TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.

華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WF40ESWAA6DNN0#

General Specifications

Item	Dimension	Unit
Size	4.0	inch
Dot Matrix	480 × 3(RGB) × 480	dots
Module dimension	78.8 × 82.95 × 4.77	mm
Active area	71.856 × 70.176	mm
Pixel pitch	0.1497 × 0.1462	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
Aspect Ratio	1:1	
TFT Interface	3W SPI+RGB24bit	
TFT Driver IC	ST7701S or Equivalent	
Backlight Type	LED ,Normally White	
Touch Panel	Without Touch Panel	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-30	—	+80	℃
Storage Temperature	TST	-30	—	+80	℃

Electrical Characteristics

1. Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Interface Supply Voltage	VCC	2.5	2.8	3.6	V
Current for Driver(White)	I_{VCC}	-	27	40.5	mA

2. Backlight Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	ILED	-	120	-	mA
LED voltage	VLED+	13.5	15	17	V
LED Life Time		50,000	-	-	Hr

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Interface

1. LCM PIN Definition

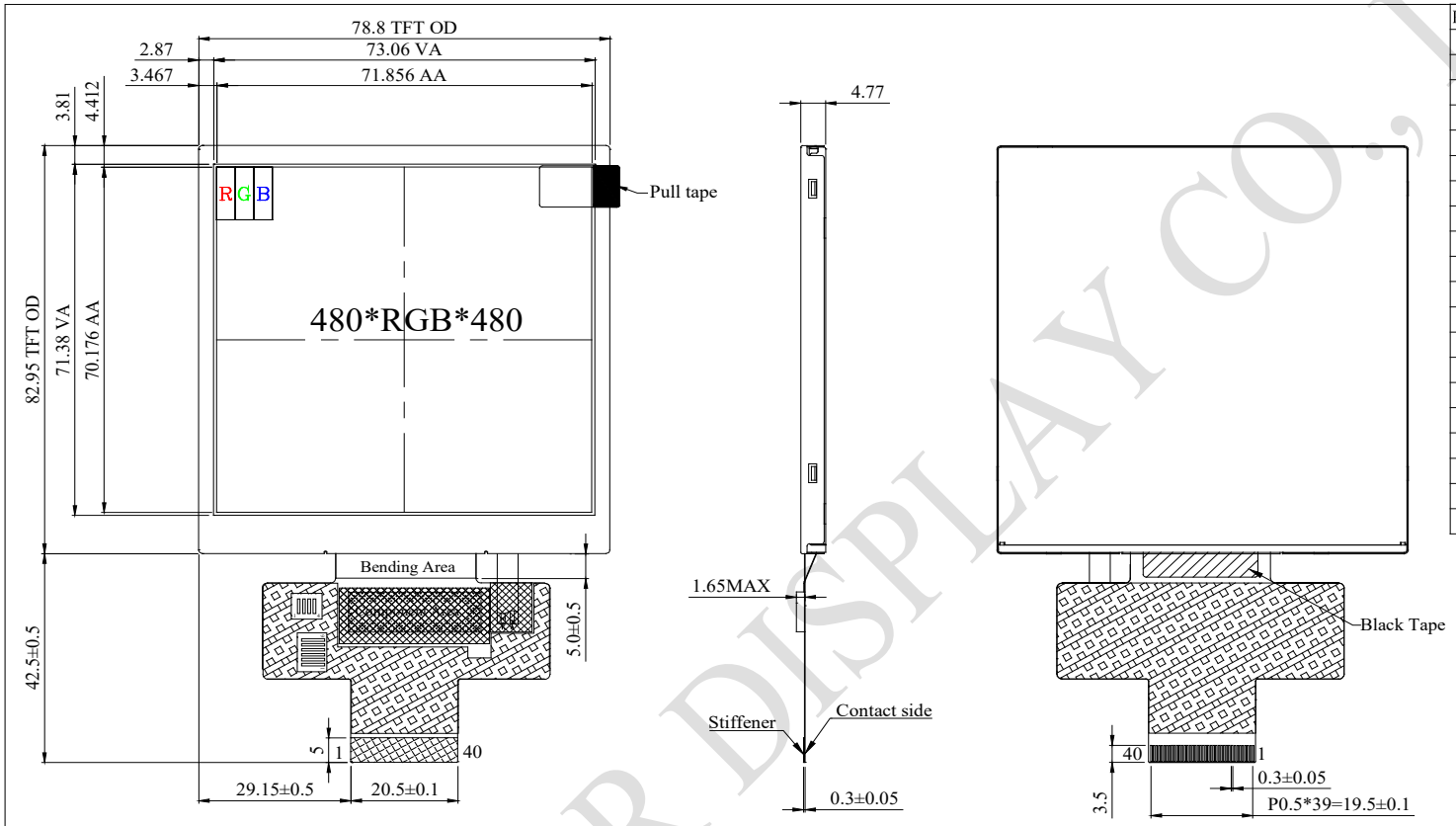
Pin	Symbol	Function
1	VLED-	Power for LED backlight cathode
2	VLED+	Power for LED backlight anode
3	GND	Power ground
4	VCC	Power supply
5	R0	Data bus
6	R1	
7	R2	
8	R3	
9	R4	
10	R5	
11	R6	
12	R7	
13	G0	Data bus
14	G1	
15	G2	
16	G3	
17	G4	
18	G5	
19	G6	
20	G7	
21	B0	Data bus
22	B1	
23	B2	
24	B3	
25	B4	
26	B5	
27	B6	
28	B7	
29	SCL	SCL: Serial clock input for SPI interface.
30	PCLK	Dot clock signal for RGB interface operation

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31	CS	SPI Chip select signal (CSX) Low: the chip is selected and accessible High: the chip is not selected and not accessible
32	HSYNC	Line synchronizing signal for RGB interface operation (HS)
33	VSYNC	Frame synchronizing signal for RGB interface operation (VS)
34	DE	Data enable signal for RGB interface operation Low: access enabled High: access inhibited
35	SDA	SDA: Serial data input/output (In: DIN, Out: DOUT) bidirectional pin for SPI Interface.
36	RESET	- The external reset input (RESX) - Initializes the chip with a low input. Be sure to execute a power-on reset after supplying power.
37-40	NC	No connect

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Contour Drawing



PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	VLED-	21	B0
2	VLED+	22	B1
3	GND	23	B2
4	VCC	24	B3
5	R0	25	B4
6	R1	26	B5
7	R2	27	B6
8	R3	28	B7
9	R4	29	SCL
10	R5	30	PCLK
11	R6	31	CS
12	R7	32	HSYNC
13	G0	33	VSYNC
14	G1	34	DE
15	G2	35	SDA
16	G3	36	RESET
17	G4	37	NC
18	G5	38	NC
19	G6	39	NC
20	G7	40	NC

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

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