

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



SPECIFICATION

MODULE NO.: WF18HSLAADNN0#

General Specifications

Item	Dimension	Unit
Size	1.77	inch
Dot Matrix	128 x RGB x 160(TFT)	dots
Module dimension	34.0(W) x 45.83(H) x 2.75(D)	mm
Active area	28.03 x 35.04	mm
Dot pitch	0.073 x 0.219	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	6 o'clock	
Gray Scale Inversion Direction	12 o'clock	
Aspect Ratio	Portrait	
TFT IC	ST7735S or Equivalent	
TFT Interface	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 Analog	VCC	—	2.5	2.75	3.7	V
Supply LCM current	ICC	—	—	0.9	2	mA

2. LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	—	—	40	—	mA
Power Consumption	—	—	124	—	mW
LED voltage	VBL+	2.9	3.1	3.4	V
LED Life Time	—	50,000	—	—	Hr

Interface

1. LCM PIN Definition

Pin	Symbol	I/O	Function
1	LED+	P	Back light anode
2	LED-	P	Back light cathode
3	SPI4W (VCC=4 WIRE)	I	- SPI4W='0', 3-line SPI Enable. - SPI4W='1', 4-line SPI Enable.
4	VCC	P	Power Supply.
5	GND	P	Ground
6	CS	I	Chip enable (CSX)
7	RST	I	Reset signal (RESX)
8	SDA	I/O	Serial input/output signal in serial interface mode.
9	SCL	I	In Serial Interface, this is used as SCL.
10	D/C	I	Data/ command selection. (D/CX)

[illegible]

Outline Drawing

The drawing consists of three main views: a top view, a side view, and a bottom view.

- Top View:** Shows the overall dimensions of the display area. Key dimensions include:
 - Total width: 34 ± 0.2
 - LCD area width: 31.83 ± 0.2 LCD
 - AA area width: 28.03 AA
 - Display resolution: $128 \times \text{RGB} \times 160$
 - Pull tape location indicated by a hatched rectangle.
 - Bottom edge features a grid pattern labeled "1" with dimensions 5 , 10 , and 25.8 .
- Side View:** Shows the profile of the assembly.
 - Stiffener thickness: 2.75 ± 0.1
 - Contact side dimension: 0.3 ± 0.05
 - D.S.T (Differential Surface Treatment) layer with thickness $T = 0.05\text{mm}$.
 - Bending Area indicated at the bottom edge.
- Bottom View:** Shows the detailed geometry of the bottom edge.
 - Bending Area with radius $R0.3$.
 - Dimensions for the bottom edge: 16.12 ± 0.5 , 5.5 ± 0.05 , 5.5 ± 0.05 , 0.5 ± 0.1 , 10 , 0.3 ± 0.04 , 3.5 , 14 , 34 ± 0.5 .
 - Pattern specification: $P0.5 * 9 = 4.5 \pm 0.03$.

NO.	SYM
1	
2	
3	SPI4W (V)
4	
5	
6	
7	
8	
9	
10	

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

Outline Drawing

The drawing illustrates the mechanical specifications of a flexible display module assembly. It includes three main views: a top plan view, a side cross-sectional view, and a detailed bottom view of the connector area.

Top View Dimensions:

- Total width: 34 ± 0.2
- LCD area width: 31.83 ± 0.2 LCD
- AA area width: 28.03 AA
- Internal width offset: 1.08 and 2.98
- Module size: $128 \times \text{RGB} \times 160$
- Pull tape location indicated.
- Bottom edge features: 5 , 10 , and 1 segments.
- Overall bottom width: 25.8

Side View Dimensions:

- Stiffener thickness: 2.75 ± 0.1
- Contact side dimension: 0.3 ± 0.05

Bottom View (Connector Area) Dimensions:

- Bending Area indicated.
- D.S.T (Double Sided Tape) thickness: $(T = 0.05\text{mm})$
- Width of D.S.T: $3.75(W)$
- Vertical dimensions from top: 9.0 ± 3.0 , 25.0 ± 0.5 , 14 , and 34 ± 0.5 .
- Horizontal dimensions at bottom: 16.12 ± 0.5 , 0.5 ± 0.1 , 10 , 0.3 ± 0.04 , 5.5 ± 0.05 , and $P0.5 * 9 = 4.5 \pm 0.03$.
- Radius: $2-R0.3$
- Other vertical offsets: 2.21 ± 0.5 and 3.5 .

NO.	SYM
1	
2	
3	SPI4W (V
4	
5	
6	
7	
8	
9	
10	

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

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