data bit
30	R6	I	Red Data bit

31	R7	I	Red Data bit(MSB)
32	Hsync	I	Horizontal synchronous signal
33	Vsync	I	Vertical synchronous signal
34	Data CLK	I	Dot data clock
35	AVDD	I	4.5V~5.5V
36	AVDD	I	4.5V~5.5V
37	Vcc	I	3.2V~3.4V
38	Vcc	I	3.2V~3.4V
39	NPC	O	NTSC/PAL mode Auto detection result H:NTSC/L:PAL
40	VGL	I	Gate off power
41	VGL	I	Gate off power
42	UD	I	Up/Down scan setting. H: Reverse scan / L: Normal scan
43	VGH	I	Gate on power
44	LRC	I	Shift direction of device internal shift register control.
45	GND	I	GROUND
46	VCOM	I	VCOM driving input
47	VCOM	I	VCOM driving input
48	ENB	I	Data enable input. Normally pull low.
49	GND	I	GROUND
50	GND	I	GROUND

Note : 1.Control the input data format.

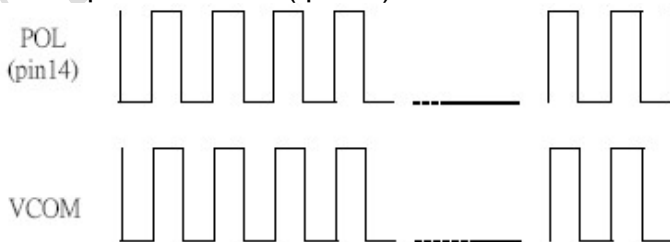
IF2,IF1	Input data format
L,L(default)	Serial RGB
L,H	Parallel RGB
H,L	CCIR601
H,H	CCIR656

2. Pin 5、Pin 6 usually pull high.

3. The polarity of VCOM (Pin 46,47) should be generated from POL (Pin 3).

4. For digital RGB input data format, both SYNC mode and DE+SYNC mode are supported. If ENB signal is fixed low, SYNC mode is used. Otherwise, DE+SYNC mode is used.

5. The phase of POL (pin 3):



2. Backlight PIN Definition

Pin No.	Symbol	I/O	Description
1	VLED+	I	Red, LED_ Anode
2	VLED-	I	Black, LED_ Cathode

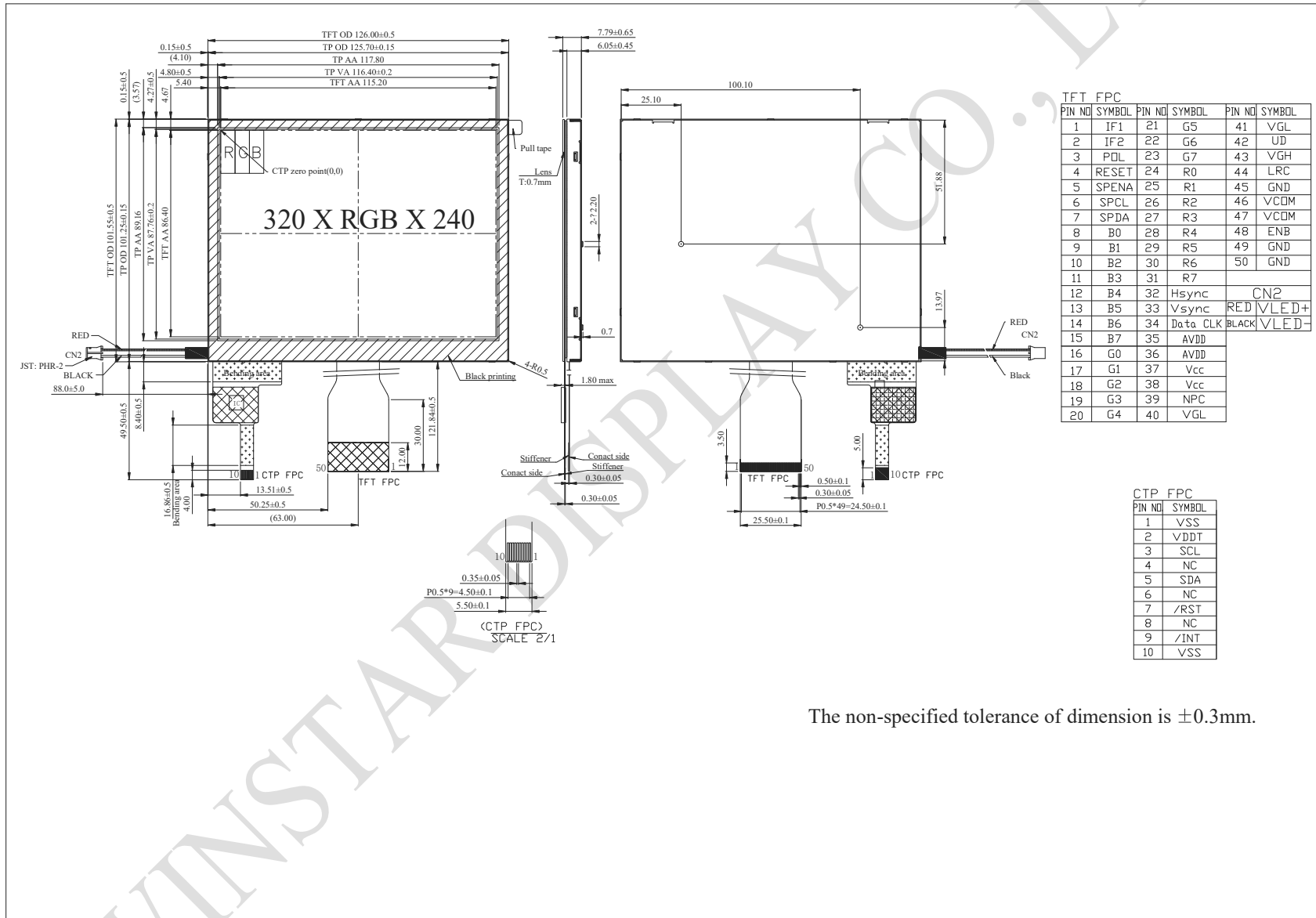
Note : The backlight interface connector is a model **PHR-2** manufactured by JST or equivalent.

The matching connector part number is S 2B-PH-K-S manufactured by JST or equivalent.

3. 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

Contour Drawing



TFT FPC					
PIN NO	SYMBOL	PIN NO	SYMBOL	PIN NO	SYMBOL
1	IF1	21	G5	41	VGL
2	IF2	22	G6	42	UD
3	PDL	23	G7	43	VGH
4	RESET	24	R0	44	LRC
5	SPENA	25	R1	45	GND
6	SPCL	26	R2	46	VCOM
7	SPDA	27	R3	47	VCOM
8	B0	28	R4	48	ENB
9	B1	29	R5	49	GND
10	B2	30	R6	50	GND
11	B3	31	R7		
12	B4	32	Hsync		CN2
13	B5	33	Vsync	RED	VLED+
14	B6	34	Data CLK	BLACK	VLED-
15	B7	35	AVDD		
16	G0	36	AVDD		
17	G1	37	Vcc		
18	G2	38	Vcc		
19	G3	39	NPC		
20	G4	40	VGL		

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

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