



RAYSTAR

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RFF500B-AIW-DNB SPECIFICATION

General Specifications

- Size: 5.0 inch
- Dot Matrix: 800 × 3(RGB) × 480 dots
- Module dimension: 147.0(W) × 104.0(H) × 4.8mm
- Active area: 108(W) × 64.8 (H) mm
- Dot pitch: 0.135(W) × 0.135(H) mm
- LCD type: TFT, Normally White, Transmissive
- TFT Driver IC: ILI6122 + ILI5960
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- TFT Interface: 24-bit RGB
- Aspect Ratio: 5:3
- Backlight Type: LED ,Normally White
- PCAP IC: ILI2511
- PCAP Interface: USB (I2C available)
- PCAP FW Version: V 6. 0. 0. 0. 5.28.0.1
- Touch Panel: With PCAP
- Surface: Glare

*Color tone slight changed by temperature and driving voltage.

Interface

1. LCM PIN Definition

FPC Connector is used for the module electronics interface.

Pin	Symbol	Function	Remark
1	VLED-	Power for LED backlight (Cathode)	
2	VLED+	Power for LED backlight (Anode)	
3	GND	Power Ground	
4	VDD	Power voltage	
5	R0	Red data (LSB)	
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(MSB)	
13	G0	Green data(LSB)	
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(MSB)	
21	B0	Blue data(LSB)	
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(MSB)	
29	GND	Power Ground	
30	CLK	Sample clock	

31	DISP	Display on/off	
32	NC/HS	No connection /Horizontal sync input	(Note)
33	NC/VS	No connection /Vertical sync input	(Note)
34	DE	Data input enable	
35	NC	No connection	
36	GND	Power Ground	
37	NC	No connection	
38	NC	No connection	
39	NC	No connection	
40	NC	No connection	

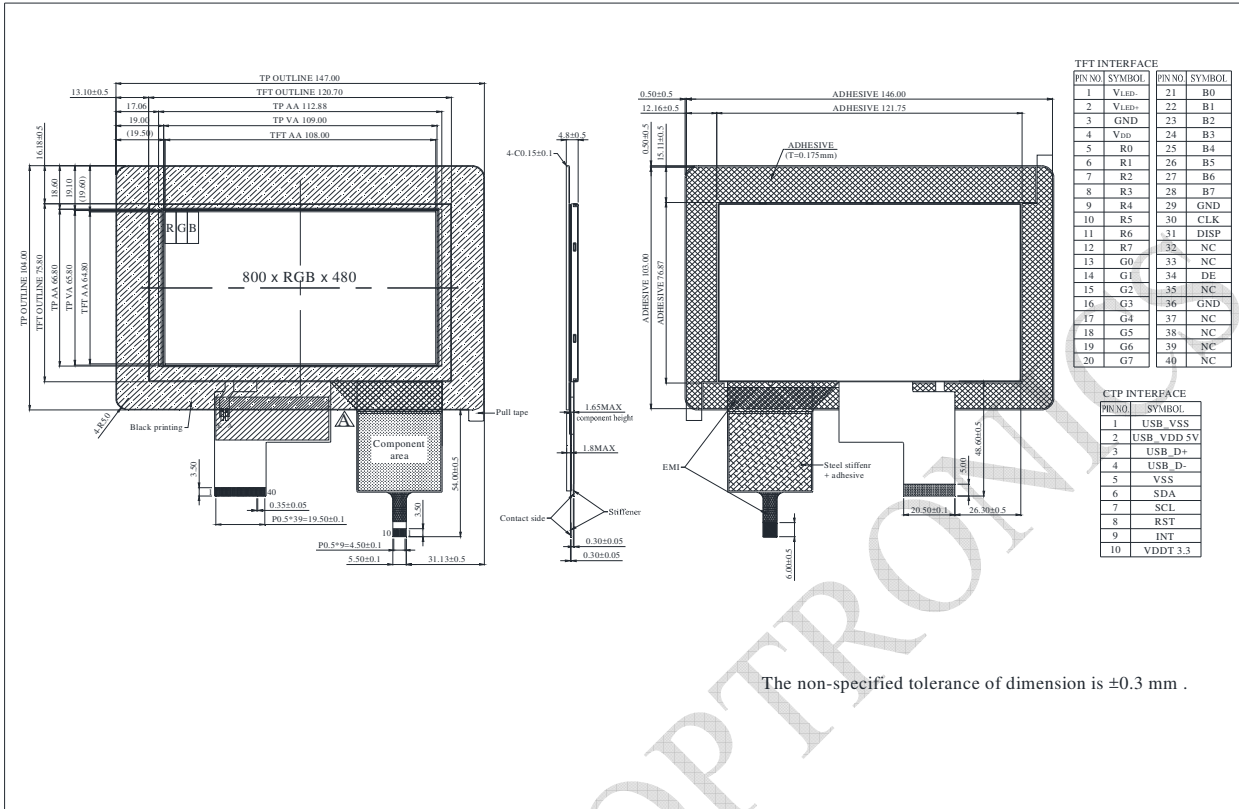
Note : This module default function is for DE mode, if this module want change to use SYNC mode , the FPC have to modify resistive jumper .

2. PCAP PIN Definition

Pin	Symbol	Function	Remark
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

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

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power voltage	VDD	3.0	3.3	3.6	V
Current for Driver(Black)	IDD	-	110	170	mA
Input logic high voltage	VIH	0.7 VDD	-	VDD	V
Input logic low voltage	VIL	0	-	0.3 VDD	
Supply Voltage For Touch Logic	VDDT	4.4	5.0	5.5	V

2. Backlight Driving Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Voltage for LED backlight	VL	18	19.2	20	V
Current for LED backlight	IL	--	60	--	mA
LED life time	-	--	50,000	-	Hr