

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODULE NO.: WF32DTLAJDNN0#

General Specifications

Item	Dimension	Unit
Size	3.2	inch
Dot Matrix	240 x RGB x 320(TFT)	dots
Module dimension	55.04 (W) x 77.6 (H) x 2.55(D)	mm
Active area	48.6 x 64.8	mm
Pixel pitch	0.2025 x 0.2025	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	6 o'clock	
Gray Scale Inversion Direction	12 o'clock	
Aspect Ratio	Portrait	
Driver IC	ILI9341 or Equivalent	
Interface	80 MCU 8bit /9bit/16bit/18bit/SPI(3 Wire/4 Wire)	
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	Type	Max	Unit
Power supply voltage	VCI		2.5	2.8	3.3	V
Power supply voltage	IOVCC		1.65	2.8	3.3	V
Input high voltage	Vih		0.7IOVCC	-	IOVCC	V
Input low voltage	Vil		GND	-	0.3IOVCC	V
Output high voltage	Voh	IOL=-1.0mA	0.8 IOVCC	-	IOVCC	V
Output low voltage	Vol	IOL =1.0mA	GND	-	0.2 IOVCC	V
Current consumption	Ivci	-	-	5.5	8.25	mA

2. LED driving conditions

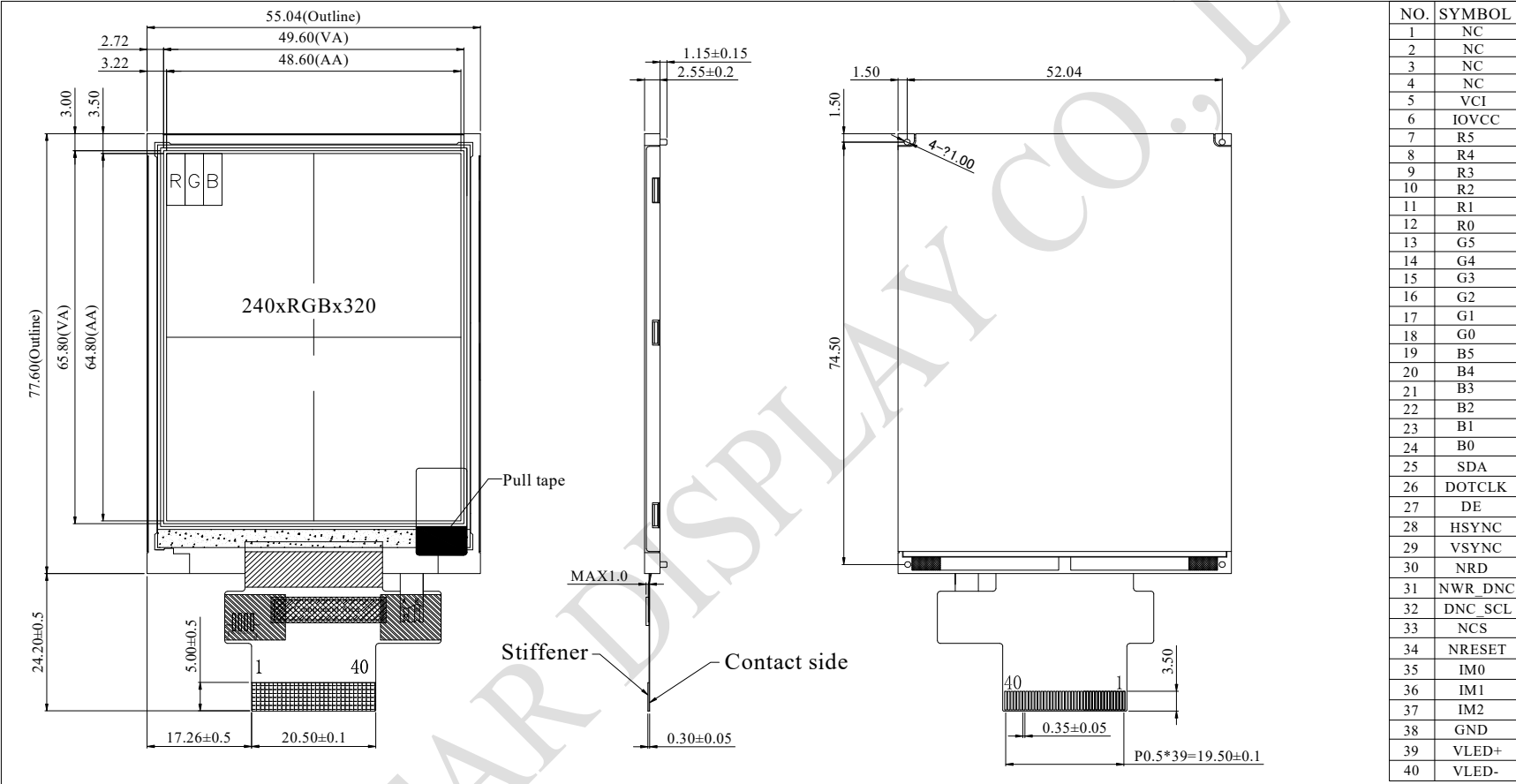
Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	120	—	mA
LED voltage	VLED+	2.7	3.1	3.4	V
LED Life Time	—	—	50000	—	Hr

Interface

LCM PIN Definition

NO	Symbol	Function	I/O																																										
1	NC	No connection	—																																										
2	NC	No connection	—																																										
3	NC	No connection	—																																										
4	NC	No connection	—																																										
5	VCI	Power supply(TYP: 2.8V).	P																																										
6	IOVCC	Power supply(TYP:1.8V/2.8V).	P																																										
7-24	DB17-DB0	Data Bus	I/O																																										
25	SDA	Serial data input/output	I/O																																										
26	DOTCLK	Data enable signal in RGB interface.	I																																										
27	DE	A data ENABLE signal in RGB I/F mode	I																																										
28	HSYNC	Horizontal synchronizing signal in RGB interface	I																																										
29	VSYNC	Vertical synchronizing signal in RGB interface	I																																										
30	NRD	Read enable pin I80 parallel bus system interface	I																																										
31	NWR_DNC	NWR Write enable pin I80 parallel bus system interface DNC Command/parameter or display data selection pin in serial bus system interface	I																																										
32	DNC_SCL	DNC Command/parameter or display data selection pin in parallel interface SCL Serial data clock in serial bus system Interface	I																																										
33	NCS	Chip select signal	I																																										
34	NRESET	System Reset	I																																										
35	IM0	System interface select: <table><tr><th rowspan="2">IM2</th><th rowspan="2">IM1</th><th rowspan="2">IM0</th><th rowspan="2">MCU-Interface Mode</th><th colspan="2">DB Pin in use</th></tr><tr><th>Register/Content</th><th>GRAM</th></tr><tr><td>0</td><td>0</td><td>0</td><td>80 MCU 8-bit bus interface I</td><td>D[7:0]</td><td>D[7:0]</td></tr><tr><td rowspan="2">0</td><td rowspan="2">0</td><td>1</td><td>80 MCU 16-bit bus interface I</td><td>D[7:0]</td><td>D[15:0]</td></tr><tr><td>0</td><td>80 MCU 9-bit bus interface I</td><td>D[7:0]</td><td>D[8:0]</td></tr><tr><td rowspan="3">0</td><td rowspan="2">1</td><td>1</td><td>80 MCU 18-bit bus interface I</td><td>D[7:0]</td><td>D[17:0]</td></tr><tr><td>1</td><td>0</td><td>1</td><td>3-wire 9-bit data serial interface I</td><td colspan="2">SDA: In/OUT</td></tr><tr><td>1</td><td>1</td><td>0</td><td>4-wire 8-bit data serial interface I</td><td colspan="2">SDA: In/OUT</td></tr></table>	IM2	IM1	IM0	MCU-Interface Mode	DB Pin in use		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	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		I
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37	IM2																																												
38	GND	Ground	P																																										
39	VLED+	Anode of LED backlight.	P																																										
40	VLED-	Cathode of LED backlight.	P																																										

Contour Drawing



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.