



RAYSTAR

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RFH70BA8-AYH-LNG

SPECIFICATION

General Specifications

- Size: 7.0 inch
- Dot Matrix: 1024 x RGB x 600(TFT) dots
- Module dimension: 169.9(W) x 103.4(H) x 7.3(D) mm
- Active area: 154.2144 x 85.92 mm
- Pixel pitch: 0.1506 x 0.1432 mm
- LCD type: TFT, Normally Black, Transmissive
- Viewing Angle: 85/85/85/85
- Aspect Ratio: 16:9
- Controller IC: NA
- Driver IC: ST5021 + ST5651 or equivalent
- PCAP IC: ILI2130 or Equivalent
- PCAP Interface: I2C
- PCAP FW Version: 0x07.0x00.0x00.0x00.0x65.0x90.0x00.0x01
- PCAP Resolution: 16384*16384
- Backlight Type: LED, Normally White
- Touch Panel: Projected capacitive touch screen (PCAP)
- Interface: LVDS
- Surface: Glare

*Color tone slight changed by temperature and driving voltage.

Interface

1. LCM PIN Definition

Pin No.	Symbol	I/O	Function
1	VCOM	P	Common Voltage
2	VDD	P	Digital circuit
3	VDD	P	Digital circuit
4	NC	---	No connection
5	RESET	I	Global reset pin
6	STBYB	I	Standby mode, Normally pulled high STBYB = "1", normal operation STBYB = "0", timing controller, source driver will turn off, all output are High-Z
7	GND	P	Ground
8	RXIN0-	I	Negative LVDS differential data input
9	RXIN0+	I	Positive LVDS differential data input
10	GND	P	Ground
11	RXIN1-	I	Negative LVDS differential data input
12	RXIN1+	I	Positive LVDS differential data input
13	GND	P	Ground
14	RXIN2-	I	Negative LVDS differential data input
15	RXIN2+	I	Positive LVDS differential data input
16	GND	P	Ground
17	RXCLKIN-	I	Negative LVDS differential clock input
18	RXCLKIN+	I	Positive LVDS differential clock input
19	GND	P	Ground
20	RXIN3-	I	Negative LVDS differential data input
21	RXIN3+	I	Positive LVDS differential data input
22	GND	P	Ground
23	NC	---	No connection
24	NC	---	No connection
25	GND	P	Ground
26	NC	---	No connection

27	NC	---	No connection
28	SELB	I	6bit/8bit mode select H:6bit / L:8bit
29	AVDD	P	Power for Analog Circuit
30	GND	P	Ground
31	LED-	P	LED Cathode
32	LED-	P	LED Cathode
33	L/R	I	Horizontal inversion
34	U/D	I	Vertical inversion
35	VGL	P	Negative power for TFT
36	NC	---	No connection
37	NC	---	No connection
38	VGH	P	Positive power for TFT
39	LED+	P	LED Anode
40	LED+	P	LED Anode

I:input ,O:output,P:power

Note

When L/R="0",set right to left scan direction.

When L/R="1",set left to right scan direction.

When U/D="0",set top to bottom scan direction.

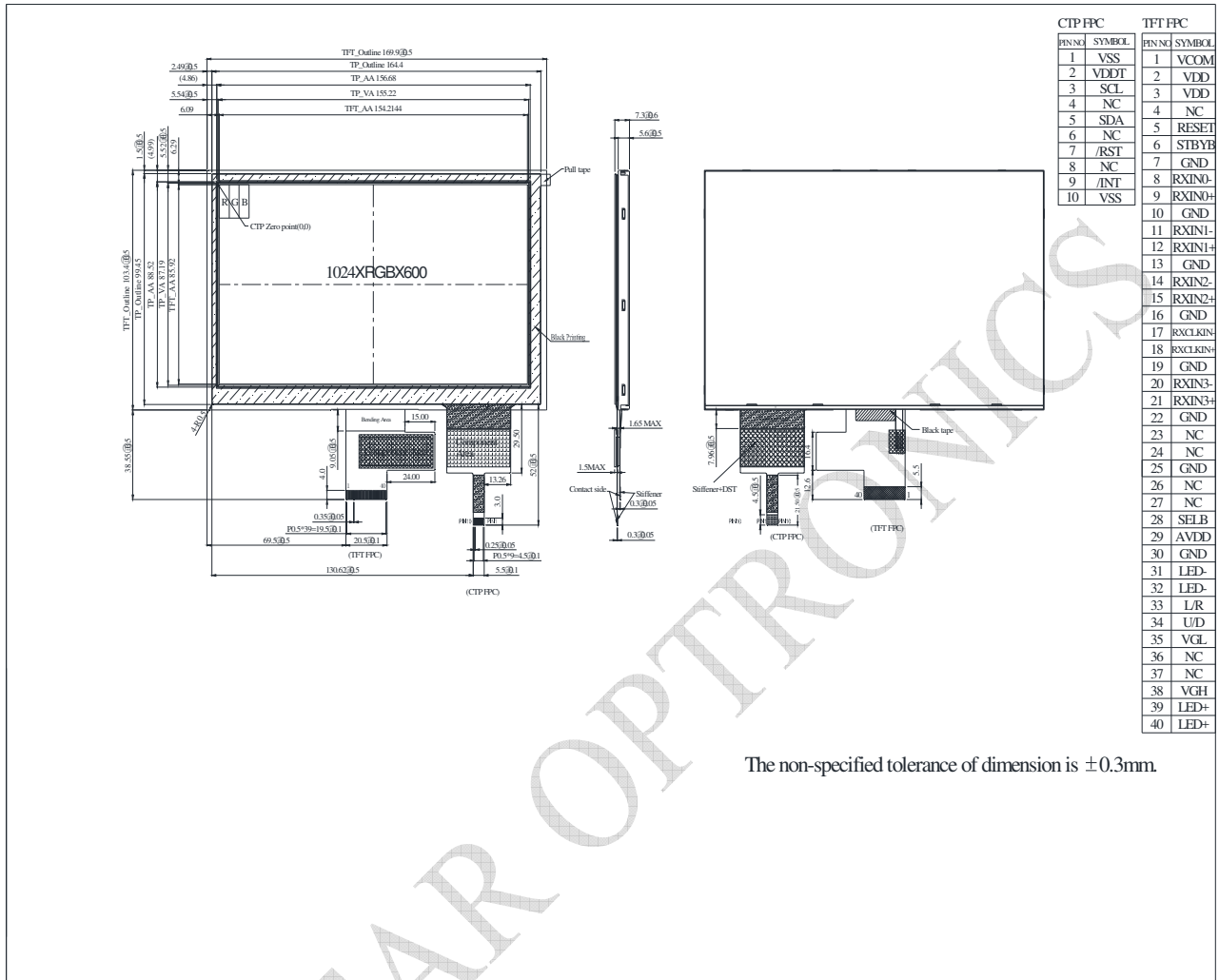
When U/D="1",set bottom to top scan direction.

2. PCAP PIN Definition

Pin	Symbol	Function
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

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Contour Drawing



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.

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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
Analog Power	AVDD	8.9	9.0	9.1	V
TFT Gate ON Voltage	VGH	17	18	19	V
TFT Gate OFF Voltage	VGL	-6.5	-6.0	-5.5	V
TFT Common Voltage	Vcom	3.0	3.15	3.3	V
Current for Driver	IDD	-	14	21	mA

2. Current Consumption

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Current for Driver	IGH	-	1.0	-	mA	VGH =18.0V
	IGL	-	1.0	-	mA	VGL = -6.0V
	Icom	-	1.0	-	mA	Vcom =3.15V
	IAVDD	-	25.0	-	mA	AVDD =9.0V

3. Backlight Driving Conditions

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Voltage for LED backlight	VL	16.8	19.2	21.0	V	Note 1
Current for LED backlight	IL	--	290	--	mA	
LED life time	-	-	50,000	-	Hr	Note 2

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