

WINSTAR Display

OLED SPECIFICATION

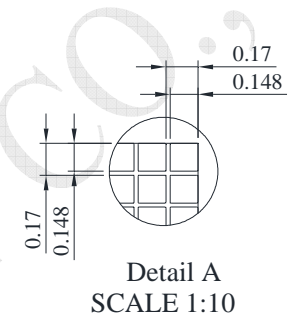
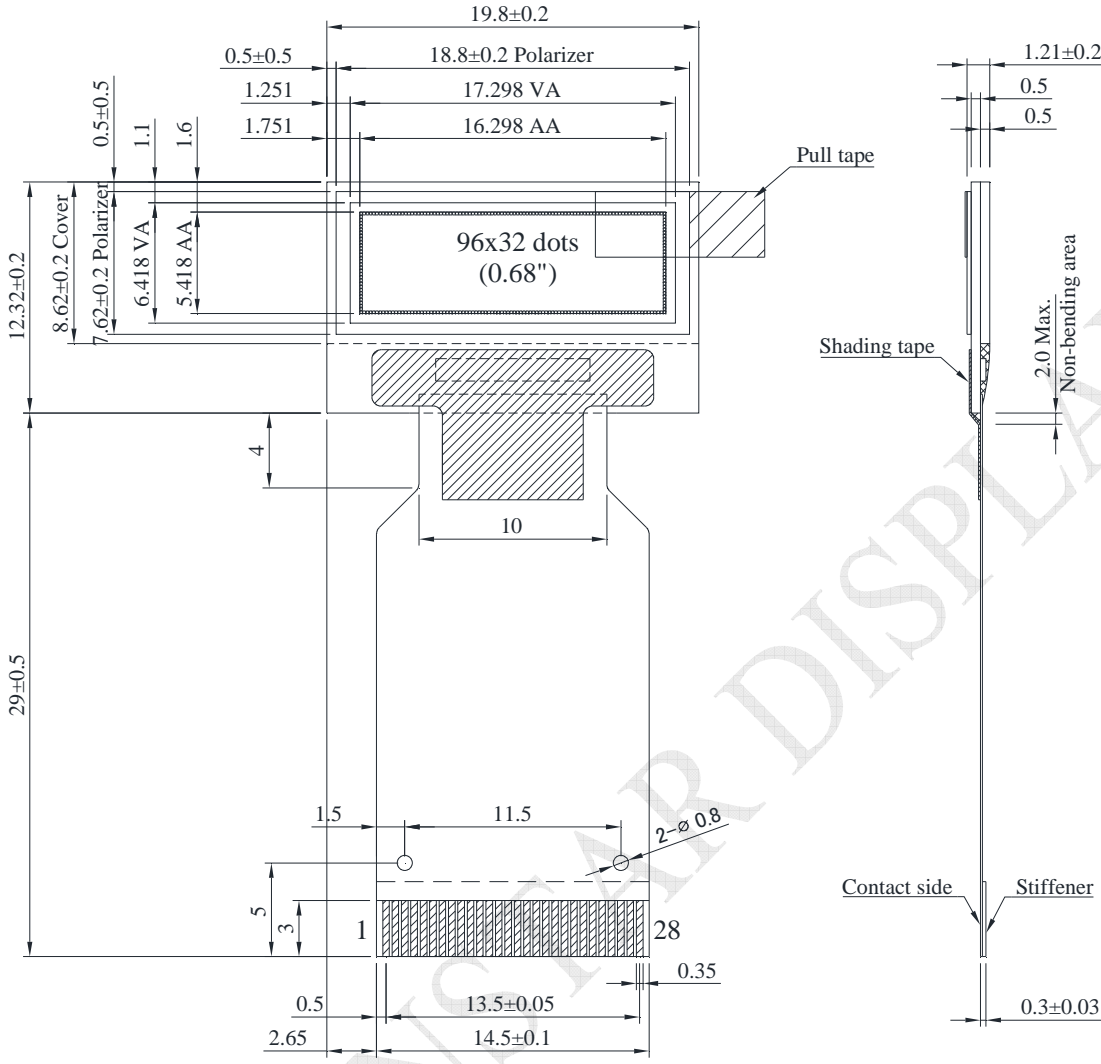
Model No:

WEO009632B-ZIF

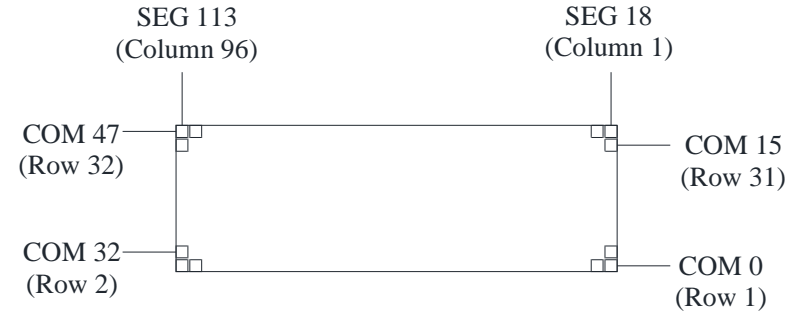
General Specification

Item	Dimension	Unit
Dot Matrix	96 x 32 Dots	—
Module dimension	19.80 x 12.32 x 1.21 (mm)	mm
Active Area	16.298 x 5.418 (mm)	mm
Pixel Size	0.148 x 0.148 (mm)	mm
Pixel Pitch	0.17 x 0.17 (mm)	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/32 Duty	
IC	SSD1305	
Interface	6800, 8080, SPI, I2C	
Size	0.68 inch	

Contour Drawing & Block Diagram



PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	VSS	15	D/C#
2	GDR	16	WR#
3	VDDB	17	E/RD#
4	FB	18	D0
5	NC	19	D1
6	VBREF	20	D2
7	NC	21	D3
8	NC	22	D4
9	VDD	23	D5
10	BS1	24	D6
11	BS2	25	D7
12	NC	26	IREF
13	CS#	27	VCOMH
14	RES#	28	VCC



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

Interface Pin Function

Pin	Symbol	I/O	Function															
1	VSS	-	Reserved Pin(Supporting Pin) The supporting pins can reduce the influences from stresses on the function pins. These pins must be connected to external ground.															
2	GDR	-	Reserved pin, not connected.															
3	VDDDB	P	Reserved pin, not connected.															
4	FB	-	Reserved pin, not connected.															
5	NC	-	Not connected.															
6	VBREF	-	Reserved pin, not connected.															
7	NC	-	Not connected.															
8	NC	-	Not connected.															
9	VDD	P	Power supply pin for core logic operation.															
10	BS1	I	MCU bus interface selection pins. Select appropriate logic setting as described in the following table. BS2, and BS1 are pin select.															
11	BS2	I	<table border="1"> <thead> <tr> <th></th> <th>4-line SPI</th> <th>I2C</th> <th>8-bits 8080</th> <th>8-bits 6800</th> </tr> </thead> <tbody> <tr> <td>BS1</td> <td>0</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>BS2</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> </tbody> </table>		4-line SPI	I2C	8-bits 8080	8-bits 6800	BS1	0	1	1	0	BS2	0	0	1	1
	4-line SPI	I2C	8-bits 8080	8-bits 6800														
BS1	0	1	1	0														
BS2	0	0	1	1														
12	NC	-	Not connected.															
13	CS#	I	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).															
14	RES#	I	This pin is reset signal input. When the pin is pulled LOW, initialization of the chip is executed. Keep this pin HIGH (i.e. connect to VDD) during normal operation.															
15	D/C#	I	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.															

16	WR#	I	<p>This is read / write control input pin connecting to the MCU interface.</p> <p>When interfacing to a 6800-series microprocessor, this pin will be used as Read/Write (R/W#) selection input. Read mode will be carried out when this pin is pulled HIGH (i.e. connect to VDD) and write mode when LOW.</p> <p>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.</p> <p>When serial or I2C interface is selected, this pin must be connected to VSS.</p>
17	E/RD#	I	<p>This pin is MCU interface input.</p> <p>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.</p> <p>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.</p> <p>When serial or I2C interface is selected, this pin must be connected to VSS.</p>
18~25	D0~D7	-	<p>These are 8-bit bi-directional data bus to be connected to the microprocessor's data bus. When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SDIN.</p> <p>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.</p>
26	IREF	-	<p>This is segment output current reference pin.</p> <p>When external IREF is used, a resistor should be connected between this pin and VSS to maintain the IREF current at 10uA.</p>
27	VCOMH	-	<p>COM signal deselected voltage level.</p> <p>A capacitor should be connected between this pin and VSS.</p>
28	VCC	-	<p>Power supply for panel driving voltage. This is also the most positive power voltage supply pin.</p> <p>When charge pump is enabled, a capacitor should be connected between this pin and VSS.</p>

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Logic	VDD	-0.3	4	V
Supply Voltage for Display	VCC	0	16	V
Operating Temperature	TOP	-40	+80	°C
Storage Temperature	TSTG	-40	+85	°C

Electrical Characteristics

DC 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	—	11.5	12	12.5	V
High Level Input	VIH	—	0.8×VDD	—	VDD	V
Low Level Input	VIL	—	0	—	0.2×VDD	V
High Level Output	VOH	I _{out} = 100uA	0.9×VDD	—	VDD	V
Low Level Output	VOL	I _{out} = 100uA	0	—	0.1×VDD	V

Symbol	Parameter	Min.	Typ.	Max.	Unit	Condition
ICC	VCC Supply Current	-	5.0	7.5	mA	VDD =3.0V , Display 100% ON