

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
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SPECIFICATION

MODULE NO.: WF35UTYAIDNN0#

General Specifications

Item	Dimension	Unit
Size	3.5	inch
Dot Matrix	320 x RGB x 480(TFT)	dots
Module dimension	54.5 (W) x 83.0 (H) x 2.46(D)	mm
Active area	48.96 x 73.44	mm
Pixel pitch	0.153 × 0.153	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
Aspect Ratio	Portrait	
TFT Driver IC	ILI9488 or Equivalent	
TFT Interface	MCU 8/16/18-bit, 3-SPI ,RGB interface+3-SPI	
Backlight Type	LED, Normally White	
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

1. Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for digital	IOVCC	—	1.8	3.0	3.3	V
Supply Voltage for analog	VCI	—	2.8	3.0	3.3	V
Power Supply for Current	ICC	IOVCC=VCI =VCC=3.3V	—	13.5	20.5	mA

2. LED driving conditions

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	160	—	mA
LED voltage	LEDA	2.7	3.2	3.4	V
LED Life Time	—	—	50000	—	Hr

Interface

LCM PIN Definition

NO	Symbol	Function	I/O
1	LEDK	Cathode of LED backlight	P
2	LEDA	Anode of LED backlight.	P
3	IM0	Note 1	I
4	IM1	Note 1	I
5	IM2	Note 1	I
6	RESET	System reset pin.	I
7	NC(VS)	No Connection (Vrtical Sync signal) Note 2)	I
8	NC(HS)	No Connection (Horizontal Sync signal ; Note 2)	I
9	NC(DCLK)	No Connection (Pixel clock signal; Note 2)	I
10	NC(DE)	No Connection (Data Enable; Note 2)	I
11-16	DB17-12	Data bus (R5~R0; RGB-18bit Pixel; Note 2)	I
17-22	DB11-6	Data bus (G5~G0; RGB-18bit Pixel; Note 2)	I
23-28	DB5-0	Data bus (B5~B0; RGB-18bit Pixel; Note 2)	I
29	NC (SDA)	Connection (serial data input/output pin)	I
30	RD	Read strobe signal. Read out data when RDX is Low.	I
31	WR (SCL)	Write data when WRX is Low.(serial clock input pin)	I
32	D/C	register select	I
33	CS (NCS)	Chip select signal (serial chip select input pin)	I
34	IOVCC	Power supply (TYP:1.8V/2.8V).	P
35	VCI	Power supply(TYP:2.8V).	P
36	GND	Ground	P
37	NC	No connection	
38	NC	No connection	
39	NC	No connection	
40	NC	No connection	

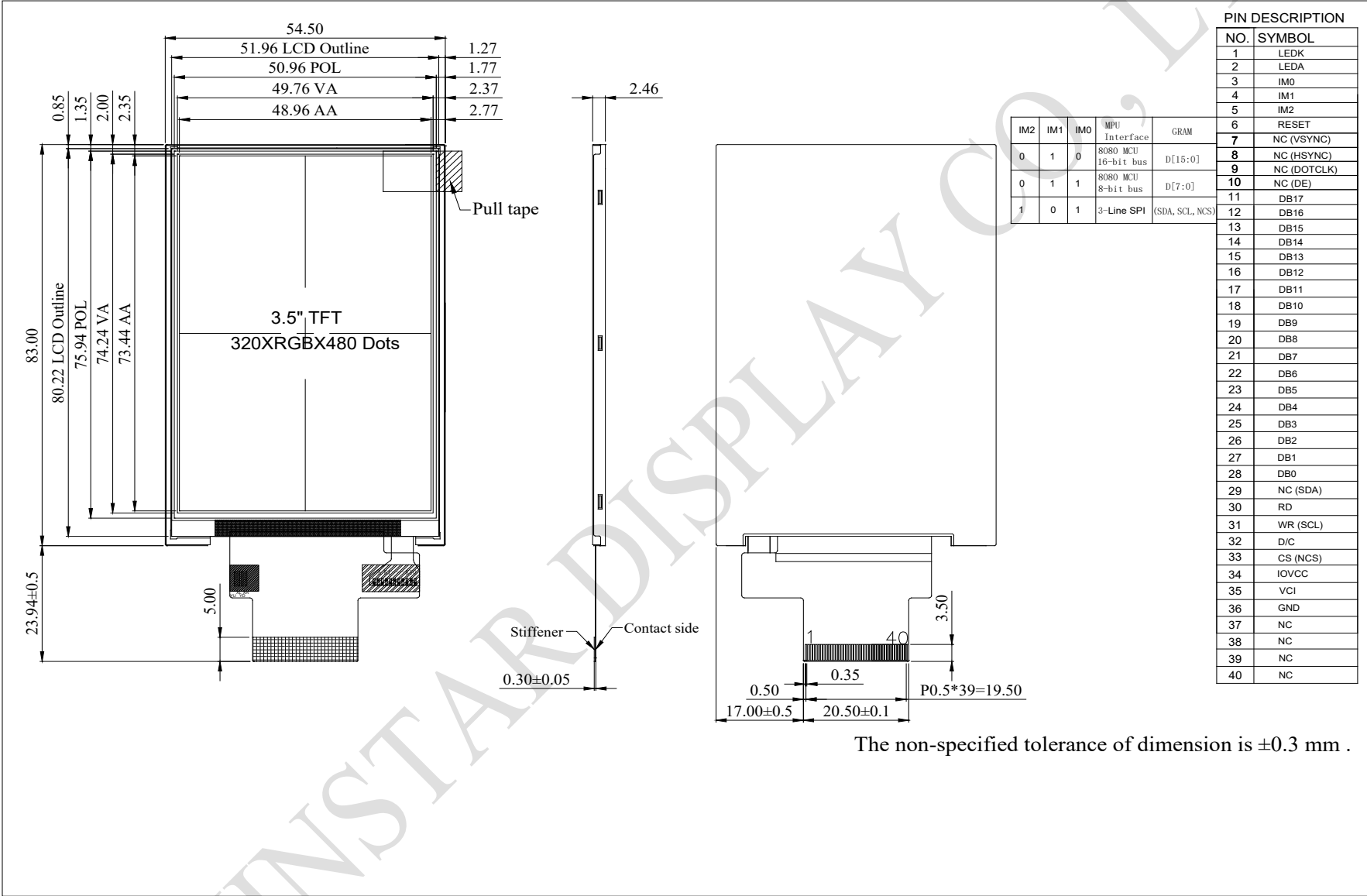
Note 1:

IM2	IM1	IM0	MPU Interface	GRAM
0	0	0	8080 MCU 18-bit bus	D[17:0]
0	1	0	8080 MCU 16-bit bus	D[15:0]
0	1	1	8080 MCU 8-bit bus	D[7:0]
1	0	1	3-Line SPI	SDA,SCL,NCS
1	0	1	RGB interface+3-SPI	D[17:0] (RGB-18bit/Pixel) D[15:0] (RGB-16bit/Pixel)

Note 2:

This module suggests function is for 8080 MCU mode, if this module wants change to use RGB Interface mode, please setting external pin IM [2:0] as 101 (3-SPI Initial code setting RGB-18bit/Pixel or RGB-16bit/Pixel),and reference the **7.5. RGB Interface Selection**

Contour Drawing



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