WINSTAR Display

OLED SPECIFICATION

Model No:

WEO128128x#D0D-FC

WINSTAR DISPLAY CO.; LTD

Represented by:

first FC components

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

T. +39 0332 1888005 web: www.first-components.com

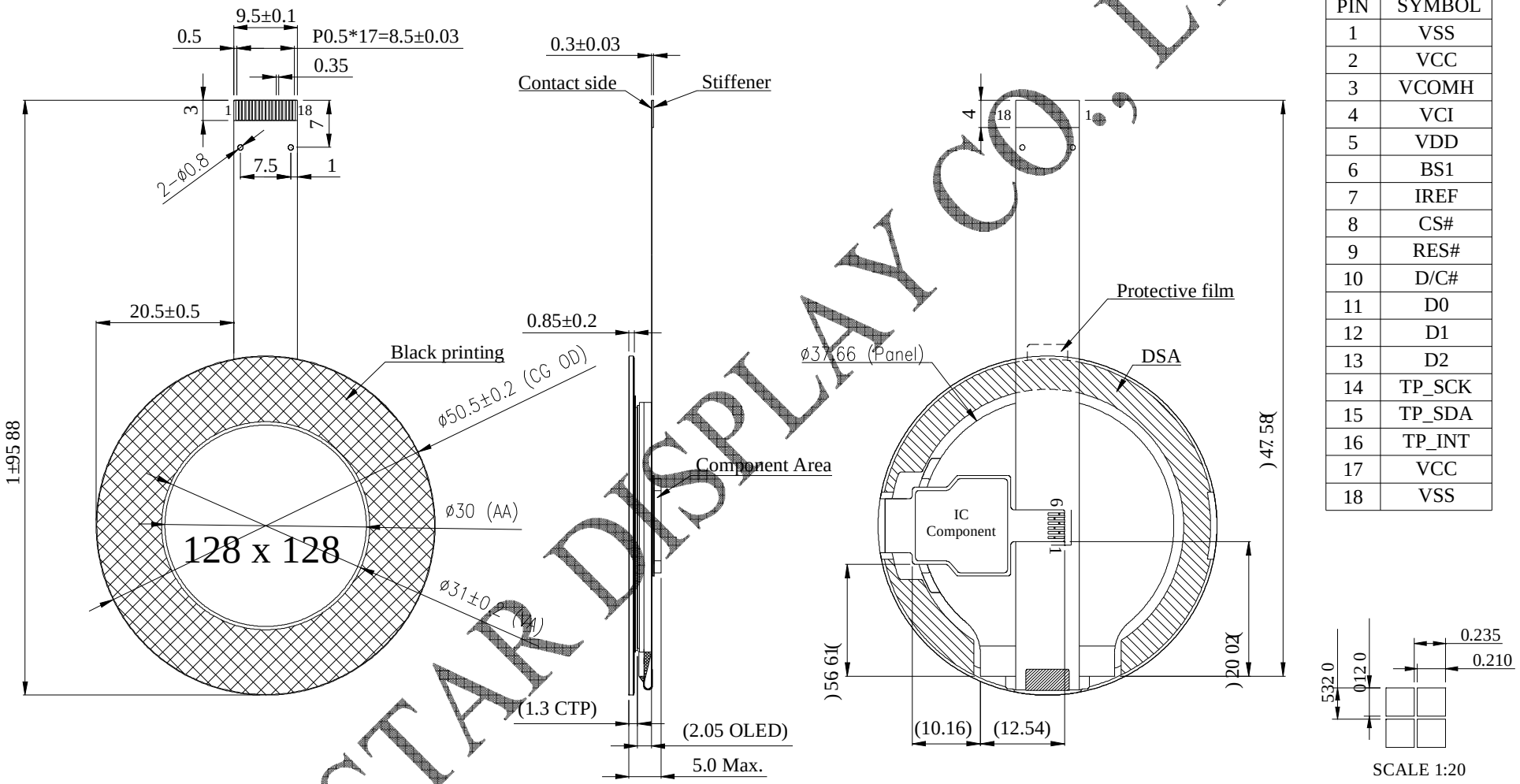
General Specification

Item	Dimension	Unit
Dot Matrix	128 x 128 Dots	—
Module dimension	Ø50.5 x 5.0	mm
Active Area	Ø 30.0	mm
Pixel Size	0.210 x 0.210	mm
Pixel Pitch	0.235 x 0.235	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/128 Duty	
Gray Scale	4 bits	
IC	SSD1327	
Interface	4-line SPI , I2C	
Size	1.18 inch	

PCAP IC	IT7259
Detect Point	1
PCAP Interface	I2C
PCAP Surface Hardness	6H

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Contour Drawing & Block Diagram



PIN	SYMBOL
1	VSS
2	VCC
3	VCOMH
4	VCI
5	VDD
6	BS1
7	IREF
8	CS#
9	RES#
10	D/C#
11	D0
12	D1
13	D2
14	TP_SCK
15	TP_SDA
16	TP_INT
17	VCC
18	VSS

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>VSS</td><td>Ground pin. It must be connected to external ground.</td></tr>
<tr><td>2</td><td>VCC</td><td>Power supply for panel driving voltage. This is also the most positive power voltage supply pin. It is supplied by external high voltage source.</td></tr>
<tr><td>3</td><td>VCOMH</td><td>COM signal deselected voltage level.
A capacitor should be connected between this pin and VSS. No external power supply is allowed to connect to this pin.</td></tr>
<tr><td>4</td><td>VCI</td><td>Low voltage power supply and power supply for interface logic level. It should match with the MCU interface voltage level and must be connected to external source.
VCI must always set to be equivalent to or higher than VDD.</td></tr>
<tr><td>5</td><td>VDD</td><td>Power supply pin for core logic operation.</td></tr>
<tr><td>6</td><td>BS1</td><td>MCU bus interface selection pins. Select appropriate logic setting as described in the following table. BS1 is pin select.
Bus Interface selection
<table>
<tr><th>BS1</th><th>Interface</th></tr>
<tr><td>0</td><td>4-line SPI</td></tr>
<tr><td>1</td><td>I2C</td></tr>
</table>
Note (1) 0 is connected to VSS (2) 1 is connected to VCI</td></tr>
<tr><td>7</td><td>IREF</td><td>This pin is the segment output current reference pin</td></tr>
<tr><td>8</td><td>CS#</td><td>This pin is the chip select input connecting to the MCU.
The chip is enabled for MCU communication only when CS# is pulled LOW (active LOW).</td></tr>
<tr><td>9</td><td>RES#</td><td>This pin is reset signal input.
When the pin is pulled LOW, initialization of the chip is executed.
Keep this pin pull HIGH during normal operation.</td></tr>
<tr><td>10</td><td>DC#</td><td>This pin is Data/Command control pin connecting to the MCU.
When the pin is pulled HIGH, will be interpreted as data.
When the pin is pulled LOW, will be transferred to a command register
In I2C mode, this pin acts as SA0 for slave address selection.</td></tr>
<tr><td>11</td><td>D0</td><td rowspan="3">When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SDIN and D2 should be kept NC.
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>12</td><td>D1</td></tr>
<tr><td>13</td><td>D2</td></tr>
<tr><td>14</td><td>TP_SCK</td><td>I2C clock signal</td></tr>
<tr><td>15</td><td>TP_SDA</td><td>I2C data signal</td></tr>
<tr><td>16</td><td>TP_INT</td><td>Interrupt signal</td></tr>
<tr><td>17</td><td>VCC</td><td>Power supply for panel driving voltage. This is also the most positive power voltage supply pin.</td></tr>
<tr><td>18</td><td>VSS</td><td>Ground</td></tr>
</table>

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Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Operation	VCI	-0.3	4.0	V
Supply Voltage for Logic	VDD	-0.5	2.75	V
Supply Voltage for Display	VCC	-0.5	19.0	V
Operating Temperature	TOP	-20	+50	°C
Storage Temperature	TSTG	-30	+70	°C

Electrical Characteristics

DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for Logic	VCI	—	2.8	3.0	3.3	V
Supply Voltage for Display	VCC	—	14.0	14.5	15.0	V
High Level Input	VIH	—	0.8×VCI	—	VCI	V
Low Level Input	VIL	—	0	—	0.2×VCI	V
High Level Output	VOH	Iout = 100uA	0.9×VCI	—	VCI	V
Low Level Output	VOL	Iout = 100uA	0	—	0.1×VCI	V
50% Check Board operating Current		VCC =14.5V	—	24	36	mA

Touch Panel Controller IT7259

Item	Symbol	Condition	Min	Typ	Max	Unit
Input High Volt.	VIH	COMS	1.2	—	—	V
Input Low Volt.	VIL	COMS	—	—	0.5	V
Output High Volt.	VOH	I_{OH} = 2mA	2.4	—	—	V
Output Low Volt.	VOL	I_{OL} = 2mA	—	—	0.4	V

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