



RAYSTAR

RAYSTAR Optronics, Inc.
曜凌光電股份有限公司



曜凌光電股份有限公司 Raystar Optonics, Inc.

T: +886-4-2565-0761 | F: +886-4-2565-0760

salescontact@raystar-optronics.com | www.raystar-optronics.com

RFH70CA8-AYH-LNG

General Specifications

- Size : 7.0 inch
- Dot Matrix : 1024 x RGBx600(TFT) dots
- Module dimension : 202.0(W) x 135.5(H) x 8.4(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 (IPS)
- Interface : LVDS
- Aspect Ratio : 16:9
- Driver IC : ST5021 + ST5651
- Backlight Type : LED, Normally White
- PCAP IC : GT911
- PCAP Interface : I2C
- PCAP FW Version : 67
- PCAP Resolution : 1024*600
- Touch Panel : Projected Capacitive Touch Panel, PCAP
- Surface : Glare

Interface

LCM PIN Definition

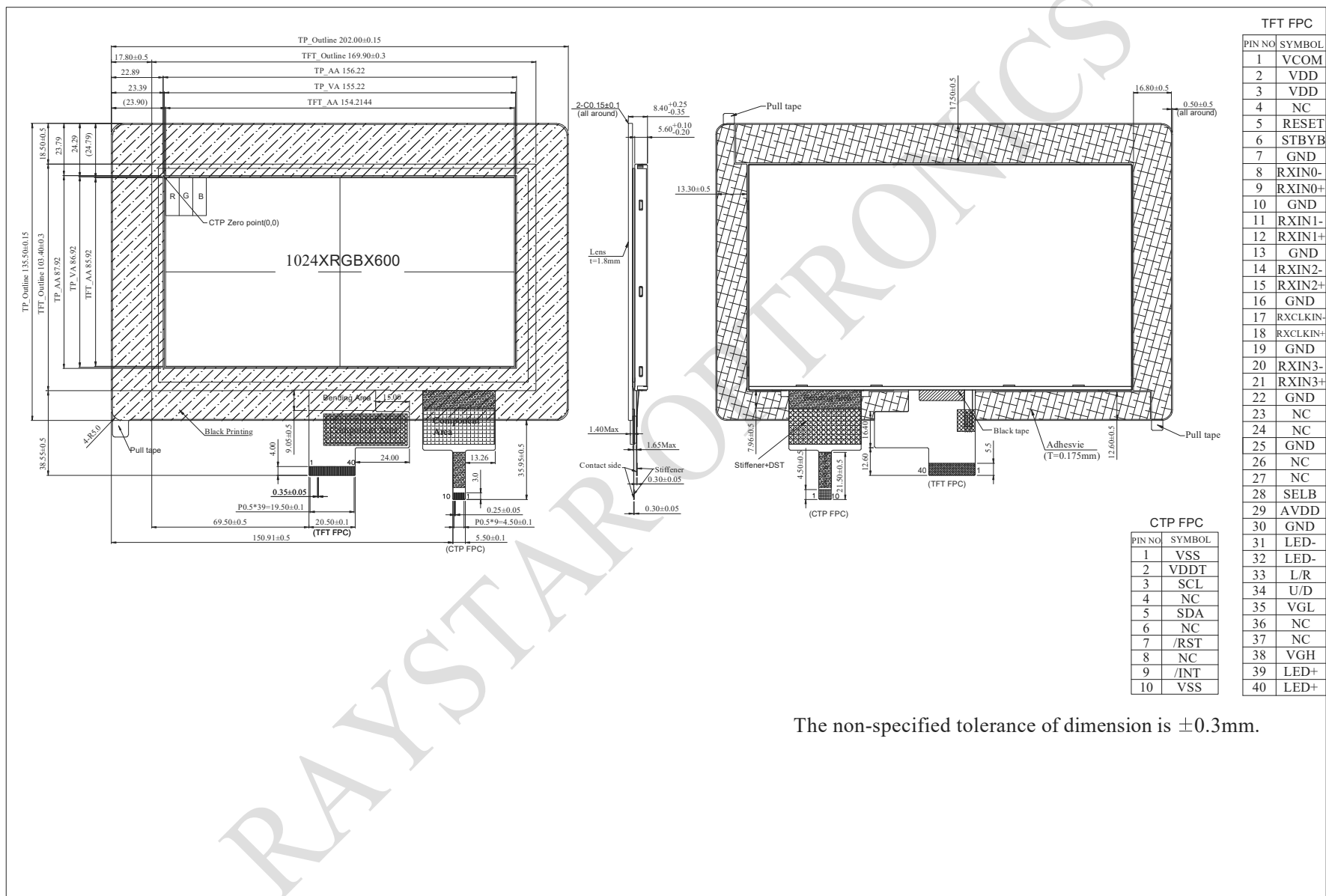
Pin No.	Symbol	I/O	Function
1	VCOM	P	Common Voltage
2	VDD	P	Digital circuit
3	VDD	P	Digital circuit
4	NC	---	No connection
5	RESET	I	Global reset pin
6	STBYB	I	Standby mode, Normally pulled high STBYB = "1", normal operation STBYB = "0", timing controller, source driver will turn off, all output are 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

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

Contour Drawing



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

Absolute Maximum Ratings

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

Electrical Characteristics

Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power voltage	VDD	3.0	3.3	3.6	V
Supply PCAP	VDDT	3.1	3.3	3.5	V
	I _{CTP}	—	16	24	mA
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	V _{com}	3.0	3.15	3.3	V
Current for Driver	IDD	-	14	21	mA
Power Current	IAVDD	-	25	-	mA
TFT Gate ON Current	IVGH	-	1	-	mA
TFT Gate OFF Current	IVGL	-	1	-	mA
TFT Common Current	IVCOM	-	1	-	mA

Backlight Driving Conditions

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