

# TFT DISPLAY SPECIFICATION



RAYSTAR

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## RFF700A9-AWH-DNG

### General Specifications

- Size: 7.0 inch
- Dot Matrix: 800 x RGB x 480(TFT) dots
- Module dimension: 165.8 (W) x 106.61 (H) x 8.5(D) mm
- Active area: 152.40 x 91.44 mm
- Pixel pitch: 0.1905 x 0.1905 mm
- LCD type: TFT, Normally Black, Transmissive
- View Direction: 80/80/80/80 (IPS)
- Interface: 24-bit RGB
- Driver IC: HX8249-A + HX8678-C
- Aspect Ratio: 15:9
- Backlight Type: LED, Normally White
- PCAP IC: ILI 2130
- PCAP Interface: I2C
- PCAP FW Version: 0x07.0x00. 0x00. 0x00. 0x00. 0x07. 0x68. 0xA1
- PCAP Resolution: 16384\*16384
- Touch Panel: Projected Capacitive Touch Panel, PCAP
- Surface: Glare

# Interface

## LCM PIN Definition

Pi n	Symbo l	Function									
1-4	NC	No connection									
5	GND	Power Ground									
6	NC	No connection									
7	VCC	Power voltage									
8	MODE	Input timing mode selection.									
		<table border="1"> <thead> <tr> <th>MODE</th> <th>Function</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>DE only</td> <td>-</td> </tr> <tr> <td>1</td> <td>HS+VS</td> <td>Default</td> </tr> </tbody> </table>	MODE	Function	Note	0	DE only	-	1	HS+VS	Default
		MODE	Function	Note							
		0	DE only	-							
1	HS+VS	Default									
9	DE	Data enable signal for TTL mode.									
10	VS	Vertical sync input									
11	HS	Horizontal sync input									
12	B7	Blue data(MSB)									
13	B6	Blue data									
14	B5	Blue data									
15	B4	Blue data									
16	B3	Blue data									
17	B2	Blue data									
18	B1	Blue data									
19	B0	Blue data(LSB)									
20	G7	Green data(MSB)									
21	G6	Green data									
22	G5	Green data									
23	G4	Green data									
24	G3	Green data									
25	G2	Green data									
26	G1	Green data									
27	G0	Green data(LSB)									
28	R7	Red data(MSB)									
29	R6	Red data									
30	R5	Red data									
31	R4	Red data									

32	R3	Red data									
33	R2	Red data									
34	R1	Red data									
35	R0	Red data (LSB)									
36	GND	Power Ground									
37	DCLK	Sample clock									
38	GND	Power Ground									
39	L/R	Horizontal shift direction (source output) selection.									
		<table border="1"> <thead> <tr><th>L/R</th><th>Source output sequence and data order</th><th>Note</th></tr> </thead> <tbody> <tr><td>1</td><td>Left to right</td><td>Default</td></tr> <tr><td>0</td><td>Right to left</td><td>-</td></tr> </tbody> </table>	L/R	Source output sequence and data order	Note	1	Left to right	Default	0	Right to left	-
		L/R	Source output sequence and data order	Note							
		1	Left to right	Default							
0	Right to left	-									
40	U/D	Vertical shift direction (gate output) selection.									
		<table border="1"> <thead> <tr><th>U/D</th><th>Function</th><th>Note</th></tr> </thead> <tbody> <tr><td>1</td><td>Top→bottom</td><td>Default</td></tr> <tr><td>0</td><td>Bottom→top</td><td>-</td></tr> </tbody> </table>	U/D	Function	Note	1	Top→bottom	Default	0	Bottom→top	-
		U/D	Function	Note							
		1	Top→bottom	Default							
0	Bottom→top	-									
41	NC	No connection									
42	NC	No connection									
43	NC	No connection									
44	RESET	Reset pin. The chip is in reset state when RESETB=0.									
45	NC	No connection									
46	NC	No connection									
47	DITHB	STBYB Standby mode setting pin. The chip is in standby mode when STBY B=0.									
48	GND	Power Ground									
49	NC	No connection									
50	NC	No connection									

#### Backlight PIN Definition

Pin	Symbol	Description
1	VLED+	Red, LED_ Anode
2	VLED-	Black, LED_ Cathode

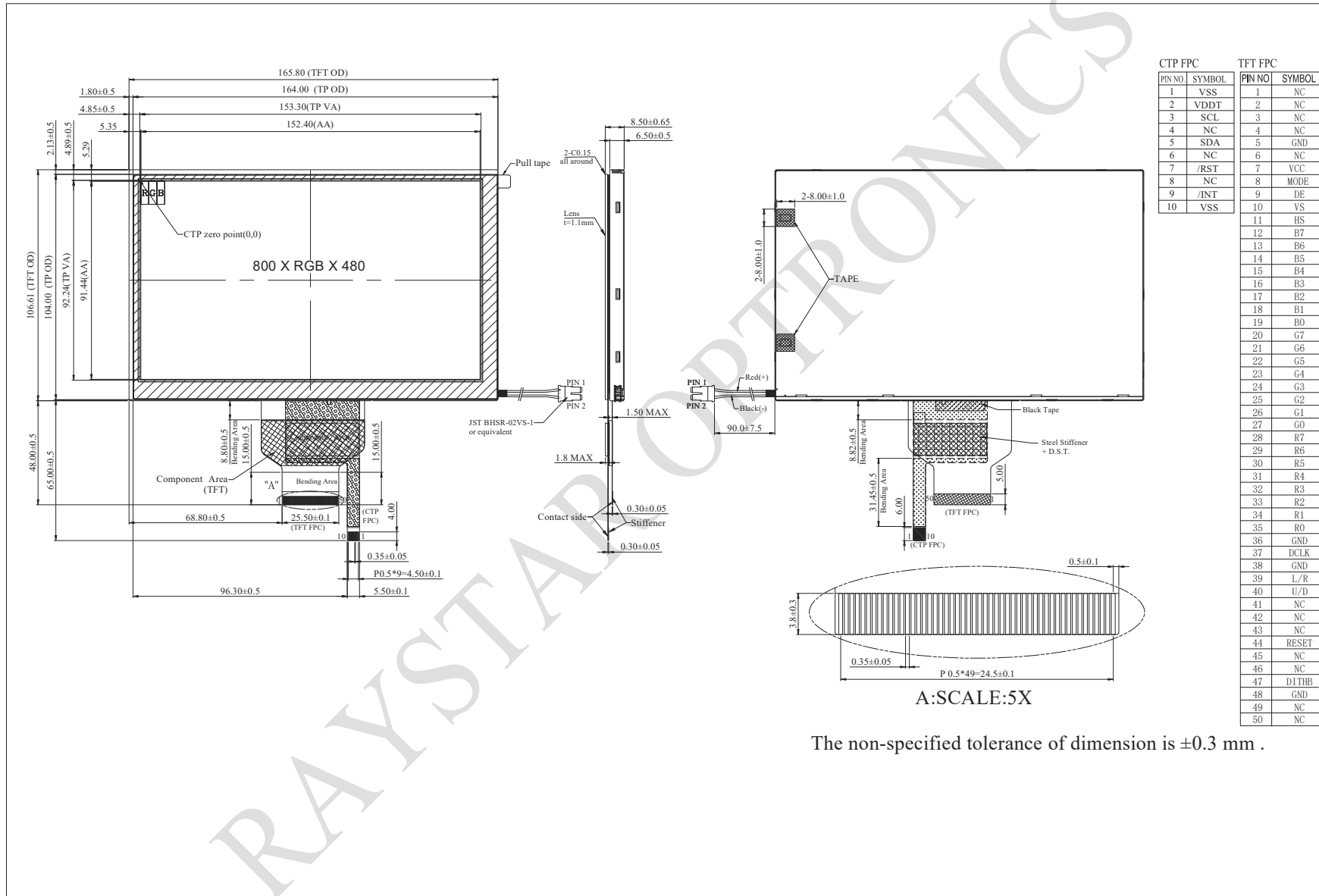
#### PCAP PIN Definition

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

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# Contour Drawing



## Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-30	—	+80	°C
Storage Temperature	TST	-40	—	+85	°C

## Electrical Characteristics

### Operating conditions

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage	Vcc	2.7	3.3	3.6	V
Current of power supply	Icc	—	101	150	mA
Supply CTP	VDDT	3.1	3.3	3.5	V
	I <sub>VDDT</sub>	—	62	93	mA

### LED driving conditions

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	450	—	mA
LED voltage	VLED+	8.1	9.3	10.2	V
LED Life Time	—	40000	—	—	Hr