

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



SPECIFICATION

MODULE NO.: WF28JTYAJDNF0#

General Specifications

Item	Dimension	Unit
Size	2.8"	
Dot Matrix	240 x RGB x 320(TFT)	dots
Module dimension	50.5(W) x 69.7(H) x 5.67(D)	mm
Active area	43.2 x 57.6	mm
Dot pitch	0.18 x 0.18	mm
LCD type	TFT, Normally Black, Transmissive	
TFT Driver IC	ILI9341V or Equivalent	
TFT Interface	MCU/SPI	
Viewing angle	80/80/80/80	
Aspect Ratio	3 : 4	
Backlight Type	LED, Normally White	
PCAP IC	FT6336G or Equivalent	
PCAP Interface	I2C	
PCAP FW	0x11	
Touch Panel	Projected Capacitive Touch Panel (PCAP)	
Surface	Glare	

Absolute Maximum Ratings

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

Electrical Characteristics

Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for digital	IOVCC	—	1.65	—	3.3	V
Supply Voltage for analog	VCI	—	2.5	—	3.3	V
Supply Voltage For Touch Logic	VDDT	—	3.0	3.3	3.6	V
Power Supply for Current	ICC	IOVCC=VCI =VCC=3.0V	—	13	20	mA

LED driving conditions

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	80	—	mA
LED voltage	LEDA	8.1	9.3	10.5	V
LED Life Time	—	50000	—	—	Hr

Interface

LCM PIN Definition

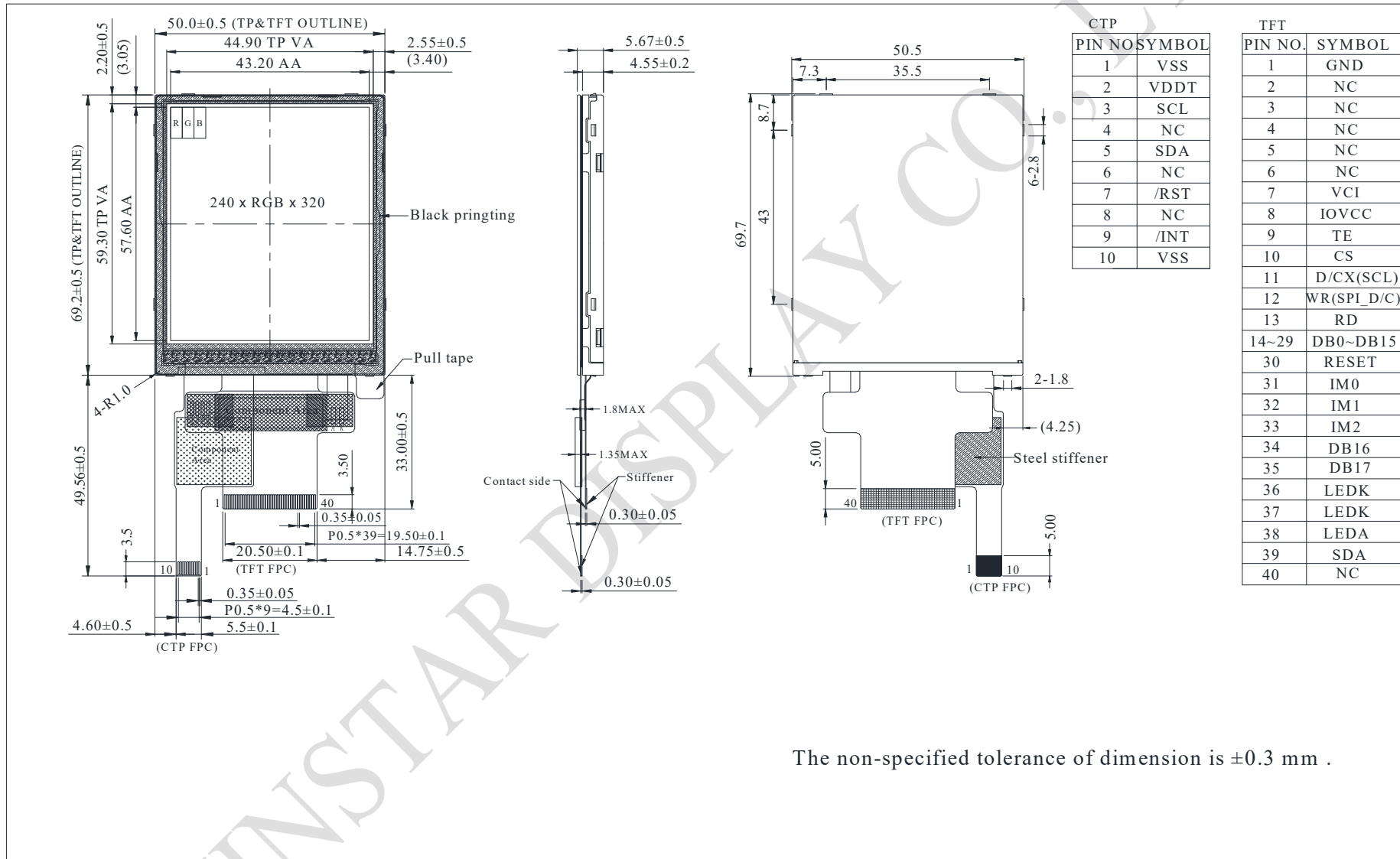
NO	Symbol	Function	I/O
1	GND	Ground	P
2-6	NC	No connection	-
7	VCI	High voltage power supply for analog circuit blocks (2.5 ~ 3.3 V)	P
8	IOVCC	Low voltage power supply for interface logic circuits (2.5 ~ 3.3 V)	P
9	TE	Tearing effect output pin to synchronize MPU to frame writing, activated by S/W command. When this pin is not activated, this pin is low. If not used, open this pin.	O
10	CS	Chip select signal.	I
11	D/CX(SCL)	(D/CX): This pin is used to select "Data or Command" in the parallel interface. When DCX = 1, data is selected. When DCX = 0, command is selected. (SCL): This pin is used as the serial interface clock in 3-wire 9-bit/4-wire 8-bit serial data interface. If not used, this pin should be connected to IOVCC or GND.	I
12	WR(SPI_D/C)	(WRX) - 8080- I /8080- II system: Serves as a write signal and writes data at the rising edge. (D/CX) - 4-line system: Serves as the selector of command or parameter. Fix to IOVCC level when not in use.	I
13	RD	8080- I /8080- II system (RDX): Serves as a read signal and MCU read data at the rising edge. Fix to IOVCC level when not in use.	I
14-29	DB0~DB15	18-bit parallel bi-directional data bus for MCU system. Fix to GND level when not in use.	I/O
30	RESET	(RESX) This signal will reset the device and must be applied to properly initialize the chip. Signal is active low.	I

31	IM0	Select the MCU interface mode					
32	IM1						
33	IM2				DB Pin in use		
		IM2	IM1	IM0	MCU-Interface Mode	Register/Content	GRAM
		0	0	0	80 MCU 8-bit bus interface I	D[7:0]	D[7:0]
		0	0	1	80 MCU 16-bit bus interface I	D[7:0]	D[15:0]
		0	1	0	80 MCU 9-bit bus interface I	D[7:0]	D[8:0]
		0	1	1	80 MCU 18-bit bus interface I	D[7:0]	D[17:0]
		1	0	1	3-wire 9-bit data serial interface I	SDA: In/OUT	
1	1	0	4-wire 8-bit data serial interface I	SDA: In/OUT			
		MPU Parallel interface bus and serial interface select If use RGB Interface must select serial interface. * : Fix this pin at IOVCC or GND.					
34	DB16	18-bit parallel bi-directional data bus for MCU system and RGB interface mode Fix to GND level when not in use.				I/O	
35	DB17						
36	LEDK	Cathode of LED backlight.				P	
37	LEDK	Cathode of LED backlight.				P	
38	LEDA	Anode of LED backlight.				P	
39	SDA	SDA : Serial in/out signal. The data is applied on the rising edge of the SCL signal. If not used, fix this pin at IOVCC or GND.				I/O	
40	NC	Not used, open this pin				N	

PCAP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT	Power Supply : +3.3V
3	SCL	I2C clock input
4	NC	No connect
5	SDA	I2C data input and output
6	NC	No connect
7	/RST	External Reset, Low is active
8	NC	No connect
9	/INT	External interrupt to the host
10	VSS	Ground for analog circuit

Contour Drawing



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