WINSTAR Display

OLED SPECIFICATION

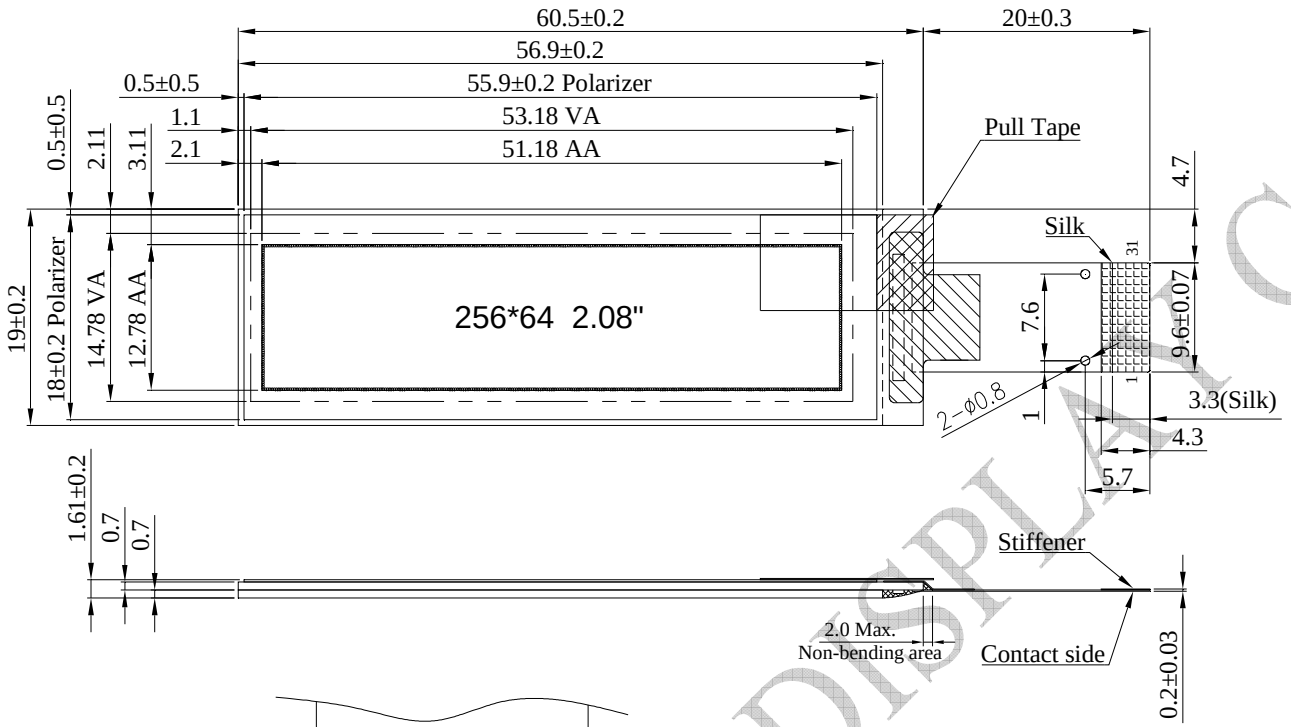
Model No:

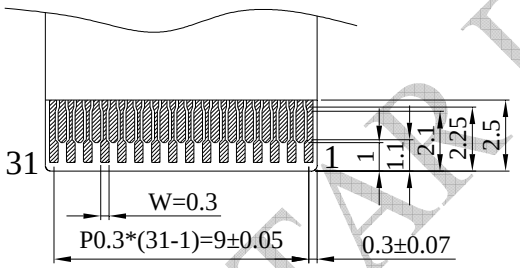
WEO025664A-ZIF

General Specification

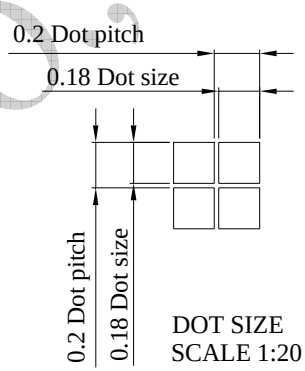
Item	Dimension	Unit
Dot Matrix	256 x 64 Dots	—
Module dimension	60.5 x 19.0 x 1.61	mm
Active Area	51.18 x 12.78	mm
Pixel Size	0.18 x 0.18	mm
Pixel Pitch	0.2 x 0.2	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
Gray Scale	4 Bits	
IC	SSD1362	
Interface	3-Wire and 4-Wire SPI, I2C, 6800, 8080	
Size	2.08 inch	

Contour Drawing & Block Diagram

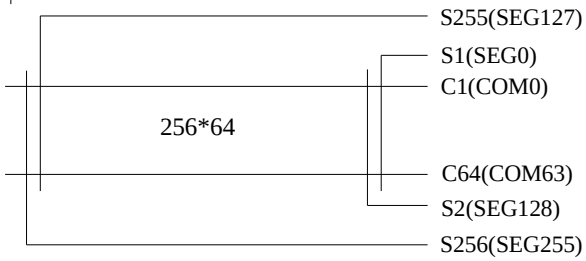




FPC Contact Side
SCALE 1:2.5



DOT SIZE
SCALE 1:20



PIN	SYMBOL
1	NC
2	VCC
3	VP
4	VCOMH
5	VDD
6	VCC
7	IREF
8	VCC
9	NC
10	VSS
11	VSS
12	VCI
13	BS0
14	BS1
15	VCI
16	BS2
17	CS
18	RES
19	D/C
20	R/W
21	RD
22	D0
23	D1
24	D2
25	D3
26	D4
27	D5
28	D6
29	D7
30	NC
31	VCC

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

Interface Pin Function

<table>
<tr><th>No.</th><th>Symbol</th><th>Function</th></tr>
<tr><td>1</td><td>NC</td><td>These pins are reserved. Nothing should be connected to these pins, nor are they connected together.</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>VP</td><td>This pin is the segment pre-charge voltage reference pin.
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>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>5</td><td>VDD</td><td>Power supply for core logic operation.
VDD can be supplied externally (within the range of 1.65V to 2.6V) or regulated internally from VCI when VCI is >2.6V.
A capacitor should be connected between VDD and VSS under all circumstances.</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. It is supplied by external high voltage source.</td></tr>
<tr><td>7</td><td>IREF</td><td>This pin is the segment output current reference pin.
When external IREF is used, a resistor should be connected between this pin and VSS to maintain current of around 18.75uA.
When internal IREF is used, this pin should be kept NC.</td></tr>
<tr><td>8</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>9</td><td>NC</td><td>These pins are reserved. Nothing should be connected to these pins, nor are they connected together.</td></tr>
<tr><td>10</td><td>VSS</td><td>Ground pin. It must be connected to external ground.</td></tr>
<tr><td>11</td><td>VSS</td><td>Ground pin. It must be connected to external ground.</td></tr>
<tr><td>12</td><td>VCI</td><td>Low voltage power supply.
VCI must always be equal to or higher than VDD and VDDIO.</td></tr>
<tr><td>13</td><td>BS0</td><td rowspan="3">MCU bus interface selection pins. Select appropriate logic setting as described in the following table. BS2 and BS1, BS0 are pin select.
<table><tr><td>BS[2:0]</td><td>Interface</td></tr><tr><td>000</td><td>4 line SPI</td></tr><tr><td>001</td><td>3 line SPI</td></tr><tr><td>110</td><td>8-bit 8080 parallel</td></tr><tr><td>100</td><td>8-bit 6800 parallel</td></tr><tr><td>010</td><td>I²C</td></tr></table>
Note (1) 0 is connected to VSS (2) 1 is connected to VCI</td></tr>
<tr><td>14</td><td>BS1</td></tr>
<tr><td>16</td><td>BS2</td></tr>
</table>

15	VCI	Low voltage power supply. VCI must always be equal to or higher than VDD and VDDIO.
17	CS	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). In I2C mode, this pin must be connected to VSS.
18	RES	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.
19	D/C	This pin is Data/Command control pin connecting to the MCU. When the pin is pulled HIGH, the data at D[7:0] will be interpreted as data. When the pin is pulled LOW, the data at D[7:0] will be transferred to a command register. 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.
20	R/W	This pin is read / write control input pin connecting to the MCU interface. When 6800 interface mode is selected, this pin will be used as Read/Write (R/W) selection input. Read mode will be carried out when this pin is pulled HIGH and write mode when LOW. When 8080 interface mode is selected, this pin will be the Write (WR) input. Data write operation is initiated when this pin is pulled LOW and the chip is selected. When serial or I2C interface is selected, this pin must be connected to VSS.
21	RD	This pin is MCU interface input. When 6800 interface mode is selected, this pin will be used as the Enable signal. Read/write operation is initiated when this pin is pulled HIGH and the chip is selected. When 8080 interface mode is selected, this pin receives the Read (RD) signal. Read operation is initiated when this pin is pulled LOW and the chip is selected. When serial or I2C interface is selected, this pin must be connected to VSS.
22	D0	These pins are bi-directional data bus connecting to the MCU data bus. Unused pins are recommended to tie LOW. When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SID. When I2C mode is selected, D2, D1 should be tied together and serve as SDA_{out}, SDA_{in} in application and D0 is the serial clock input, SCL.
23	D1	
24	D2	
25	D3	
26	D4	
26	D5	
28	D6	
29	D7	
30	NC	These pins are reserved. Nothing should be connected to these pins, nor are they connected together.
31	VCC	Power supply for panel driving voltage. This is also the most positive power voltage supply pin. It is supplied by external high voltage source.

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Operation	VCI	-0.5	5.5	V
Supply Voltage for Logic	VDD	-0.5	2.75	V
Supply Voltage for Display	VCC	-0.5	21	V
Operating Temperature	TOP	-40	+80	°C
Storage Temperature	TSTG	-40	+85	°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	—	11.5	12	12.5	V
Input High Volt.	VIH	—	0.8×VCI	—	VCI	V
Input Low Volt.	VIL	—	VSS	—	0.2×VCI	V
Output High Volt.	VOH	—	0.9×VCI	—	VCI	V
Output Low Volt.	VOL	—	VSS	—	0.1×VCI	V
50% Check Board operating Current	ICC	VCC=12V	—	15	30	mA