

TFT DISPLAY SPECIFICATION



RAYSTAR

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RFS390E-AWH-DNG

General Specifications

- Size: 3.9 inch
- Dot Matrix: 480 x RGBx128(TFT) dots
- Module dimension: 105.5(W) x 37.0(H) x 5.2(D) mm
- Active area: 95.04 x 25.34 mm
- Pixel pitch: 0.198 x 0.198 mm
- LCD type: TFT, Normally Black, Transmissive
- Viewing Angle: 80/80/80/80 (IPS)
- Aspect Ratio: Bar Type
- Driver IC: SC7283
- Interface: 24-bit RGB
- Backlight Type: LED, Normally White
- PCAP IC: GT911
- PCAP FW Version: 0X99
- PCAP Interface: I2C
- PCAP Resolution: 480*128
- Touch Panel: Projected Capacitive Touch Panel, PCAP
- Surface: Glare

Interface

LCM PIN Definition

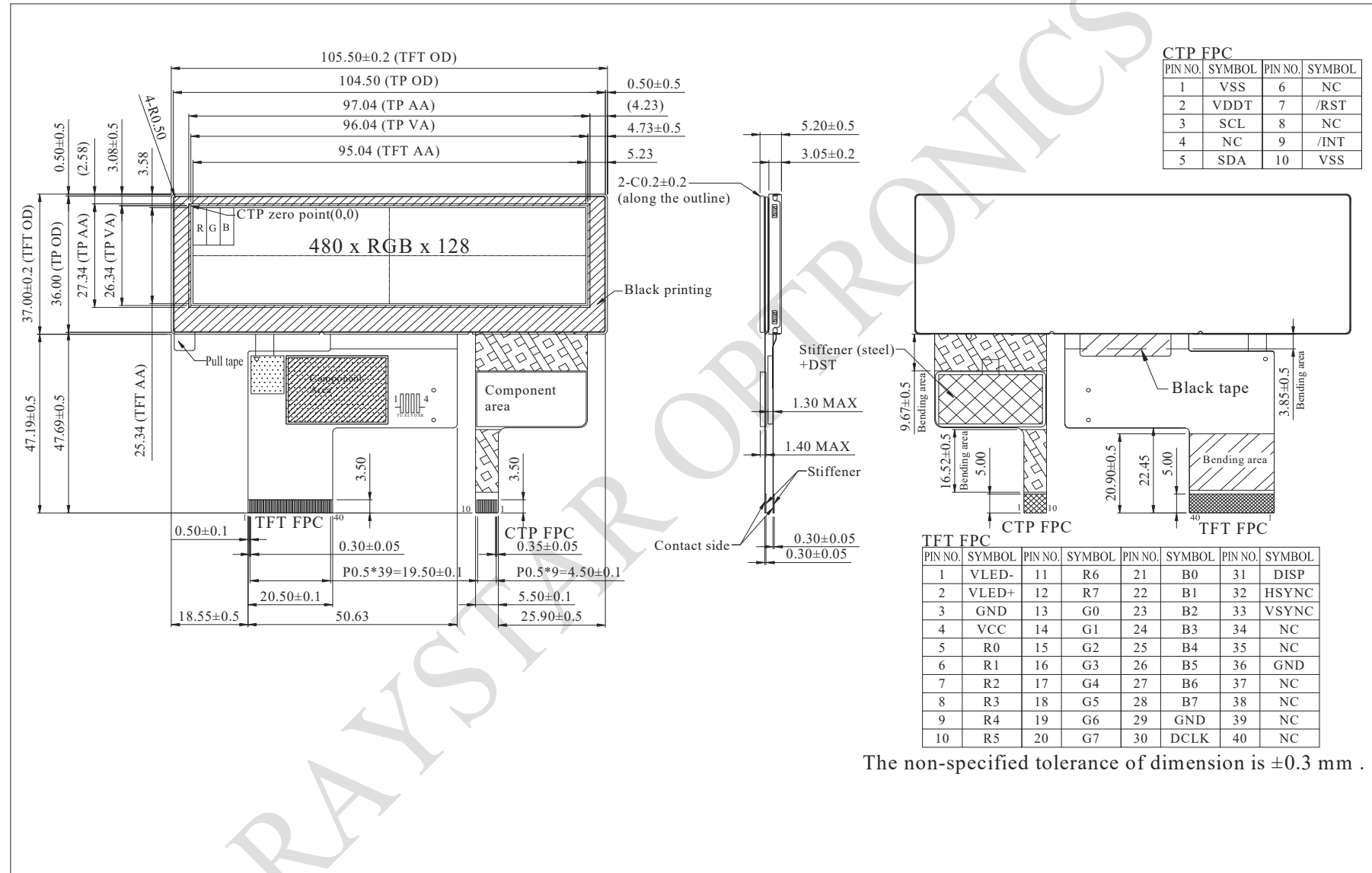
Pin	Symbol	Function
1	VLED-	Power for LED backlight cathode
2	VLED+	Power for LED backlight anode
3	GND	Power ground
4	VCC	Power voltage
5	R0	Red data
6	R1	Red data
7	R2	Red data
8	R3	Red data
9	R4	Red data
10	R5	Red data
11	R6	Red data
12	R7	Red data
13	G0	Green data
14	G1	Green data
15	G2	Green data
16	G3	Green data
17	G4	Green data
18	G5	Green data
19	G6	Green data
20	G7	Green data
21	B0	Blue data
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
29	GND	Power ground
30	DCLK	Pixel clock input pin

31	DISP	DISP sets the display mode. <table><tr><th>DISP</th><th>Function Description</th></tr><tr><td>L</td><td>Standby mode</td></tr><tr><td>H</td><td>Normal display mode</td></tr></table>	DISP	Function Description	L	Standby mode	H	Normal display mode
DISP	Function Description							
L	Standby mode							
H	Normal display mode							
32	HSYNC	Horizontal sync signal, default is negative polarity.						
33	VSYNC	Vertical sync signal, default is negative polarity.						
34	NC	No connection						
35	NC	No connection						
36	GND	Power ground						
37	NC	No connection						
38	NC	No connection						
39	NC	No connection						
40	NC	No connection						

PCAP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT	Power Supply : +3.0V
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



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

Absolute Maximum Ratings

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

Electrical Characteristics

Operating conditions:

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage For LCM	VCC	3.0	—	3.6	V
Supply Current For LCM	ICC	—	20	30	mA
Supply PCAP	VDDT	2.8	—	3.3	V
	I _{VDDT}	—	7	10.5	mA

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	—	—	40	—	mA
Power Consumption	—	784	840	952	mW
LED voltage	V _{LED+}	19.6	21.0	23.8	V
LED Life Time	—	—	50,000	—	Hr