Winstar Display Co., LTD
華凌光電股份有限公司
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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF35-320240XD#0SPW3-FC

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	**PCB VERSION:** **DATA:**

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
			葉虹蘭
ISSUED DATE: 2022/01/24			

General Specifications

Item	Dimension	Unit
Size	3.5	inch
Dot Matrix	320 x RGBx240(TFT)	dots
Module dimension	76.84(W) x 63.84(H) x 4.86(D)	mm
Active area	70.08 x 52.56	mm
Pixel pitch	0.219 x 0.219	mm
LCD type	TFT, normally black, Transmissive	
View Direction	80/80/80/80	
Driver IC	ST7272A or equivalent	
Interface	24-bit RGB	
Aspect Ratio	4:3	
Backlight Type	LED,Normally White	
CTP IC	ILI2130 or equivalent	
CTP Interface	I2C	
CTP FW Version	0x07.0x00.0x00.0x00.0x00.0x35.0x5A.0x01	
CTP Resolution	16384*16384	
With /Without TP	With CTP	
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	℃
Storage Temperature	TST	-30	—	+85	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

Electrical Characteristics

Operating conditions:

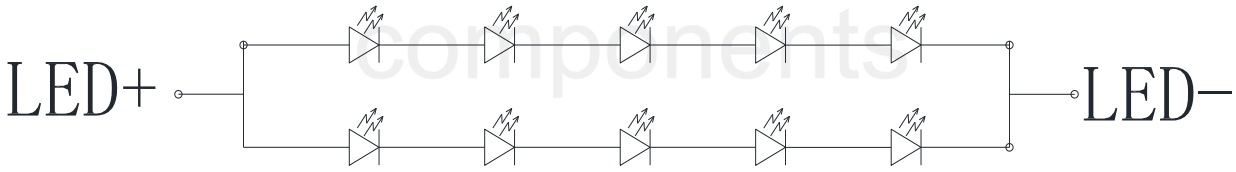
Item	Symbol	Min	Typ	Max	Unit	Remark
Supply Voltage For LCM	VCC	3.0	3.3	3.6	V	
Supply Current For LCM	ICC	—	20	30	mA	Note 1
Supply CTP	VDDT	3.0	3.3	3.6	V	
	I_{CTP}	—	45	68	mA	

Note 1 : This value is test for VCC =3.3V , Ta=25 ℃ only

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current		-	40	-	mA	
Power Consumption		540	600	660	mW	
LED voltage	LED+	13.5	15	16.5	V	Note 1
LED Life Time		-	50,000	-	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



CIRCUIT DIAGRAM

Note 2 : Ta = 25 ℃
Note 3 : Brightness to be decreased to 50% of the initial value
Note 4 : The single LED lamp case

Interface

LCM PIN Definition

Pin	Symbol	Function	Remark
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(SPI_IIC_SEL)	No connect	
8	/RESET	Hardware reset	
9	NC(CS)	No connect	
10	NC(SDA)	No connect	
11	NC(SCL)	No connect	
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	

First FC components

31	R3	Data bus	
32	R4	Data bus	
33	R5	Data bus	
34	R6	Data bus	
35	R7	Data bus	
36	HSYNC	Horizontal sync signal, default is negative polarity.	
37	VSYNC	Vertical sync signal, default is negative polarity.	
38	DCLK	Dot-clock signal and oscillator source	
39	NC(HDIR)	No connect	
40	NC(VDIR)	No connect	
41	VCC	Power Supply	
42	VCC	Power Supply	
43	NC	No connect	
44	NC	No connect	
45	NC(PARA_SERI)	No connect	
46	NC(BIST_EN)	No connect	
47	NC(ENPROG)	No connect	
48	NC	No connect	
49	NC	No connect	
50	NC	No connect	
51	NC(DISP)	No connect	
52	DE	Data input enable. Display access is enabled when DE is “H” .	
53	GND	Ground	
54	GND	Ground	

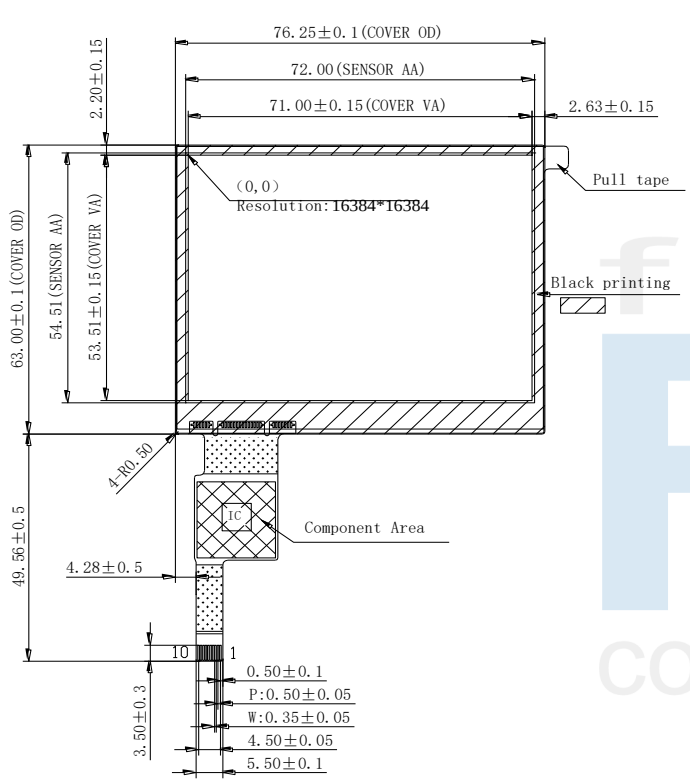
First FC components

CTP PIN Definition

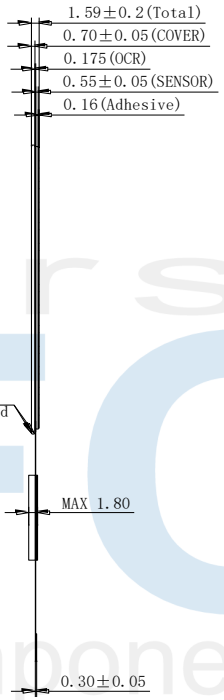
Pin	Symbol	Function	Remark
1	VSS	System ground pin of the IC. Connect to system ground.	
2	VDDT	Power Supply : +3.3V	
3	SCL	I2C clock input	
4	NC	No connect	
5	SDA	I2C data input and output	
6	NC	No connect	
7	/RST	External Reset, Low is active	
8	NC	No connect	
9	/INT	External interrupt to the host	
10	VSS	System ground pin of the IC. Connect to system ground.	

first FC components

Touch Panel Information

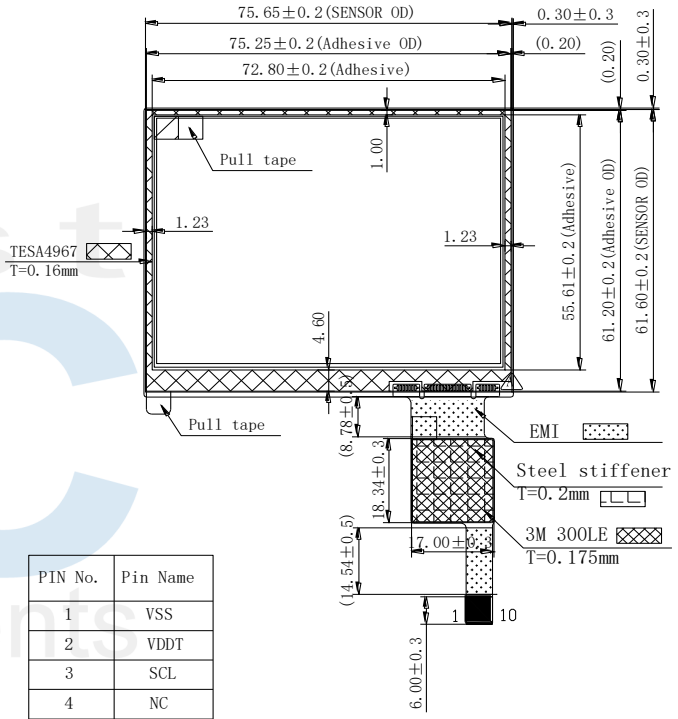


Front view



Side view

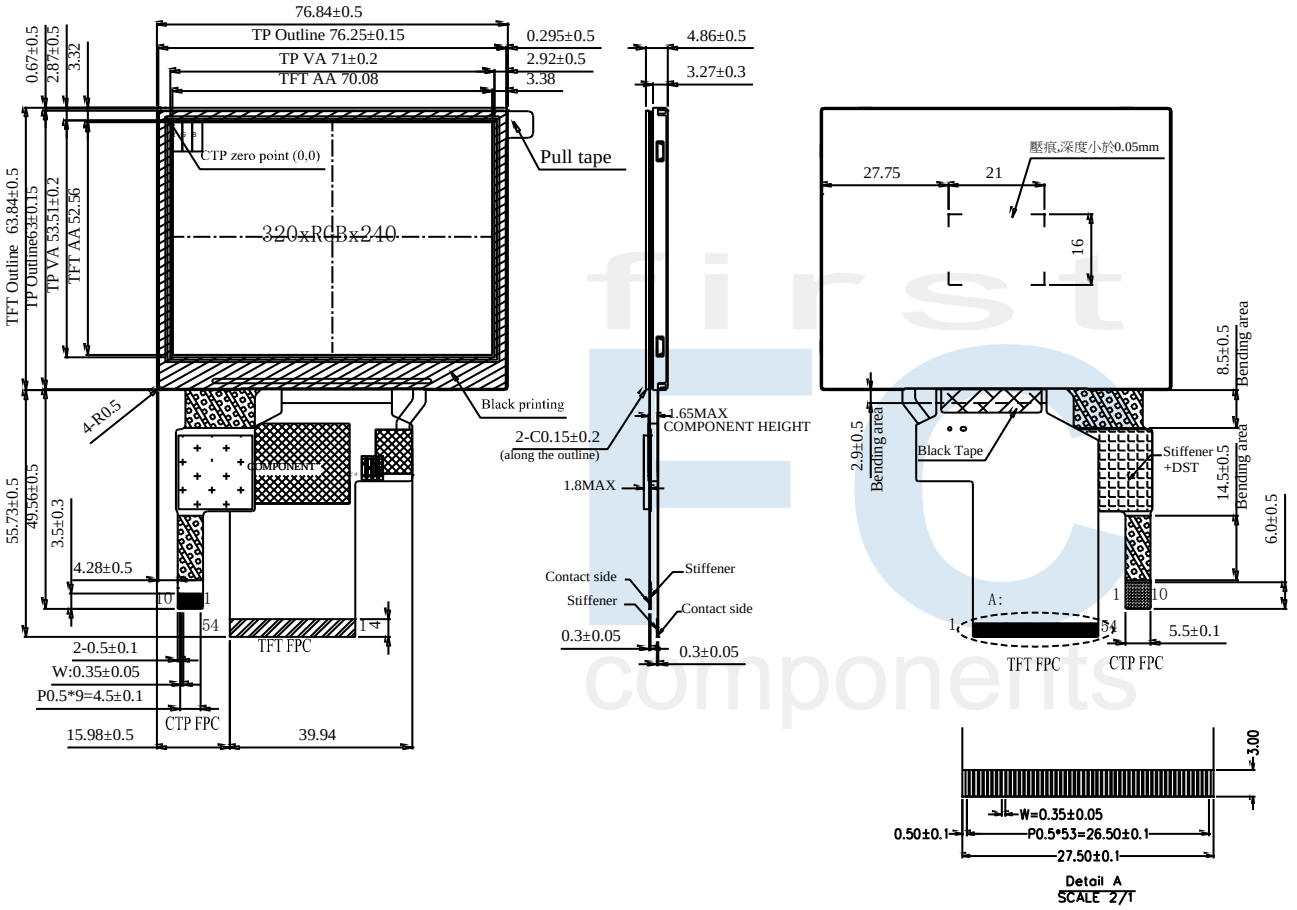
PIN No.	Pin Name
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	RST
8	NC
9	INT
10	VSS



Back view

first FC components

Contour Drawing



TFT

PinNo.	Symbol	PinNo.	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(SPI_IIC_SEL)	34	R6
8	/RESET	35	R7
9	NC(CS)	36	HSYNC
10	NC(SDA)	37	VSYNC
11	NC(SCL)	38	DCLK
12	B0	39	NC(HDIR)
13	B1	40	NC(VDIR)
14	B2	41	VCC
15	B3	42	VCC
16	B4	43	NC
17	B5	44	NC
18	B6	45	NC(PARA_SERI)
19	B7	46	NC(BIST_EN)
20	G0	47	NC(ENPROG)
21	G1	48	NC
22	G2	49	NC
23	G3	50	NC
24	G4	51	NC(DISP)
25	G5	52	DE
26	G6	53	GND
27	G7	54	GND

CTP

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

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