

TFT DISPLAY SPECIFICATION



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 Optronics, Inc.

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

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

RFA515600A-AWW-LNN

General Specifications

- Size: 15.6-inch
- Dot Matrix: 1920 x RGB x 1080 dots
- Module Dimension: 363.8 (W) x 215.9 (H)x 9.3 (D) mm
- Active Area: 344.16 x 193.59 mm
- Pixel Pitch: 0.17925 (H) x 0.17925 (V) mm
- LCD Type: TFT, Normally Black, Transmissive
- Viewing Angle: 89/89/89/89
- Backlight Type: LED, Normally White
- Driver IC: EK77526AHI205A
- TFT Interface: 2ch-LVDS
- Touch Panel: Without Touch Panel
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

Interface

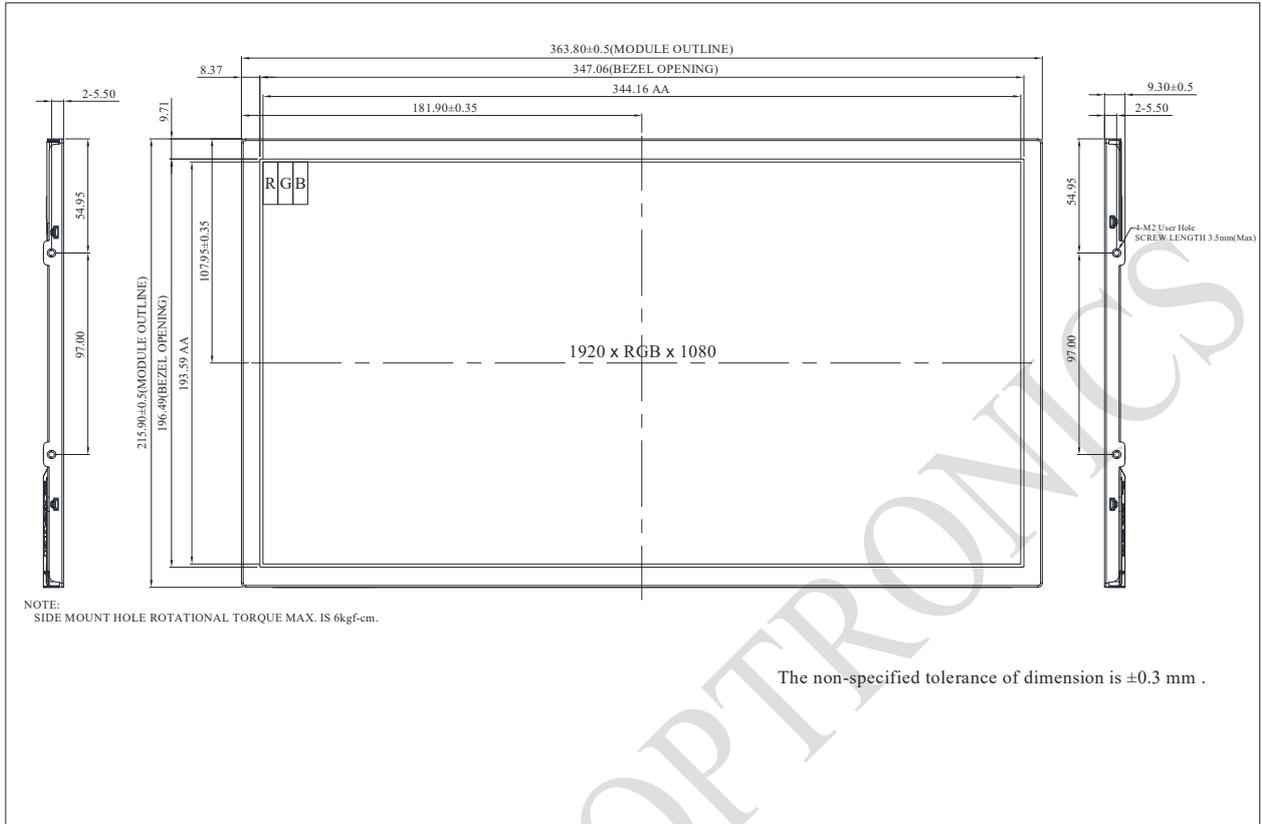
CON2: LCM PIN Definition

Pin No.	Symbol	Description
1~4	LED_Vcc	+12V Vi power supply
5~8	GND	Ground
9	LED_EN	Enable pin
10	LED_PWM	Backlight Adjust
11~13	LCD_VCC	LCD logic and driver power 3.3V
14~16	NC	Not connection, this pin should be open
17	REV_SCAN	Low → Normal Mode. High → Horizontal & Vertical Reverse Scan
18	RX00-	Negative LVDS differential data input. Channel O0 (odd)
19	RX00+	Positive LVDS differential data input. Channel O0 (odd)
20	RX01-	Negative LVDS differential data input. Channel O1 (odd)
21	RX01+	Positive LVDS differential data input. Channel O1 (odd)
22	RX02-	Negative LVDS differential data input. Channel O2 (odd)
23	RX02+	Positive LVDS differential data input. Channel O2 (odd)
24	LCD GND	LCD logic and driver ground
25	RXOC-	Negative LVDS differential clock input. (odd)
26	RXOC+	Positive LVDS differential clock input. (odd)
27	LCD GND	LCD logic and driver ground
28	RX03-	Negative LVDS differential data input. Channel O3(odd)
29	RX03+	Positive LVDS differential data input. Channel O3 (odd)
30	RXE0-	Negative LVDS differential data input. Channel E0 (even)
31	RXE0+	Positive LVDS differential data input. Channel E0 (even)
32	RXE1-	Negative LVDS differential data input. Channel E1 (even)
33	RXE1+	Positive LVDS differential data input. Channel E1 (even)
34	LCD GND	LCD logic and driver ground
35	RXE2-	Negative LVDS differential data input. Channel E2 (even)
36	RXE2+	Positive LVDS differential data input. Channel E2 (even)
37	RXEC-	Negative LVDS differential clock input. (even)
38	RXEC+	Positive LVDS differential clock input. (even)
39	RXE3-	Negative LVDS differential data input. Channel E3 (even)

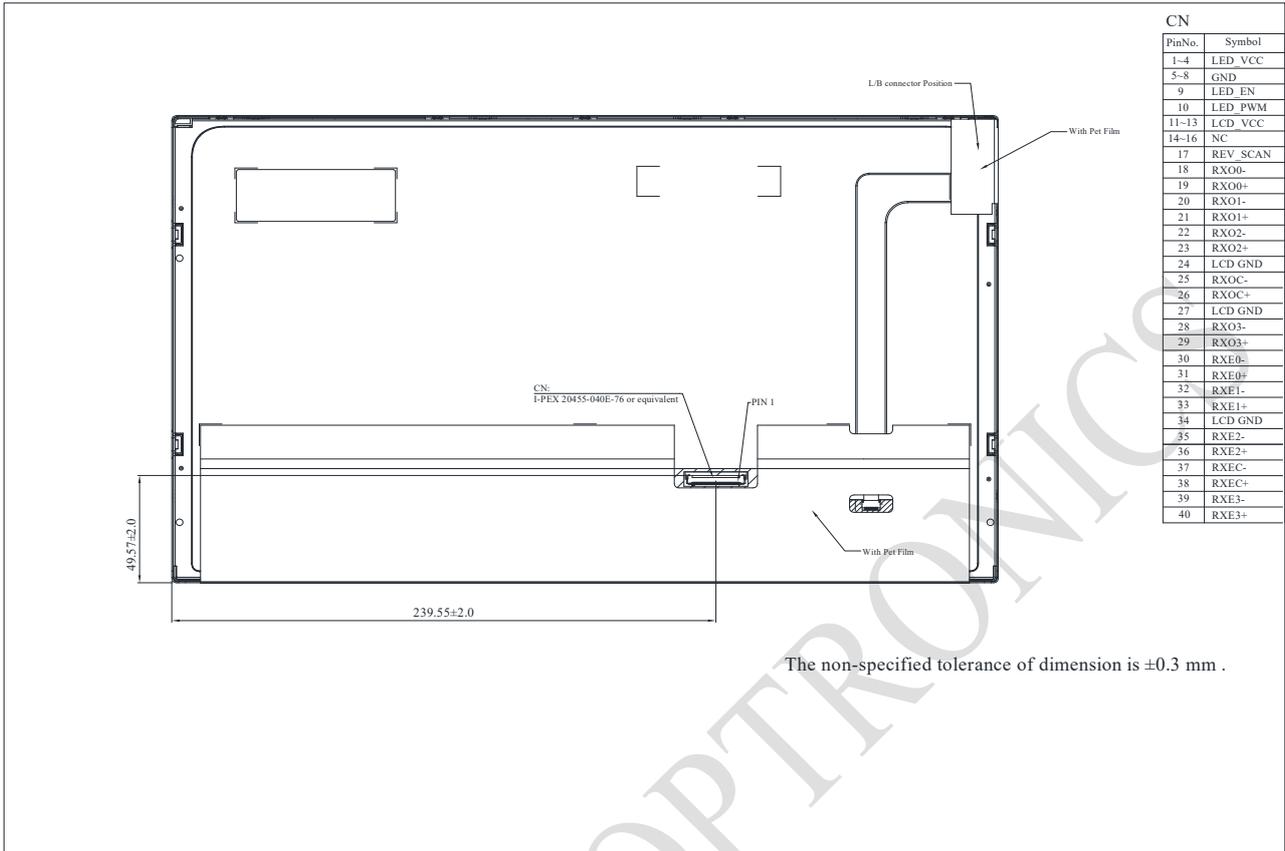
40	RXE3+	Positive LVDS differential data input. Channel E3 (even)
----	-------	--

RAYSTAR OPTRONICS

Contour Drawing



RAYSTAR OPTRONICS



PinNo.	Symbol
1-4	LED_VCC
5-8	GND
9	LED_EN
10	LED_PWM
11-13	LCD_VCC
14-16	NC
17	REV_SCAN
18	RX0-
19	RX0+
20	RX1-
21	RX1+
22	RX2-
23	RX2+
24	LCD_GND
25	RX0C-
26	RX0C+
27	LCD_GND
28	RX3-
29	RX3+
30	RXE0-
31	RXE0+
32	RXE1-
33	RXE1+
34	LCD_GND
35	RXE2-
36	RXE2+
37	RXEC-
38	RXEC+
39	RXE3-
40	RXE3+

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

Absolute Maximum Ratings

Absolute Rating of Environment

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-30	—	+85	°C
Storage Temperature	TST	-40	—	+90	°C

TFT LCD Module

Item	Symbol	Value		Unit
		Min	Max	
Power Supply Voltage	V	-0.3	4.0	V
Logic Input Voltage	VIN	-0.3	4.0	V

Backlight Converter

Item	Symbol	Value			Unit
		Min	Typ	Max	
Converter Voltage	LED_Vin	0	12.0	18.0	V
Enable Voltage	LED_EN	0	3.3/5	7	V
Backlight Adjust	LED_PWM	0	3.3/5	7	V

Electrical Characteristics

LCD Electronics Specification

Parameter		Symbol	Value			Unit
			Min	Typ	Max	
Power Supply Voltage		VCC	3.15	3.3	3.6	V
Ripple Voltage		VRP	—	—	150	mV
Rush Current		IRUSH	—	—	3	A
Power Supply Current	White	—	—	1.22	1.5	A
	Black		—	0.51	0.7	A
	Vertical Stripe		—	0.82	—	A
Power Consumption		PLCD	—	4	5	Watt
LVDS Differential Input Voltage		Vid	200	—	600	mV
LVDS Common Input voltage		V _{i c}	1.0	1.2	1.4	V
Differential Input Voltage for LVDS Receiver Threshold	"H" Level	V _{IH}	—	—	100	mV
	"L" Level	V _{IL}	-100	—	—	mV
LVDS Terminating Resistor		RT	—	100	—	ohm