Winstar Display Co., LTD
華凌光電股份有限公司

WEB: https://www.winstar.com.tw E-mail: sales@winstar.com.tw

SPECIFICATION

MODULE NO.: WF24MTLAJDNN0#

General Specifications

Item	Dimension	Unit
Size	2.4	inch
Dot Matrix	240 x RGB x 320(TFT)	dots
Module dimension	42.72(W) x 60.26(H) x 2.25(D)	mm
Active area	36.72 x 48.96	mm
Pixel Pitch	0.153 x 0.153	mm
LCD type	TFT, Normally White, Transmissive	
TFT Interface	SPI	
TFT Driver IC	ST7789V or Equivalent	
View Direction	6 o'clock	
Gray Scale Inversion Direction	12 o'clock	
Aspect Ratio	Portrait	
Backlight Type	LED, Normally White	
Touch Panel	Without Touch Panel	
Surface	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	Condition	Min	Typ	Max	Unit
Supply Voltage For Analog	V_{CC}	—	2.4	3.3	3.6	V
Supply Current For LCM	I_{CC}	—	—	6.4	9.6	mA

Interface

LCM PIN Definition

NO	Symbol	Function
1	GND	Ground
2	VLED+	Anode of LED backlight.
3	VLED-	Cathode of LED backlight.
4	GND	Ground
5	VCC	Power supply
6	RESET	System reset pin. (RESX) signal is active low
7	SDA	When IM3: Low, SPI interface input/output pin. When IM3: High, SPI interface input pin. The data is latched on the rising edge of the SCL signal. If not used, please fix this pin at VDDI or DGND level.
8	DCX(SCL)	This pin is used to be serial interface clock. DCX='1': display data or parameter. DCX='0': command data. If not used, please fix this pin at VDDI or DGND.
9	CSX	Chip selection pin Low enable. High disable.
10	WRX(D/CX)	Display data/command selection pin in 4-line serial interface. Second Data lane in 2 data lane serial interface. If not used, please fix this pin at VDDI or DGND.
11	GND	Ground
12	SDO(DOUT)	SPI interface output pin. The data is output on the falling edge of the SCL signal. If not used, let this pin open.
13	TE	Tearing effect signal is used to synchronize MCU to frame memory writing. If not used, please let this pin open
14	IM3	The MCU interface mode select. <table><tr><td>IM3</td><td>IM2</td><td>IM1</td><td>IM0</td><td>MPU Interface Mode</td><td>Data pin</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>4-line 8bit serial I/F</td><td>SDA: in/out</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>4-line 8bit serial I/F II</td><td>SDA:in/ SDO: out</td></tr></table>
15	GND	Ground
16-19	NC	No connection
20	GND	Ground

Contour Drawing

PIN NO.	SYMBOL
1	GND
2	VLED+
3	VLED-
4	GND
5	VCC
6	RESET
7	SDA
8	DCX(SCL)
9	CSX
10	WRX(D/CX)
11	GND
12	SDO(DOUT)
13	TE
14	IM3
15	GND
16	NC
17	NC
18	NC
19	NC
20	GND

42.72±0.2(BL)
37.72(LCD VA)
36.72(LCD AA)
2.50
2.17
2.67
3.00

RGB

49.96(LCD VA)
48.96(LCD AA)
60.26±0.2(BL)

240*RGB*320

Pull tape

2.75±0.5

20.75±0.5

Bending Area

20   1

16.11±0.5   10.50±0.1

5.00

2.25±0.1
(without D.S.T)

D.S.T(T0.05mm)

Stiffener   Contact side

0.30±0.05

2-3.00
(2.35)

43.00

3.50

1   20

0.50±0.1   0.35±0.05
P0.5*19=9.50±0.1

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