

TFT DISPLAY SPECIFICATION



RAYSTAR

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RFF50DB-AIW-DNG SPECIFICATION

General Specifications

- Size: 5.0 inch
- Dot Matrix: 800 × 3(RGB) × 480 dots
- Module dimension: 120.7(W) × 75.8(H) × 4.475 mm
- Active area: 108(W) × 64.8 (H) mm
- Pixel pitch: 0.135(W) × 0.135(H) mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- TFT Driver IC: ILI6122 + ILI5960 or Equivalent
- TFT Interface: 24-bit RGB
- Aspect Ratio: 5:3
- Backlight Type: LED ,Normally White
- PCAP IC: ILI2130 or Equivalent
- PCAP Interface: I2C
- PCAP FW Version: 0x07.0x00.0x00.0x00.0xA1.0x25.0x50.0x00
- PCAP Resolution: 16384*16384
- Touch Panel: With PCAP
- Surface: Glare

*Color tone slight changed by temperature and driving voltage.

Interface

1. LCM PIN Definition

FPC Connector is used for the module electronics interface.

Pin	Symbol	Function	Remark
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	

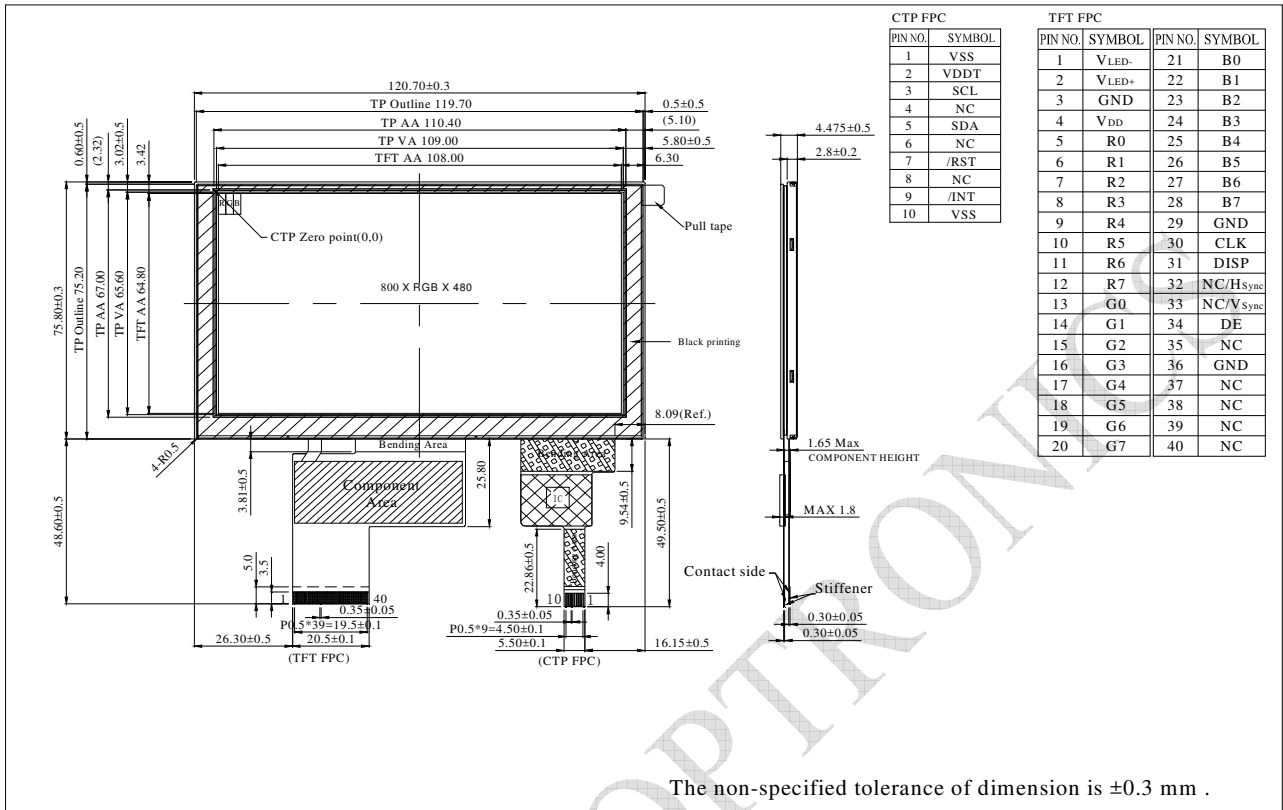
31	DISP	Display on/off	
32	NC/HSync	No connection /Horizontal sync input	(Note)
33	NC/VSynC	No connection /Vertical sync input	(Note)
34	DE	Data input enable	
35	NC	No connection	
36	GND	Power Ground	
37	NC	No connection	
38	NC	No connection	
39	NC	No connection	
40	NC	No connection	

Note : This module default function is for DE mode, if this module want change to use SYNC mode , the FPC have to modify resistive jumper .

2. PCAP PIN Definition

Pin	Symbol	Function	Remark
1	VSS	Ground for analog circuit	
2	VDDT	Power Supply : +3.3V	
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	

Contour Drawing



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 voltage	VDD	3.0	3.3	3.6	V
Current for Driver(Black)	IDD	-	110	170	mA
Input logic high voltage	VIH	0.7 VDD	-	VDD	V
Input logic low voltage	VIL	0	-	0.3 VDD	
Supply PCAP	VDDT	3.0	3.3	3.6	V
	ICTP	—	51	77	mA

2. Backlight Driving Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Voltage for LED backlight	VL	18	19.2	20	V
Current for LED backlight	IL	--	60	--	mA
LED life time	-	--	50,000	-	Hr