



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



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### SPECIFICATION

**MODULE NO.: WF35LTIACDNGO#**

### General Specifications

Item	Dimension	Unit
Size	3.5	inch
Dot Matrix	320 x RGB x 240(TFT)	dots
Module dimension	76.84 x 63.84 x 4.86	mm
Active area	70.08 x 52.56	mm
Dot pitch	0.073 x 0.219	mm
LCD type	TFT, Normally White, Transmissive	
TFT Driver IC	HX8238 or Equivalent	
TFT Interface	24-bit RGB Or option other mode	
View Direction	12o'clock	
Gray Scale Inversion Direction	6 o'clock	
Aspect Ratio	4:3	
PCAP IC	ILI2130 or equivalent	
PCAP Interface	I2C	
PCAP FW Version	0x07.0x00.0x00.0x00.0x00.0x35.0x5A.0x01	
Backlight Type	LED ,Normally White	
Touch Panel	Projected capacitive touch screen (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. Operating conditions:

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage For LCM	VCC	3.0	3.3	3.6	V
Supply Current For LCM	ICC	—	8.6	15	mA
Supply CTP	VDDT	3.0	3.3	3.6	V
	I <sub>CTP</sub>	—	45	68	mA

## 2. LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current		-	20	-	mA
Power Consumption		336	384	408	mW
LED voltage	LED+	16.8	19.2	20.4	V
LED Life Time		-	50,000	-	Hr

# Interface

## 1. LCM PIN Definition

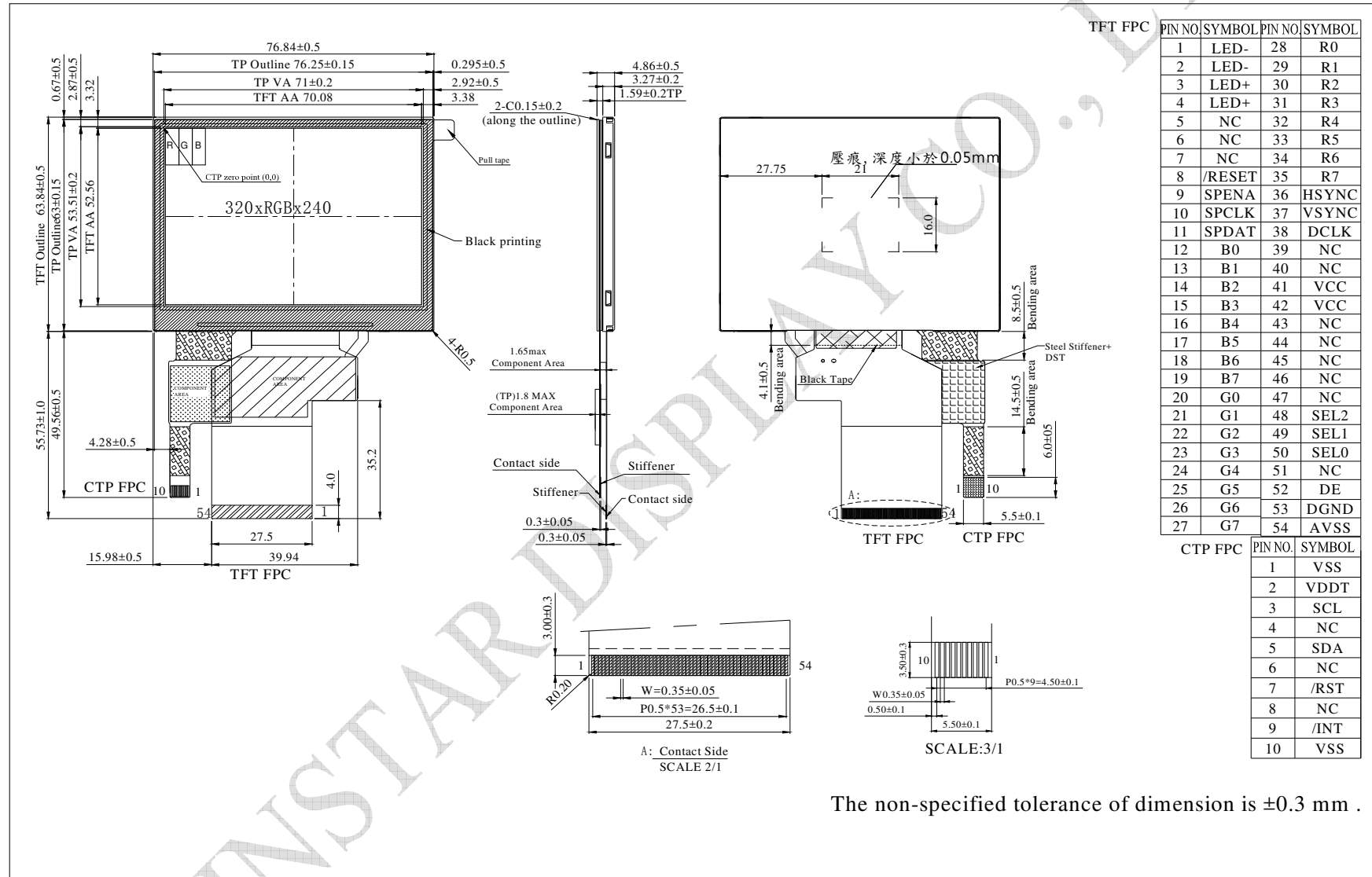
Pin	Symbol	Function
1	LED-	Power for LED backlight cathode
2	LED-	Power for LED backlight cathode
3	LED+	Power for LED backlight anode
4	LED+	Power for LED backlight anode
5	NC	No connect
6	NC	No connect
7	NC	No connect
8	/RESET	Hardware reset
9	SPENA	Chip select pin of serial interface
10	SPCLK	Clock pin of serial interface (SPCK)
11	SPDAT	Data input pin in serial mode(SPDA)
12	B0	Data bus
13	B1	Data bus
14	B2	Data bus
15	B3	Data bus
16	B4	Data bus
17	B5	Data bus
18	B6	Data bus
19	B7	Data bus
20	G0	Data bus
21	G1	Data bus
22	G2	Data bus
23	G3	Data bus
24	G4	Data bus
25	G5	Data bus
26	G6	Data bus
27	G7	Data bus
28	R0	Data bus
29	R1	Data bus
30	R2	Data bus

31	R3	Data bus
32	R4	Data bus
33	R5	Data bus
34	R6	Data bus
35	R7	Data bus
36	HSYNC	Line synchronization signal
37	VSYNC	Frame synchronization signal
38	DCLK	Dot-clock signal and oscillator source
39	NC	No connect
40	NC	No connect
41	VCC	Power Supply
42	VCC	Power Supply
43	NC	No connect
44	NC	No connect
45	NC	No connect
46	NC	No connect
47	NC	No connect
48	SEL2	Input pin to select input interface mode
49	SEL1	Input pin to select input interface mode
50	SEL0	Input pin to select input interface mode
51	NC	No connect
52	DE	Display enable pin from controller. Internal pull high Connect to VDDIO or floating if not used
53	DGND	System ground pin of the IC. Connect to system ground.
54	AVSS	Grounding for analog circuit. Connect to system ground

## 2. PCAP PIN Definition

Pin	Symbol	Function
1	VSS	Ground.
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.

# Contour Drawing



TFT FPC

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	LED-	28	R0
2	LED-	29	R1
3	LED+	30	R2
4	LED+	31	R3
5	NC	32	R4
6	NC	33	R5
7	NC	34	R6
8	/RESET	35	R7
9	SPENA	36	HSYNC
10	SPCLK	37	VSYNC
11	SPDAT	38	DCLK
12	B0	39	NC
13	B1	40	NC
14	B2	41	VCC
15	B3	42	VCC
16	B4	43	NC
17	B5	44	NC
18	B6	45	NC
19	B7	46	NC
20	G0	47	NC
21	G1	48	SEL2
22	G2	49	SEL1
23	G3	50	SEL0
24	G4	51	NC
25	G5	52	DE
26	G6	53	DGND
27	G7	54	AVSS

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 ±0.3 mm .