

**WINSTAR Display**

## **OLED SPECIFICATION**

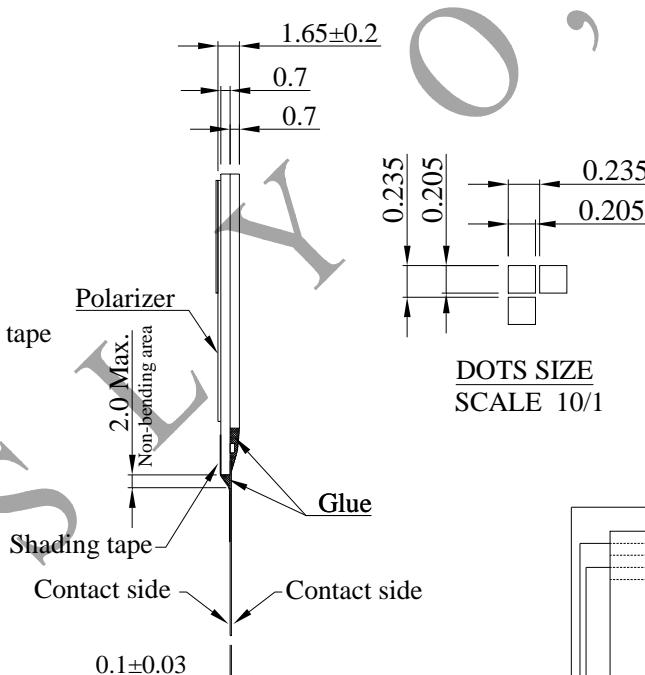
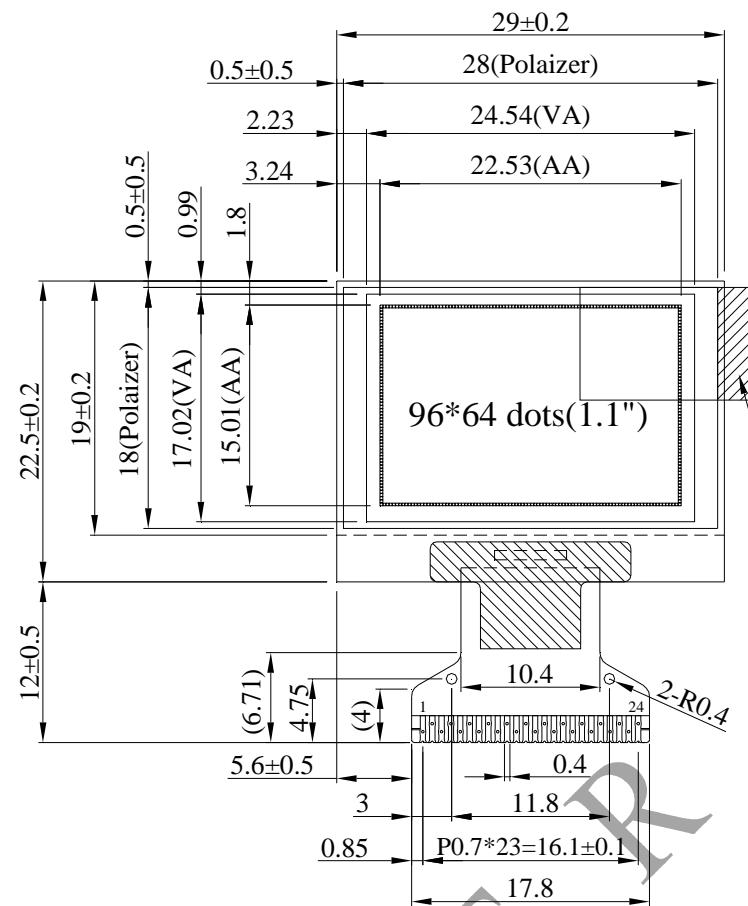
Model No:

***WEO009664B-Hotbar***

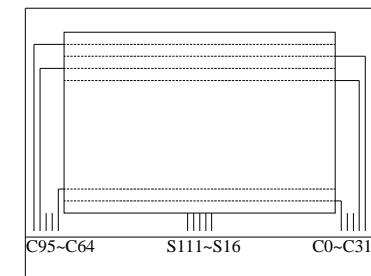
## General Specification

Item	Dimension	Unit
Dot Matrix	96 x 64 Dots	—
Module dimension	29.00 x 22.50 x 1.65	mm
Active Area	22.53 x 15.01	mm
Pixel Size	0.205 x 0.205	mm
Pixel Pitch	0.235 x 0.235	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
IC	SSD1327	
Interface	4-Wire SPI, I2C, 6800, 8080	
Size	1.1 inch	

# Contour Drawing & Block Diagram



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



## SEG & COM Layout

The non-specified tolerance of dimension is  $\pm 0.3$  mm.

## Interface Pin Function

No.	Symbol	Function						
1	VSS	Ground pin. It must be connected to external ground.						
2	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.						
3	VCOMH	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.						
4	VCI	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.						
5	VDD	Power supply pin for core logic operation.						
6	BS1	MCU bus interface selection pins. Select appropriate logic setting as described in the following table. BS2, BS1 and BS0 are pin select. Bus Interface selection <table border="1" data-bbox="393 938 874 1102"> <tr> <th>BS[2:1]</th> <th>Interface</th> </tr> <tr> <td>00</td> <td>4 line SPI</td> </tr> <tr> <td>01</td> <td>I2C</td> </tr> </table>	BS[2:1]	Interface	00	4 line SPI	01	I2C
BS[2:1]	Interface							
00	4 line SPI							
01	I2C							
7	BS2	<table border="1" data-bbox="393 1028 874 1102"> <tr> <td>11</td> <td>8-bit 8080 parallel</td> </tr> <tr> <td>10</td> <td>8-bit 6800 parallel</td> </tr> </table> Note (1) 0 is connected to VSS (2) 1 is connected to VCI	11	8-bit 8080 parallel	10	8-bit 6800 parallel		
11	8-bit 8080 parallel							
10	8-bit 6800 parallel							
8	VSS	Ground pin. It must be connected to external ground.						
9	IREF	This pin is the segment output current reference pin						
10	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).						
11	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.						
12	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.						
13	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.						

14	E	<p>This pin is MCU interface input. When 6800 interface mode is selected, this pin will be used as the Enable (E) 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.</p>
15	D0	
16	D1	
17	D2	
18	D3	
19	D4	
20	D5	
21	D6	
22	D7	
23	VCC	<p>Power supply for panel driving voltage. This is also the most positive power voltage supply pin. It is supplied by external high voltage source.</p>
24	VSS	Ground pin.

## 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	-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	—	8.0	8.5	9.0	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=8.5V	—	13.0	26.0	mA