



RAYSTAR

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RFH1010J-AYH-MNB

SPECIFICATION

General Specifications

- Size: 10.1 inch
 - Dot Matrix: 1024 RGB × 600 dots
 - Module dimension: 235(W) × 143(H) × 8.78(D) mm
 - Active area: 222.72 (H) × 125.28(V) mm
 - Pixel pitch: 0.2175(W) × 0.2088(H) mm
 - LCD type: TFT, Normally Black, Transmissive
 - TFT Interface: 4-Lanes MIPI
 - Driver IC: EK79007AD3 + EK73217BCGA or equivalent
 - Viewing Angle: 85/85/85/85
 - Aspect Ratio: 16:9
 - Backlight Type: LED, Normally White
 - PCAP IC: ILI2511 or equivalent
 - PCAP Interface: USB (I2C available)
 - PCAP FW Version: V6.0.0.0.62.90.1.2
 - Touch Panel: Projected capacitive touch panel (PCAP)
 - Surface: Glare
- *Color tone slight changed by temperature and driving voltage.

Interface

1. TFT LCD MODULE

Pin No.	Symbol	Description
1	VLED+	LED Anode
2	VLED+	LED Anode
3	VGH	Positive power for TFT
4	VGL	Negative power for TFT
5	UPDN	Gate up or down scan control. UPDN = "L", STV2 output vertical start pulse and UD pin output logical "L" to Gate driver. (default) UPDN = "H", STV1 output vertical start pulse and UD pin output logical "H" to Gate driver
6	SHLR	Source right or left sequence control. SHLR = "L", shift left: last data = S1←S2←S3.....←S1536 = first data. SHLR = "H", shift right: first data = S1→S2→S3.....→S1536 = last data.(default)
7	VLED-	LED Cathode
8	VLED-	LED Cathode
9	AVDD	Analog power
10	GND	Digital ground
11	D3P	MIPI data input.
12	D3N	MIPI data input.
13	GND	Digital ground
14	D2P	MIPI data input.
15	D2N	MIPI data input.
16	GND	Digital ground
17	CLKP	MIPI clock input
18	CLKN	MIPI clock input
19	GND	Digital ground
20	D1P	MIPI data input.
21	D1N	MIPI data input.
22	GND	Digital ground
23	D0P	MIPI data input.
24	D0N	MIPI data input.
25	GND	Digital ground
26	STBYB	Standby mode.

		STBYB = "H", normal operation(default) STBYB = "L", timing controller, source driver will turn off, all output are GND.
27	RESET	Global reset pin. Active Low to enter Reset State. Normally pull high. Connecting with an RC reset circuit for stability.
28	VDD (1.8V)	Digital power
29	VDD (1.8V)	Digital power
30	VCOMI	Common voltage

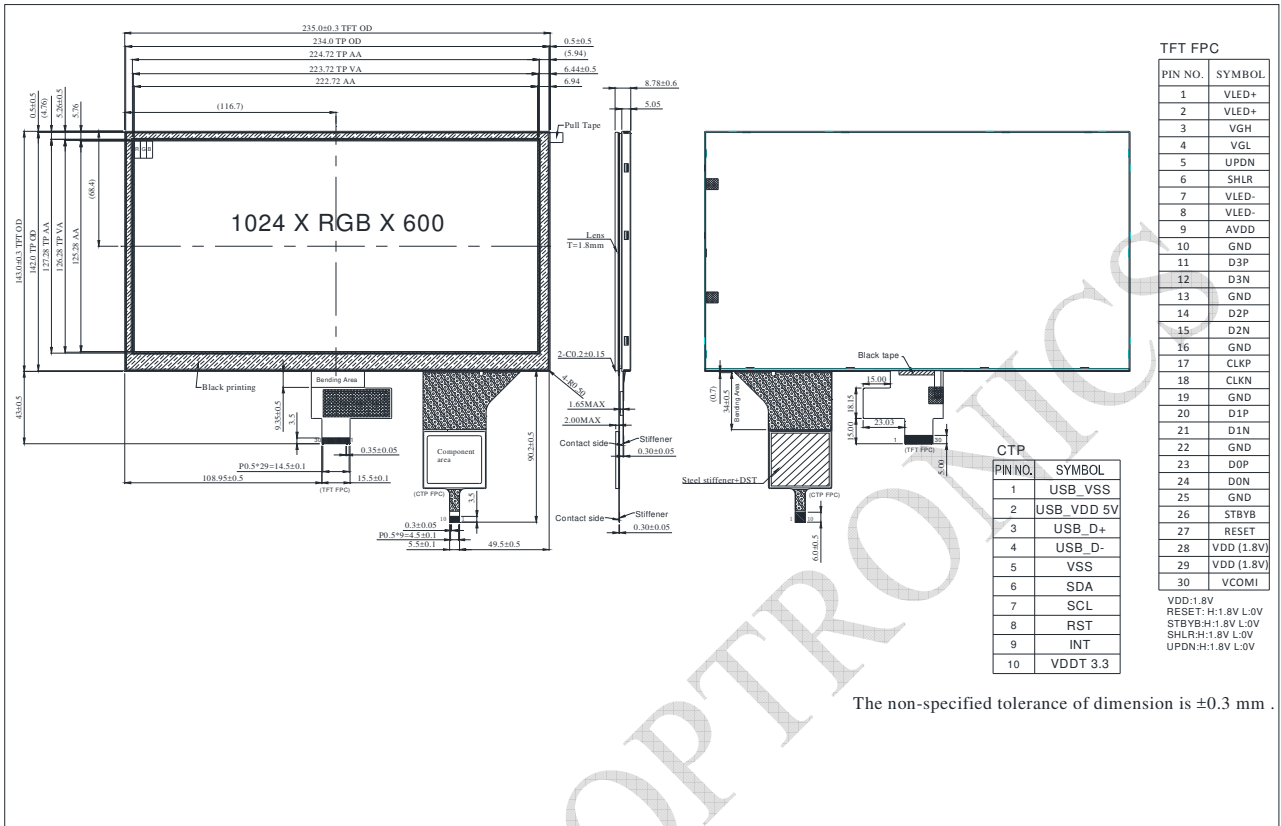
2. PCAP PIN Definition

Pin	Symbol	Function
1	USB_VSS	System ground
2	USB_VDD 5V	Power supply
3	USB_D+	Data +
4	USB_D-	Data -
5	VSS	System ground
6	SDA	I2C data input and output
7	SCL	I2C clock input
8	RST	External Reset, Low is active
9	INT	External interrupt to the host
10	VDDT 3.3	Power supply

Note: Interface can support both USB and I2C, USB is main function

Note 2 : Connect VSS(USB_VSS) of CTP with TFT GND

Contour Drawing



The non-specified tolerance of dimension is ± 0.3 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 (At Ta = 25 °C,)

Item	Symbol	Min.	Typ.	Max.	Unit
Digital Power Supply Voltage For LCD	VDD	1.71	1.8	1.89	V
Analog Power Supply Voltage	AVDD	9.89	10.2	10.5	V
Gate On Power Supply Voltage	VGH	19.4	20.0	20.6	V
Gate Off Power Supply Voltage	VGL	-10.3	-10.0	-9.7	V
Common Power Supply Voltage	VCOMI	4.0	4.3	4.6	V
Supply PCAP	VDDT	3.0	3.3	3.6	V
	I _{VDDT}		90.5	115	mA
	USB_VDD 5V	4.4	5.0	5.5	V
	I _{VDD 5V}	—	97.8	120	mA