



RAYSTAR

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RFC350Q-EIW-DBG

SPECIFICATION

General Specifications

- Size: 3.5 inch
- Dot Matrix: 320 x RGB x 240 (TFT) dots
- Module dimension: 93.5 x 66.44 x 8.89 mm
- Active area: 70.08 x 52.56 mm
- Dot pitch: 0.073 x 0.219 mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- Aspect Ratio: 4:3
- Backlight Type: LED, Normally White
- Controller IC: SSD1963
- TFT Interface: Digital 8080 family MPU 8bit/16bit
- PCAP IC: ILI2130 or equivalent
- PCAP Interface: I2C
- PCAP FW Version: 0x07.0x00.0x00.0x00.0x00.0x35.0x5A.0x01
- PCAP Resolution: 16384*16384
- Touch Panel: With PCAP
- Surface: Glare

*Color tone slight changed by temperature and driving voltage.

Interface

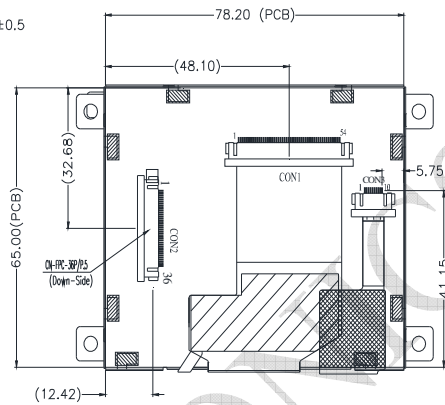
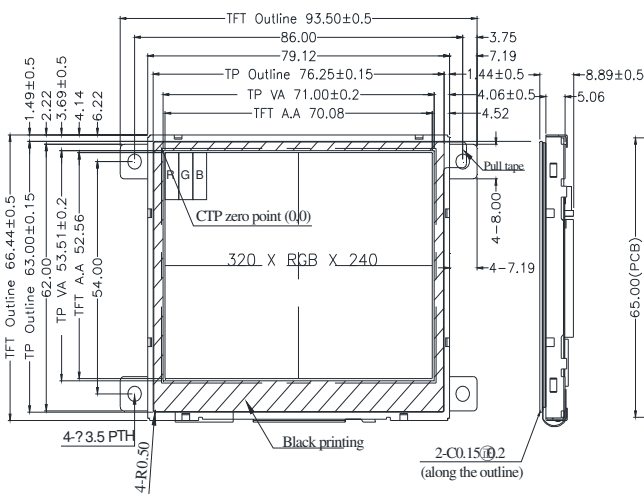
1. LCM PIN Definition (CON2)

Pin	Symbol	Function	Remark
1	GND	System ground pin of the IC. Connect to system ground.	
2	VDD	Power Supply : +3.3V	
3	BL_E	Backlight control signal , H: On \ L: Off	
4	D/C	Data/Command select	
5	WR	Write strobe signal	
6	RD	Read strobe signal	
7	DB0	Data bus	
8	DB1	Data bus	
9	DB2	Data bus	
10	DB3	Data bus	
11	DB4	Data bus	
12	DB5	Data bus	
13	DB6	Data bus	
14	DB7	Data bus	
15	DB8	Data bus (When select 8bits Mode, this pin is NC)	Note1
16	DB9	Data bus (When select 8bits Mode, this pin is NC)	Note1
17	DB10	Data bus (When select 8bits Mode, this pin is NC)	Note1
18	DB11	Data bus (When select 8bits Mode, this pin is NC)	Note1
19	DB12	Data bus (When select 8bits Mode, this pin is NC)	Note1
20	DB13	Data bus (When select 8bits Mode, this pin is NC)	Note1
21	DB14	Data bus (When select 8bits Mode, this pin is NC)	Note1
22	DB15	Data bus (When select 8bits Mode, this pin is NC)	Note1
23	NC	No connect	

24	CTP_INT	External interrupt to the host	
25	CS	Chip select	
26	RST	Hardware reset	
27	NC	No connect	
28	NC	No connect	
29	CTP_SCL	I2C clock input	
30	CTP_SDA	I2C data input and output	
31	CTP_RST	External Reset, Low is active	
32	NC	No connect	
33	VLED-	VLED- for B/L LED inverter (GND)	
34	VLED-	VLED- for B/L LED inverter (GND)	
35	VLED+	VLED+ for B/L LED inverter (+3.3V)	
36	VLED+	VLED+ for B/L LED inverter (+3.3V)	

Note1: When select 8bit mode, DB0~DB7 be used, DB8~DB15 no connect
When select 16bit mode, DB0~DB15 be used

Contour Drawing



CON2	
PIN	Symbol
1	GND
2	VDD
3	BL_E
4	DC
5	WR
6	RD
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	DB8
16	DB9
17	DB10
18	DB11
19	DB12
20	DB13
21	DB14
22	DB15
23	NC
24	CTP_INT
25	CS
26	RST
27	NC
28	NC
29	CTP_SCL
30	CTP_SDA
31	CTP_RST
32	NC
33	VLED-
34	VLED-
35	VLED+
36	VLED+

The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.

RAYSTAR OPTROIN

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C

Electrical Characteristics

1. Operating conditions: (CON2.Pin1=GND, Pin2=VDD)

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For LCM	VDD	—	3.0	3.1	3.3	V
Supply Current For LCM	IDD	—	—	210	350	mA
Supply CTP	VDDT	—	3.0	3.3	3.6	V
	I _{CTP}	—	—	45	68	mA

2. Backlight driving conditions (CON2.Pin33,34=VLED-, Pin35,36=VLED+)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operation Current For LED Driver	VLED=3.3V	150	-	225	mA
Power Consumption	VLED=3.3V	495	-	742.5	mW
Supply Voltage For LED Driver	VLED+	3.3	-	5	V
LED Life Time		-	50,000	-	Hr