WINSTAR Display

OLED SPECIFICATION

Model No:

WEO12864W#VY0-FC

WINSTAR DISPLAY CO.; LTD

Represented by:

first FC components

FIRST Components srl Via Cavour 69, 21020 Buguggiate (VA)

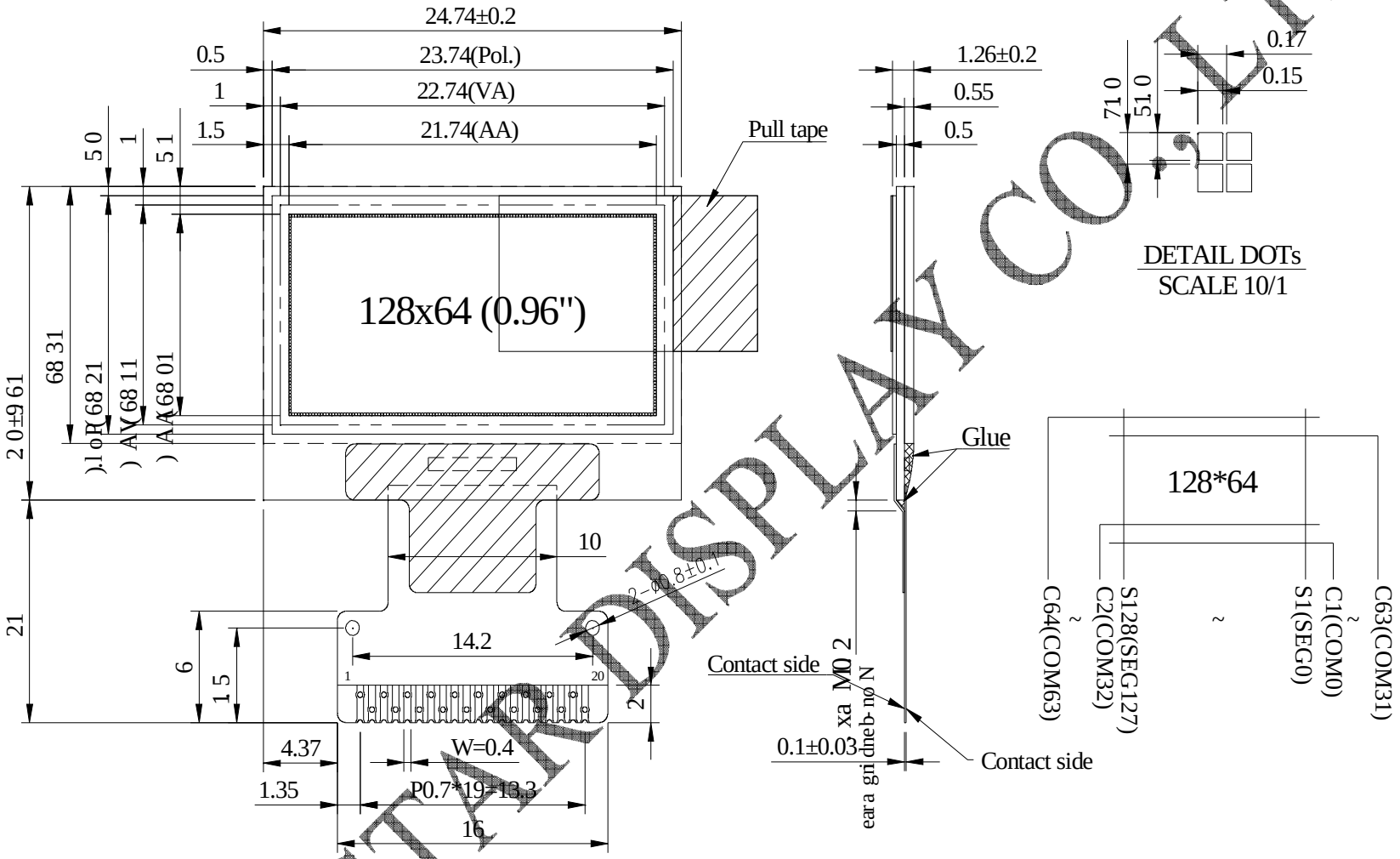
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General Specification

Item	Dimension	Unit
Dot Matrix	128 x 64 Dots	—
Module dimension	24.74 x 16.90 x 1.26	mm
Active Area	21.74 x 10.86	mm
Pixel Size	0.15 x 0.15	mm
Pixel Pitch	0.17 x 0.17	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
IC	SSD1315	
Interface	SPI, I2C	
Size	0.96 inch	

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Contour Drawing & Block Diagram



PIN	SYMBOL
1	C2N
2	C2P
3	C1P
4	C1N
5	VBAT
6	VCC
7	VSS
8	VDD
9	BS0
10	BS1
11	CS#
12	RES#
13	D/C#
14	D0
15	D1
16	D2
17	IREF
18	VCOMH
19	VCC
20	VLSS

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

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Interface Pin Function

<table>
<tr><th>No.</th><th>Symbol</th><th>Function</th></tr>
<tr><td>1</td><td>C2N</td><td rowspan="2">C2P/C2N – Pin for charge pump capacitor; Connect to each other with a capacitor.</td></tr>
<tr><td>2</td><td>C2P</td></tr>
<tr><td>3</td><td>C1P</td><td rowspan="2">C1P/C1N – Pin for charge pump capacitor; Connect to each other with a capacitor.</td></tr>
<tr><td>4</td><td>C1N</td></tr>
<tr><td>5</td><td>VBAT</td><td>Power Supply for DC/DC Converter Circuit
This is the power supply pin for the internal buffer of the DC/DC voltage converter. It must be connected to external source when the converter is used. It should be float when the converter is not used.</td></tr>
<tr><td>6</td><td>VCC</td><td>Power supply for panel driving voltage. This is also the most positive power voltage supply pin.
When charge pump is enabled, a capacitor should be connected between this pin and VSS.</td></tr>
<tr><td>7</td><td>VSS</td><td>Ground of Logic Circuit
This is a ground pin. It acts as a reference for the logic pins. It must be connected to external ground.</td></tr>
<tr><td>8</td><td>VDD</td><td>Power Supply for Logic
This is a voltage supply pin. It must be connected to external source.</td></tr>
<tr><td>9</td><td>BS0</td><td rowspan="2">Communicating Protocol Select
These pins are MCU interface selection input. See the following table:
<table>
<tr><td>BS[1:0]</td><td>Interface</td></tr>
<tr><td>00</td><td>4-line SPI</td></tr>
<tr><td>01</td><td>3-line SPI</td></tr>
<tr><td>10</td><td>I2C</td></tr>
</table></td></tr>
<tr><td>10</td><td>BS1</td></tr>
<tr><td>11</td><td>CS#</td><td>Chip Select
This pin is the chip select input. The chip is enabled for MCU communication only when CS# is pulled low.</td></tr>
<tr><td>12</td><td>RES#</td><td>Power Reset for Controller and Driver
This pin is reset signal input. When the pin is low, initialization of the chip is executed.</td></tr>
<tr><td>13</td><td>D/C#</td><td>In I2C mode, this pin acts as SA0 for slave address selection.
When 3-wire serial interface is selected, this pin must be connected to VSS.</td></tr>
<tr><td>14~16</td><td>D0~D2</td><td>When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SDIN.
When I2C mode is selected, D2, D1 should be tied together and serve as SDAout, SDAin in application and D0 is the serial clock input, SCL.</td></tr>
<tr><td>17</td><td>IREF</td><td>Current Reference for Brightness Adjustment
This pin is segment current reference pin. A resistor should be connected between this pin and VSS. Set the current lower than 30uA.</td></tr>
<tr><td>18</td><td>VCOMH</td><td>COM signal deselected voltage level.
A capacitor should be connected between this pin and VSS.</td></tr>
</table>

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19	VCC	*Power supply for panel driving voltage. This is also the most positive power voltage supply pin.* *When charge pump is enabled, a capacitor should be connected between this pin and VSS.*
20	VLSS	*Ground of Analog Circuit* This is an analog ground pin. It should be connected to VSS externally.

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Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Logic	VDD	-0.3	4.0	V
Charge Pump Regulator	VBAT	-0.3	6.0	V
Supply Voltage for Display	VCC	0	18.0	V
Operating Temperature	TOP	-30	+70	°C
Storage Temperature	TSTG	-30	+70	°C

Electrical Characteristics

DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for Logic	VDD	—	2.8	3.0	3.3	V
Supply Voltage for Display	VCC	—	7.0	7.5	8.0	V
Input High Volt.	VIH	—	0.8×VDD	—	VDD	V
Input Low Volt.	VIL	—	0	—	0.2×VDD	V
Output High Volt.	VOH	—	0.9×VDD	—	VDD	V
Output Low Volt.	VOL	—	0	—	0.1×VDD	V
Operating Current for VCC (50% display ON)	ICC	—	—	6	12	mA

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