



XINSUN Display Integration Ltd.

Product Specification For TFT Module

MODEL NO. : XF024240320DR-TILL

CUSTOMER : _____

☐ **CUSTOMER'S APPROVAL**

BY:

DATE:

PRESENTED

BY:



1. General Specifications

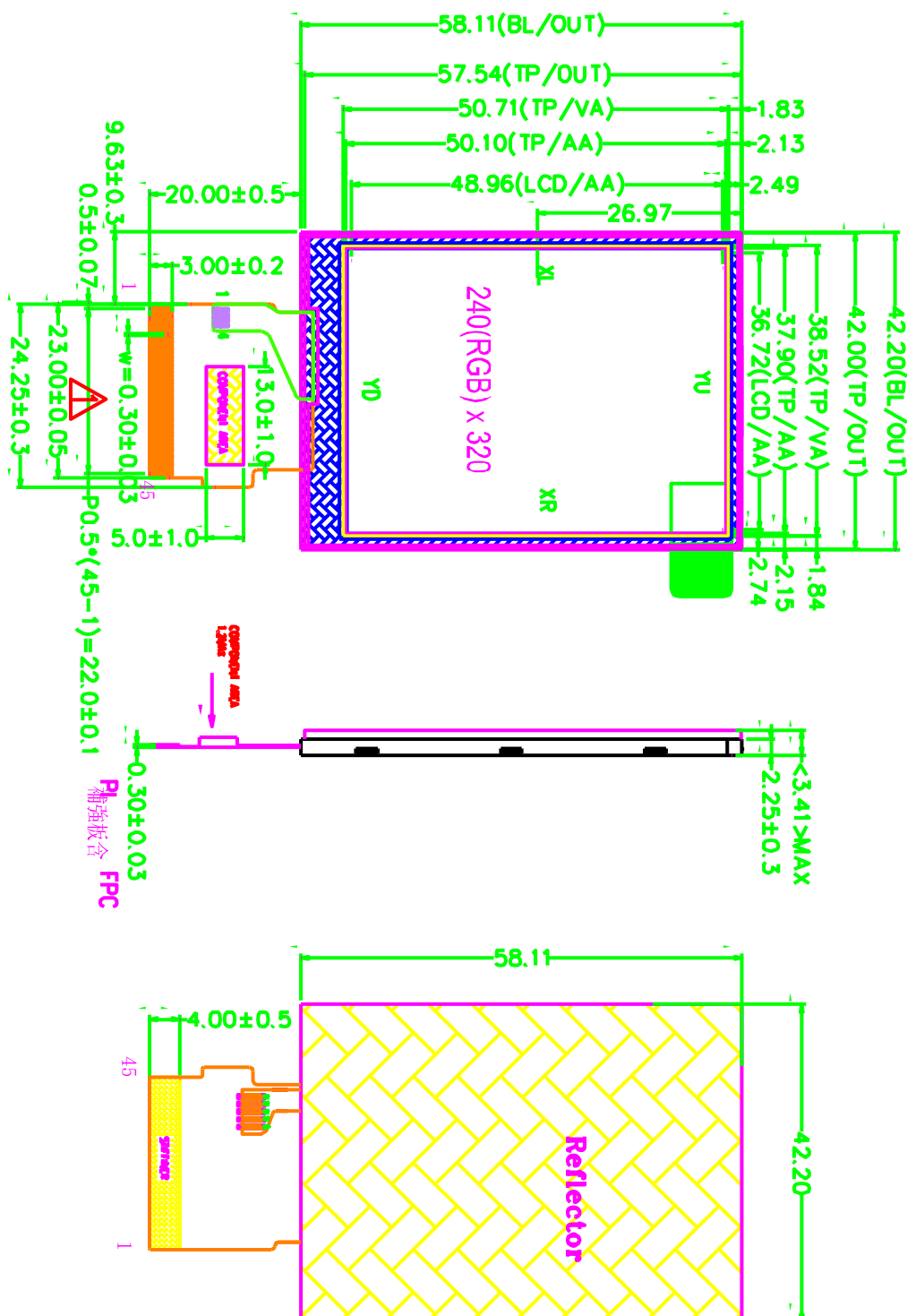
It is a color active matrix TFT (Thin Film Transistor) liquid crystal display (LCD) that uses the amorphous silicon TFT as a switching devices. This model is composed of a Transmissive type TFT-LCD Panel, a driver circuit and a back-light unit. The resolution of a 2.4 main LCD contains 240 x 320 pixels, and can display up to 262K colors and is suitable for cell phone application.

1.1 Features

- High image quality a-Si TFT LCD module.
- 65K/262K color number.
- 80-system 8 bit bus CPU I/F .
- High-speed RAM write function is available.
- Partial-screen display function is available.
- Sleep and Stand-by modes are available for power saving.
- High contrast, high brightness, Gamma adjustment.
- Low power consumption.

1.2 General Specifications

Item	Standard Value	Unit
Screen Size	2.4”(QVGA)	Inch
Dot Matrix	240(RGB)*320	-
Color Number	262K	-
Module Dimension	42.2(W)*58.11(H)*3.41(T)	mm
Active Area	36.72(W)*48.96(H)	mm
Pixel Pitch	0.153(W)*0.153(H)	mm
Color Arrangement	RGB-stripe	-
LCD Type	a-Si TFT, TRANSMISSIVE, Normally White	-
Viewing Direction	6 O’CLOCK	-
Backlight type	LED, WHITE	-
Assembly Type	COG	-
Controller IC	ILI9341 OR Equal	-
Weight	TBD	-





1.3 Interface Pin Description

Pin no	Symbol	Description	Remark
1	LED-A	Power Supply for LED Anode	-----
2	LED-K	Power Supply for LED Cathode	-----
3	GND	Ground	Input
4	VCI	High voltage power supply for analog circuit	Input
5	VDDI	Low voltage power supply for interface logic circuits(1.65 ~ 3.3 V)	Input
6	CSX	Chip select input pin	Input
7	DE	Enable signal pin used in the RGB interface	Input
8	SDI	Serial in/out signal	Input/Output
9	SDO	Serial output signal	Output
10	D/CX (SCL)	This pin is used serial interface clock in 3-wire 9-bit / 4-wire 8-bit serial data	Input
11	WRX(D/CX)	Write	Input
12	RDX	Read	Input
18	B0~B5	Data Input	Input/Output
24	G0~G5	Data Input	Input/Output
30	R0~R5	Data Input	Input/Output
31	DOTCLK	Dot clock signal input used in the RGB	Input
32	HSYNC	Horizontal synchronization signal input pin	Input
33	VSYNC	Vertical synchronization signal input pin	Input
34	RESET	System Reset	Input
35	IM1	MPU Interface mode select	Input
36	IM2	MPU Interface mode select	Input
37	IM3	MPU Interface mode select	Input
38	YU	Touch Panel Top	-----
39	XL	Touch Panel Left	-----
40	YD	Touch Panel Bottom	-----
41	XR	Touch Panel Right	-----
42-43	GND	Ground	-----
44-45	NC	No Connection	-----

NOTE: IMO=GND



2. Absolute Maximum Ratings

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Operating Temperature	Top	-20	70	°C	-
Storage Temperature	Tst	-30	80	°C	-
Power Supply Voltage(2)	VCI-GND	-0.3	4.6	V	-
Power Supply Voltage(4)	VDI-GND	-0.3	4.6	V	-

* If the LSI is used above these absolute maximum ratings, it may become permanently damaged. Using the LSI within the following electrical characteristics limit is strongly recommended for normal operation. If these electrical characteristic conditions are also exceeded, the LSI will malfunction and cause poor reliability.



3. Optical Characteristics and Definitions

3.1 Optical Characteristics

$T_a = 25^{\circ}\text{C}$, $V_{CI}=2.8\text{V}$, $I_{OVCC}=2.8\text{V}$, $I_{LED}=60\text{mA}$

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Brightness		B	$\theta=0^{\circ}$ Normal viewing angle At the center of panel	250	-	-	cd/m^2	(1)
Contrast Ratio		C/R		200	-	-	--	(2)
Response Time		Tr		-	10	-	ms	(3)
		Tf		-	15	-	ms	
Color chromaticity (CIE)	White	W _x		-	0.2549	-	-	-
		W _y		-	0.3056	-		
Viewing Angle	Top	θ_U	$CR \geq 10$ Backlight On	-	45	--	degrees	(4)
	Bottom	θ_D		-	60	--		
	Left	θ_L		-	60	--		
	Right	θ_R		-	60	--		
Color Gamut		S%		-	55	-	%	-
Uniformity		Un	$\theta=0^{\circ}$ Normal viewing angle	70	80	--	%	(5)