



XINSUN Display Integration Ltd.

Product Specification For TFT Module

MODEL NO. : XF028QV03A-TINL

CUSTOMER : _____

☐ CUSTOMER'S APPROVAL

BY:

DATE:

PRESENTED

BY:



1. General Specisications

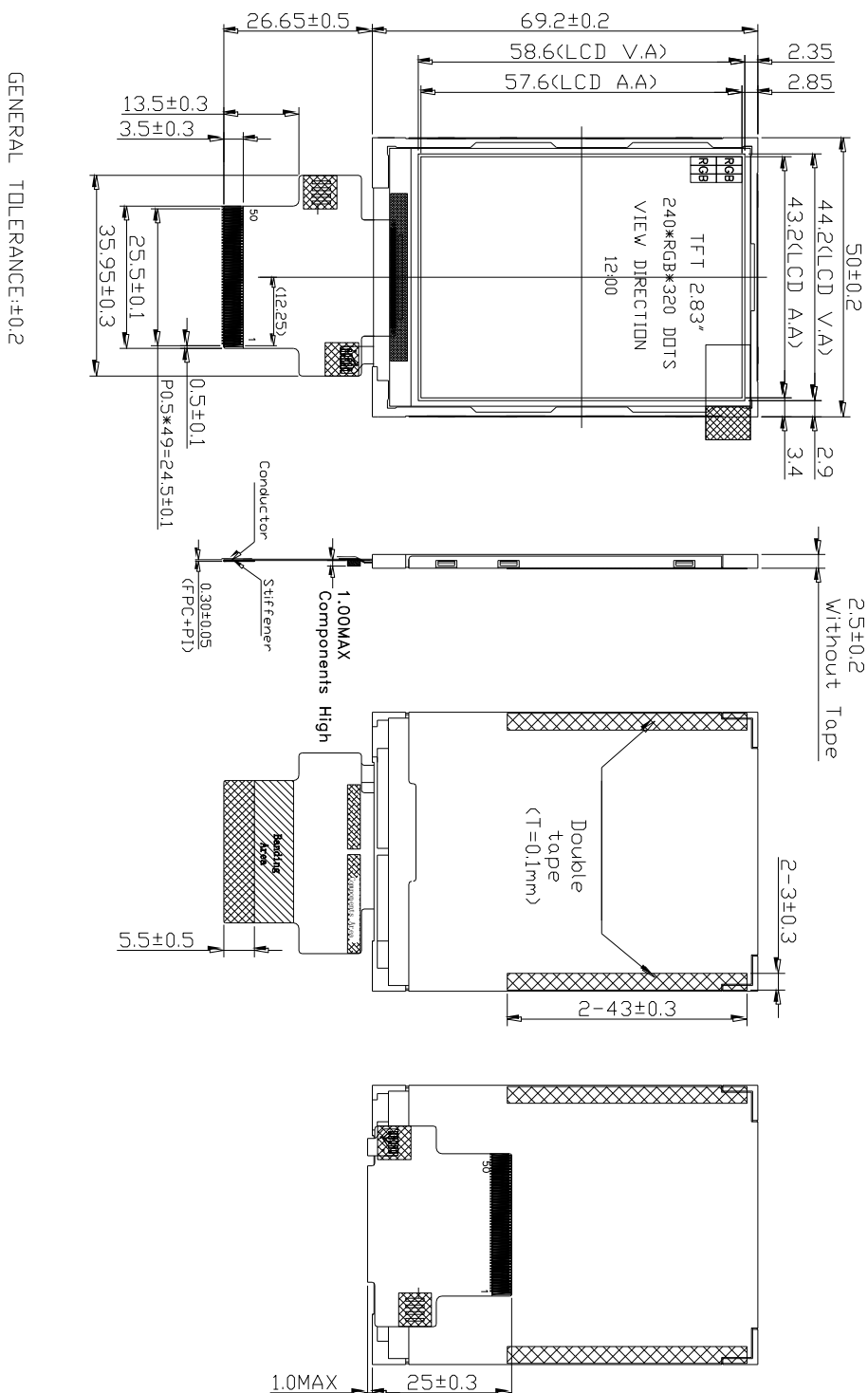
It is a color active matrix TFT (Thin Film Transistor) liquid crystal display (LCD) that uses the amorphous silicon TFT as a switching devices. This model is composed of a Transmissive type TFT-LCD Panel, a driver circuit and a back-light unit. The resolution of a 2.8 main LCD contains 240 x 320 pixels, 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 Specisications

Item	Standard Value	Unit
Screen Size	2.8”(QVGA)	Inch
Dot Matrix	240(RGB)*320	-
Color Number	262K	-
Module Dimension	50.0(W)*69.2(H)*2.5(T)	mm
Active Area	43.2(W)*57.6(H)	mm
Pixel Pitch	0.18(W)*0.18(H)	mm
Color Arrangement	RGB-stripe	-
LCD Type	a-Si TFT, TRANSMISSIVE, Normally White	-
Viewing Direction	12 O’CLOCK	-
Backlight type	LED, WHITE	-
Assembly Type	COG	-
Controller IC	ILI9341 OR Equal	-
Weight	TBD	-





3. Interface Pin Description

Pin no	Symbol	Description	Remark
1	LED-A	Power Supply for LED Anode	-----
2-5	LED-K	Power Supply for LED Cathode	-----
6	IM0	MPU Interface mode select	Input
7	IM1	MPU Interface mode select	Input
8	IM2	MPU Interface mode select	Input
9	IM3	MPU Interface mode select	Input
10	/RESET	System Reset	Input
11	VSYNC	Vertical synchronization signal input pin	Input
12	HSYNC	Horizontal synchronization signal input pin	Input
13	DOTCLK	Dot clock signal input used in the RGB	Input
14	DE	Enable signal pin used in the RGB interface	Input
15-32	DB17~DB0	Data Bus	Input/Output
33	SDO	Serial output signal	Output
34	SDI	Serial in/out signal	Input/Output
35	RDX	Read	Input
36	WRX(D/CX)	Write	Input
37	D/CX (SCL)	This pin is used serial interface clock in	Input
38	CSX	Chip select input pin	Input
39	TE	Tearing effect output pin to synchronize MPU to frame writing	Output
40-41	VDDI	Low voltage power supply for interface logic circuits(1.65 ~ 3.3 V)	Input
42	VCI	High voltage power supply for analog circuit	Input
43	GND	Ground	Input
44	NC	No Connection	-----
45	NC	No Connection	-----
46	NC	No Connection	-----
47	NC	No Connection	-----
48	GND	Ground	Input
49	GND	Ground	Input
50	GND	Ground	Input



4. 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.



5. Optical Characteristics and Definitions

5.1 Optical Characteristics

Ta = 25°C

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Brightness		B	$\theta=0^\circ$ Normal viewing angle At the center of panel	-	350	-	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	of panel	-	0.2549	-	-	-
		W _y		-	0.3056	-		
Viewing Angle	Top	θ_U	$CR \geq 10$ Backlight On	-	60	--	degrees	(4)
	Bottom	θ_D		-	50	--		
	Left	θ_L		-	60	--		
	Right	θ_R		-	60	--		
Color Gamut		S%		-	55	-	%	-
Uniformity		Un	$\theta=0^\circ$ Normal viewing angle	70	80	--	%	(5)