



RAYSTAR

RAYSTAR Optronics, Inc.
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RFH700A8-AYW-MNN

SPECIFICATION

General Specification

- Size: 7.0 inch
- Dot Matrix: 1024 × RGB × 600(TFT) dots
- Module dimension: 169.9(W) × 103.4(H) × 5.6(D) mm
- Active area: 154.2144 × 85.92 mm
- Pixel pitch: 0.1506 × 0.1432 mm
- LCD type: TFT, Normally Black, Transmissive
- Viewing Angle: 85/85/85/85
- Aspect Ratio: 16:9
- Driver IC: EK79007AD3 + EK73217BCGA or equivalent
- Interface: 4-Lanes MIPI
- Backlight Type: LED, Normally White
- Touch Panel: Without Touch Panel
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

Interface

1. LCM PIN Definition

Pin No.	Symbol	Function
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	Power for Analog Circuit
10	GND	Ground
11	D3P	MIPI data input.
12	D3N	MIPI data input.
13	GND	Ground
14	D2P	MIPI data input.
15	D2N	MIPI data input.
16	GND	Ground
17	CLKP	MIPI clock input
18	CLKN	MIPI clock input
19	GND	Ground
20	D1P	MIPI data input.
21	D1N	MIPI data input.
22	GND	Ground

23	D0P	MIPI data input.
24	D0N	MIPI data input.
25	GND	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 circuit
29	VDD(1.8V)	Digital circuit
30	VCOMIN	Common voltage

Note

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

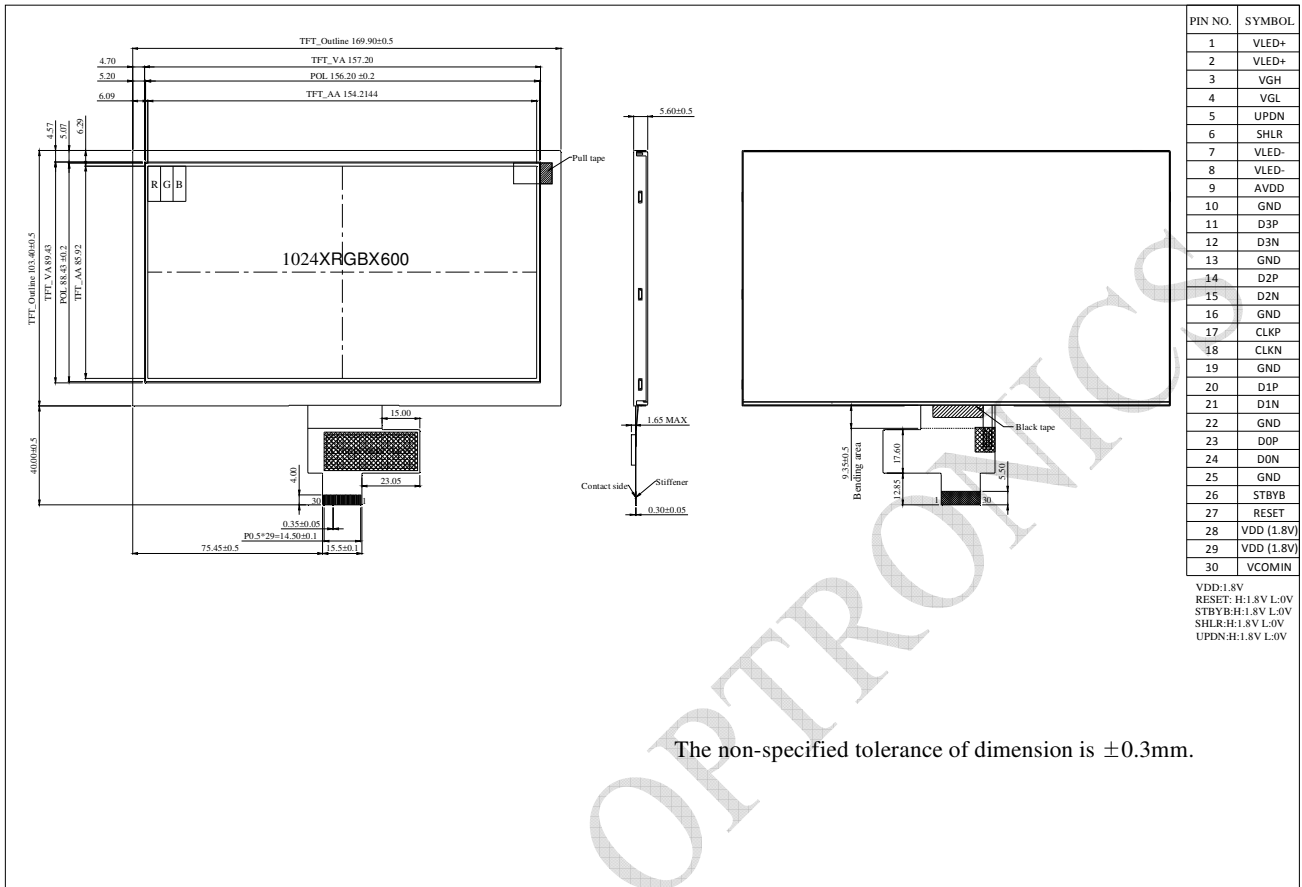
When L/R="1",set left to right scan direction.

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

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

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Contour Drawing



The non-specified tolerance of dimension is ±0.3mm.

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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	1.71	1.8	1.89	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	VCOMIN	3.0	3.15	3.3	V
Current for Driver	IDD	--	16	24	mA
Power Current	IAVDD	--	19	28.5	mA
TFT Gate ON Current	IVGH	--	1.6	2.4	mA
TFT Gate OFF Current	IVGL	--	0.6	0.9	mA
TFT Common Current	IVCOMIN	--	0	--	mA

2. 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	--	240	--	mA
LED life time	-	-	50,000	-	Hr