

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



SPECIFICATION

MODULE NO.: WF22GN5AB2DNN0#

General Specifications

Item	Dimension	Unit
Dot Matrix	122 x 250	dots
Module dimension	27.07(W) x 56.2 (H) x 1.09 (D)	mm
Active area	23.668 x 48.50	mm
Pixel Pitch	0.194 x 0.194	mm
LCD type	Mono TFT (Reflective type)	
Viewing Angle	65/65/65/65	
Aspect Ratio	18:9	
Driver IC	ST7306 or or Equivalent	
Interface	8bit MCU/4-SPI/3-SPI	
Touch Panel	Without Touch Panel	
Surface	Anti-Glare	

*Color tone slight changed by temperature and driving voltage.

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:

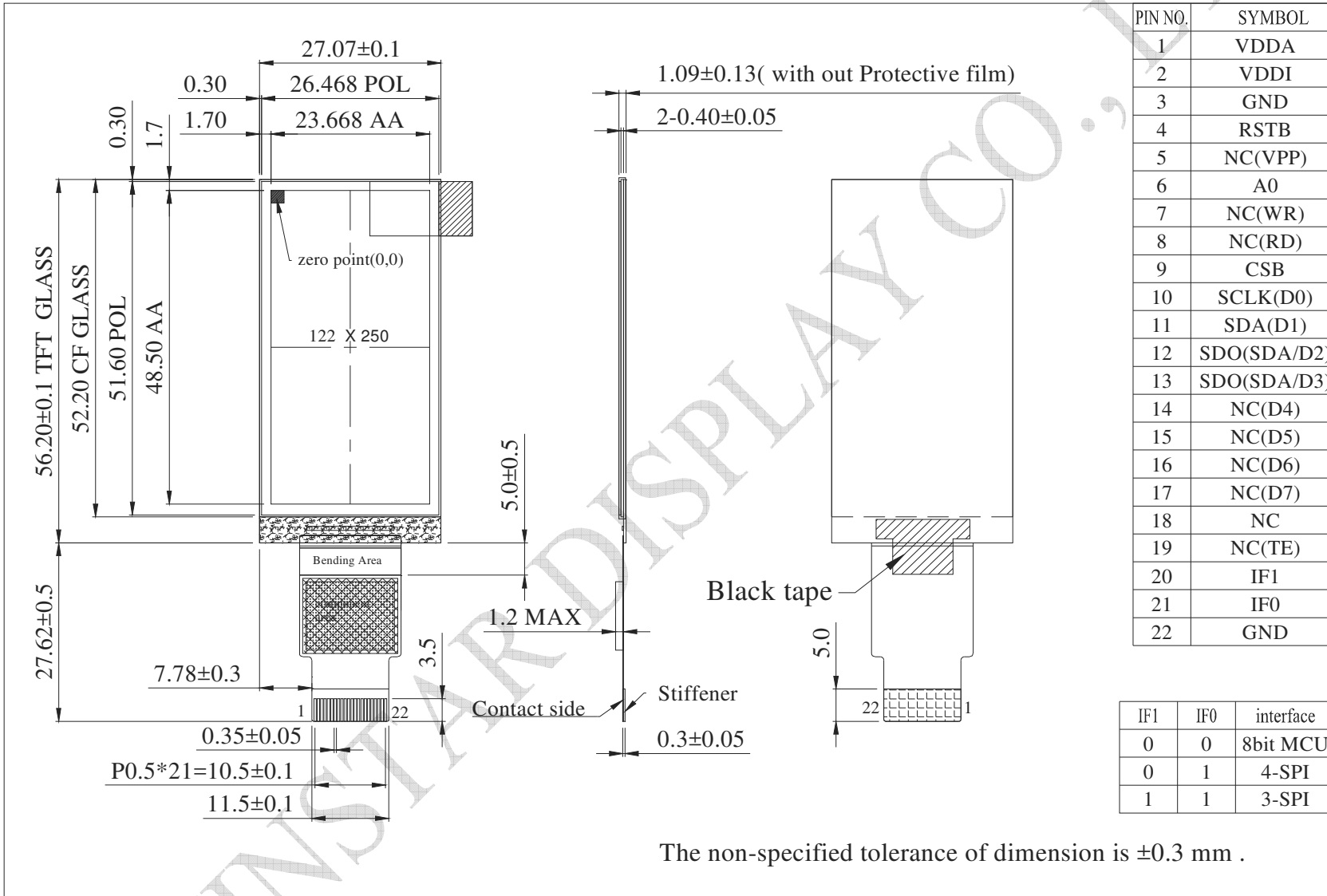
Item	Symbol	Min	Typ	Max	Unit
Supply voltage for logic	VDDA	2.55	3.3	3.6	V
Supply voltage for logic	VDDI	1.7	1.8	1.9	V
Supply Current For LCM	I _{VDDA}	-	-	1	mA

Interface

1. LCM PIN Definition

Pin	Symbol	Function												
1	VDDA	Power Supply (Analog)												
2	VDDI	Power Supply (Digital)												
3	GND	Ground												
4	RSTB	Reset input pin. When RSTB is "L", internal initialization procedure is executed.												
5	NC(VPP)	No connect (The programming power supply of the built-in NVM. Apply external power 7.5V here when programming (> 8mA for successful programming). If not used, left this pin open.)												
6	A0	When using 8080. It determines whether the access is related to data or command. A0 = "H": Indicates that D[7:0] are display data; A0 = "L": Indicates that D[7:0] are control data.												
7	NC(WR)	No connect (When using 8080 Write enable in 8080 parallel interface.)												
8	NC(RD)	No connect (Read enable in 8080 interface. This pin is not used in serial interfaces and should be connected to VDDI.)												
9	CSB	Chip select input pin. CSB="L": This chip is selected and the MPU interface is active. CSB="H": This chip is not selected and the MPU interface is disabled (D[7:0] are high impedance).												
10	SCLK(D0)	<p>When using 8-bit parallel interface: 8080 mode 8 bit bi-directional data bus. Connect to the data bus of 8-bit microprocessor. When CSB is "H", D[7:0] are high impedance. When using serial interface: 4-line SPI, 3-line SPI. D[7:4] : fix to "H" by VDDI. D[3:2] : serial output data (SDA_OUT). D[1] : serial input data (SDA_IN). D[0] : serial input clock (SCLK). D1 to D3 must be connected together (SDA) When CSB is "H", D[7:0] are high impedance.</p>												
11	SDA(D1)													
12	SDO(SDA/D2)													
13	SDO(SDA/D3)													
14	NC(D4)													
15	NC(D5)													
16	NC(D6)													
17	NC(D7)													
18	NC	No connect												
19	NC(TE)	No connect (Tearing effect signal is used to synchronize MCU to frame memory writing. If not used, please let this pin open)												
20	IF1	<p>These pins select interface operation mode</p> <table border="1"> <thead> <tr> <th>IF1</th> <th>IF0</th> <th>interface</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>L</td> <td>8bit MCU</td> </tr> <tr> <td>L</td> <td>H</td> <td>4-SPI</td> </tr> <tr> <td>H</td> <td>H</td> <td>3-SPI</td> </tr> </tbody> </table>	IF1	IF0	interface	L	L	8bit MCU	L	H	4-SPI	H	H	3-SPI
IF1	IF0		interface											
L	L		8bit MCU											
L	H	4-SPI												
H	H	3-SPI												
21	IF0													
22	GND	Ground												

Contour Drawing



PIN NO.	SYMBOL
1	VDDA
2	VDDI
3	GND
4	RSTB
5	NC(VPP)
6	A0
7	NC(WR)
8	NC(RD)
9	CSB
10	SCLK(D0)
11	SDA(D1)
12	SDO(SDA/D2)
13	SDO(SDA/D3)
14	NC(D4)
15	NC(D5)
16	NC(D6)
17	NC(D7)
18	NC
19	NC(TE)
20	IF1
21	IF0
22	GND

IF1	IF0	interface
0	0	8bit MCU
0	1	4-SPI
1	1	3-SPI