



RAYSTAR

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RFF500F-AWW-LNN

SPECIFICATION

General Specifications

- Size: 5.0 inch
- Dot Matrix: 800 × 3(RGB) × 480 dots
- Module dimension: 120.7(W) × 75.8(H) × 2.8mm
- Active area: 108(W) × 64.8 (H) mm
- Dot pitch: 0.135(W) × 0.135(H) mm
- LCD type: TFT, Normally Black, Transmissive
- View Direction: 80/80/80/80
- Aspect Ratio: 16:9
- Driver IC: ST7262 or equivalent
- Interface: LVDS
- Backlight Type: LED ,Normally White
- Touch Panel: Without Touch Panel
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

Interface

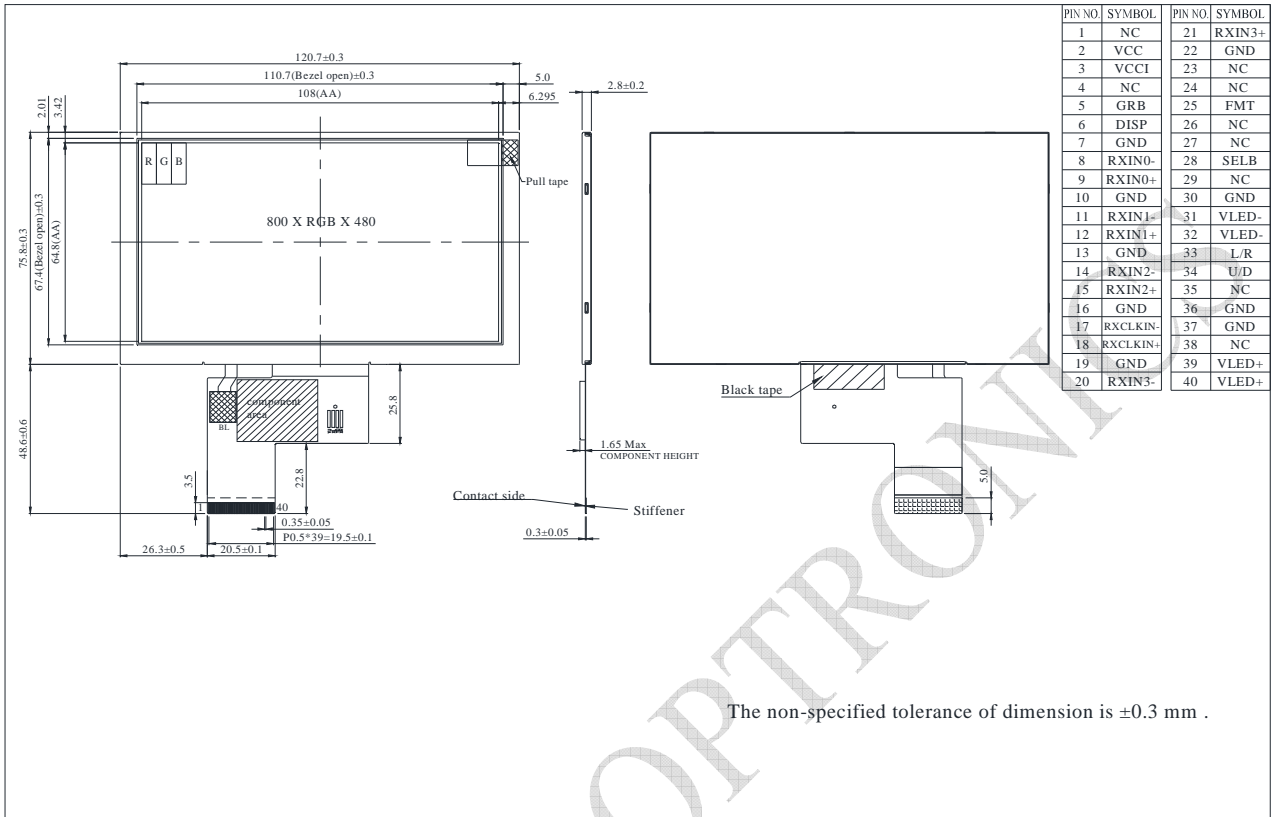
LCM PIN Definition

FPC Connector is used for the module electronics interface.

Pin	Symbol	Function						
1	NC	No connection						
2	VCC	Power voltage						
3	VCCI	Power supply for digital I/O pins.						
4	NC	No connection						
5	GRB	Global reset pin. When GRB is “L” , internal initialization procedure is executed						
6	DISP	Display on/off						
7	GND	Power Ground						
8	RXIN0-	LVDS input lane: RX0-/ RX0+						
9	RXIN0+							
10	GND	Power Ground						
11	RXIN1-	LVDS input lane: RX1-/ RX1+						
12	RXIN1+							
13	GND	Power Ground						
14	RXIN2-	LVDS input lane: RX2-/ RX2+						
15	RXIN2+							
16	GND	Power Ground						
17	RXCLKIN-	LVDS input lane, detail pin define please refer to LVDS Input Pin Mapping Table.						
18	RXCLKIN+							
19	GND	Power Ground						
20	RXIN3-	LVDS input lane: RX3-/ RX3+						
21	RXIN3+							
22	GND	Power Ground						
23-24	NC	No connection						
25	FMT	LVDS_FMT sets LVDS data format.						
		<table border="1"> <thead> <tr> <th>LVDS_FMT</th> <th>Function Description</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>VESA Mode(Default)</td> </tr> <tr> <td>H</td> <td>JEIDA Mode</td> </tr> </tbody> </table>	LVDS_FMT	Function Description	L	VESA Mode(Default)	H	JEIDA Mode
		LVDS_FMT	Function Description					
L	VESA Mode(Default)							
H	JEIDA Mode							
LVDS_FMT is not used in RGB interface and should be connected to “L” .								

26-27	NC	No connection													
28	SELB	SELB sets VSYNC polarity in RGB interface and sets LVDS 3- / 4-lane in LVDS interface.													
		<table border="1"> <thead> <tr> <th>MCU Type</th> <th>VDPOL</th> <th>Function Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">RGB interface</td> <td>L</td> <td>VSYNC polarity: positive</td> </tr> <tr> <td>H</td> <td>VSYNC polarity: negative(Default)</td> </tr> <tr> <td rowspan="2">LVDS interface</td> <td>L</td> <td>LVDS 3 lane</td> </tr> <tr> <td>H</td> <td>LVDS 4 lane(Default)</td> </tr> </tbody> </table>	MCU Type	VDPOL	Function Description	RGB interface	L	VSYNC polarity: positive	H	VSYNC polarity: negative(Default)	LVDS interface	L	LVDS 3 lane	H	LVDS 4 lane(Default)
		MCU Type	VDPOL	Function Description											
		RGB interface	L	VSYNC polarity: positive											
H	VSYNC polarity: negative(Default)														
LVDS interface	L	LVDS 3 lane													
	H	LVDS 4 lane(Default)													
29	NC	No connection													
30	GND	Power Ground													
31-32	VLED-	Power for LED backlight (Cathode)													
33	L/R	Horizontal scan direction control pin. This pin must be connected to “H” or “L” according to system application													
		<table border="1"> <thead> <tr> <th>HDIR</th> <th>Function Description</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>From right to left</td> </tr> <tr> <td>H</td> <td>From left to right(Default)</td> </tr> </tbody> </table>	HDIR	Function Description	L	From right to left	H	From left to right(Default)							
		HDIR	Function Description												
L	From right to left														
H	From left to right(Default)														
34	U/D	Vertical scan direction control pin. This pin must be connected to “H” or “L” according to system application.													
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		VDIR	Function Description												
L	From down to up.														
H	From up to down. (Default)														
35	NC	No connection													
36-37	GND	Power Ground													
38	NC	No connection													
39-40	VLED+	Power for LED backlight (Anode)													

Contour Drawing



Absolute Maximum Ratings

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

Electrical Characteristics

Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Power voltage	VCC	3.1	3.3	3.6	V
Power voltage	VCCI	3.1	3.3	3.6	V
Current for Driver(Black)	ICC	-	67.6	102	mA

Backlight Driving Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Voltage for LED backlight	VL	16.8	19.2	20.4	V
Current for LED backlight	IL	--	60	--	mA
LED life time	-	--	50,000	-	Hr