TFT DISPLAY SPECIFICATION



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RFF70BA2-AIW-DNG

General Specifications

- Size: 7.0 inch
- Dot Matrix: 800 x RGB x 480 dots
- Module dimension: 202.0 x 135.5 x 8.5 mm
- Active area: 154.08 x 85.92 mm
- Pixel Pitch: 0.1926 X 0.179 mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- Aspect Ratio: 16:9
- Backlight Type: LED ,Normally White
- TFT Interface: 24-bit RGB
- Color arrangement: RGB-STRIPE
- TFT Driver IC: ST5623D + ST5091D
- PCAP IC: GT911
- PCAP Interface: I2C
- PCAP FW Version: 67
- PCAP Resolution: 1024*600
- Touch Panel: Projected Capacitive Touch Panel, PCAP
- Surface: Glare

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Interface

LCM PIN Definition

Pin	Symbol	Function
1	A	Power supply for backlight
2	A	Power supply for backlight
3	K	Backlight ground
4	K	Backlight ground
5	GND	Power ground
6	VCOM	Common voltage
7	VCC	Power for Digital Circuit
8	MODE	DE/SYNC mode select
9	DE	Data Input Enable (DEN)
10	VS	Vertical Sync Input (VSD)
11	HS	Horizontal Sync Input (HSD)
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

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33	R2	Red data
34	R1	Red data
35	R0	Red data(LSB)
36	GND	Power Ground
37	DCLK	Sample clock (CLK)
38	GND	Power Ground
39	L/R	Left / right selection
40	U/D	Up/down selection
41	VGH	Gate ON Voltage
42	VGL	Gate OFF Voltage
43	AVDD	Power for Analog Circuit
44	RESET	Global reset pin.
45	NC	No connection
46	VCOM	Common Voltage
47	DITHB	Dithering function
48	GND	Power Ground
49	NC	No connection
50	NC	No connection

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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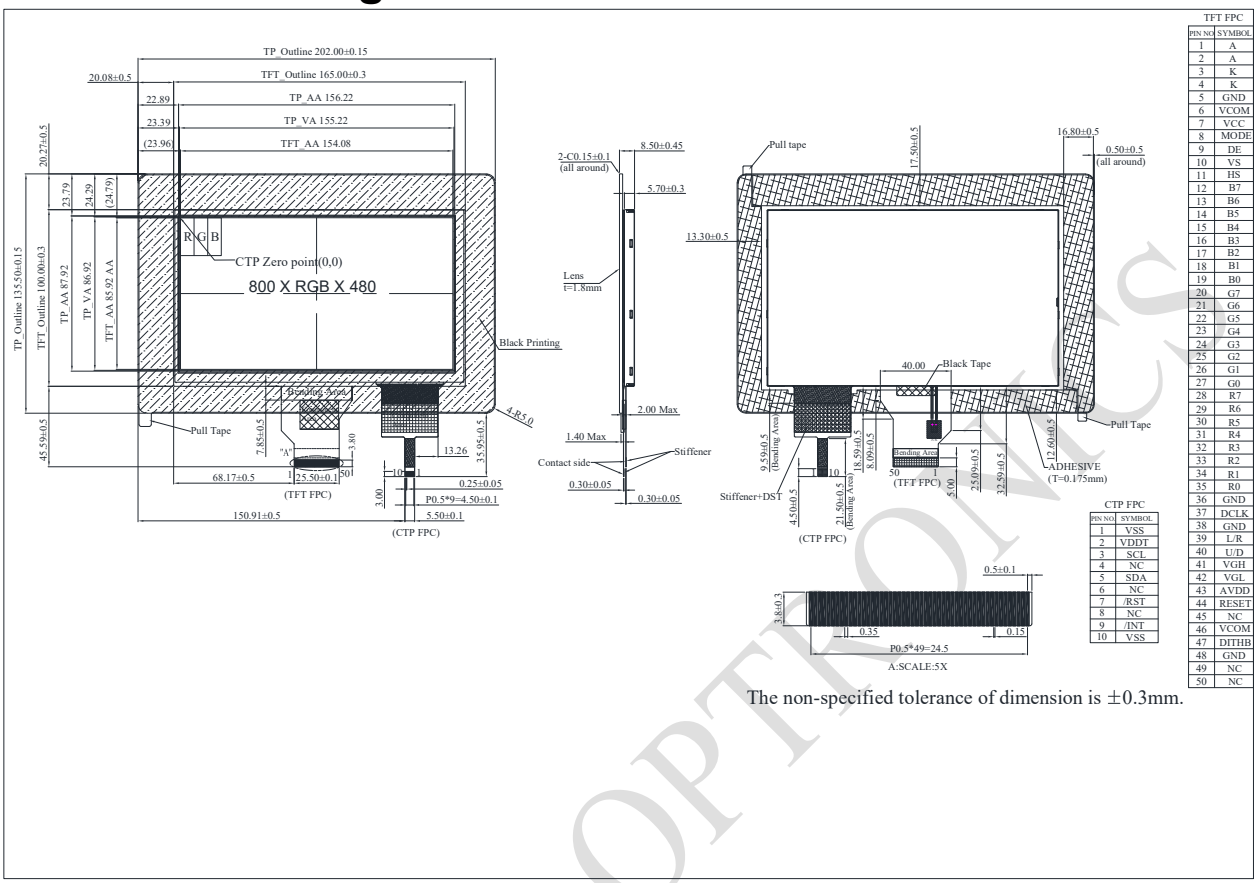
Contour Drawing



TFT FPC

PIN NO.	SYMBOL
1	A
2	A
3	K
4	K
5	GND
6	VCOM
7	VCC
8	MODE
9	DE
10	VS
11	HS
12	B7
13	B6
14	B5
15	B4
16	B3
17	B2
18	B1
19	B0
20	G7
21	G6
22	G5
23	G4
24	G3
25	G2
26	G1
27	G0
28	R7
29	R6
30	R5
31	R4
32	R3
33	R2
34	R1
35	R0
36	GND
37	DCLK
38	GND
39	L/R
40	U/D
41	VGH
42	VGL
43	AVDD
44	RESET
45	NC
46	VCOM
47	DITHB
48	GND
49	NC
50	NC

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 ±0.3mm.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

Electrical Characteristics

Operating Conditions:

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage For Logic	VCC	3.0	3.3	3.6	V
Supply PCAP	VDDT	3.1	3.3	3.5	V
	I_{CTP}	—	16	24	mA
Power voltage	AVDD	10.2	10.4	10.6	V
Power Supply For Current	VCC =3.3V	—	7.5	15	mA
Power voltage	VGH	14.5	15.0	15.5	V
Power voltage	VGL	-10.5	-10	-9.5	V
Input signal voltage	VCOM	3.54	4.04	4.54	V
Power AVDD For Current	IADD	-	25	-	mA
Power VGH For Current	IGH	-	0.2	-	mA
Power VGL For Current	IGL	-	0.2	-	mA
Power VCOM For Current	ICOM	-	0.7	-	mA

LED Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	-	-	180	-	mA
LED voltage	A~K	8.4	9.8	11.0	V
LED Life Time	-		50,000	-	Hr

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