

WINSTAR Display

OLED SPECIFICATION

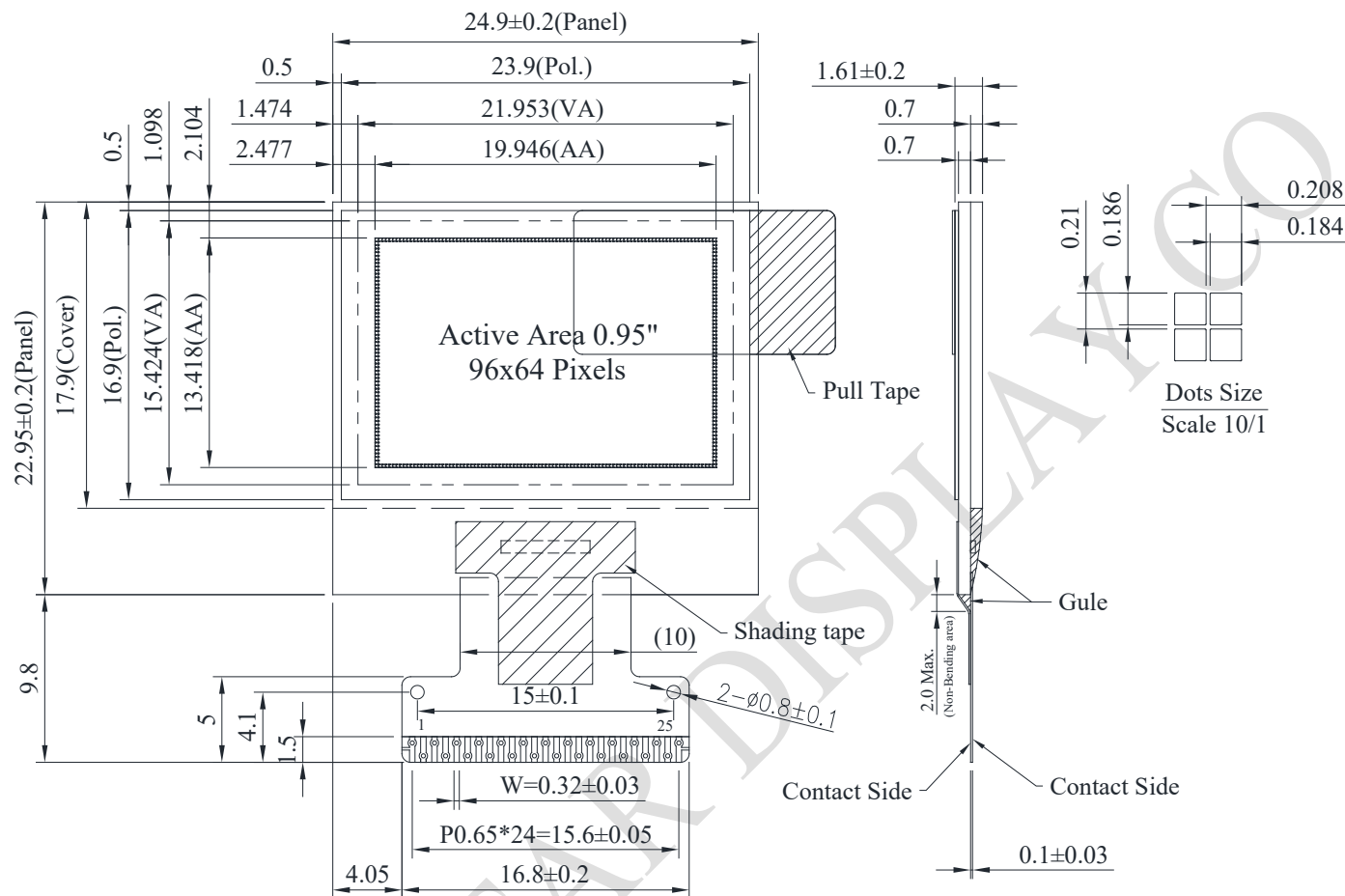
Model No:

WEO009664D

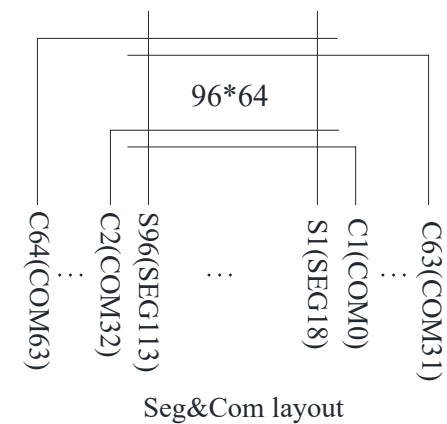
General Specification

Item	Dimension	Unit
Dot Matrix	96 x 64 Dots	—
Module dimension	24.90 x 22.95 x 1.61	mm
Active Area	19.946 x 13.418	mm
Pixel Size	0.184 x 0.186	mm
Pixel Pitch	0.208 x 0.210	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
IC	SSD1315	
Interface	6800,8080,4-Wire SPI,I2C	
Size	0.95 inch	

Contour Drawing & Block Diagram



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



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

Interface Pin Function

No.	Symbol	Function						
1	NC	No connection						
2	VCC	Power supply for panel driving voltage. This is also the most positive power voltage supply pin.						
3	VSS	Ground pin. It must be connected to external ground.						
4	NC	No connection						
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 are pin select <table><tr><td>BS[2:1]</td><td>Interface</td></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><tr><td>11</td><td>8-bit 8080 parallel</td></tr><tr><td>10</td><td>8-bit 6800 parallel</td></tr></table> <p>Note (1) 0 is connected to VSS (2) 1 is connected to VDD</p>	11	8-bit 8080 parallel	10	8-bit 6800 parallel		
11	8-bit 8080 parallel							
10	8-bit 6800 parallel							
8	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).						
9	RES#	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.						
10	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.						
11	R/W#	This is read / write control input pin connecting to the MCU interface. 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. 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.						

12	E/RD#	<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>
13	D0	<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>
14	D1	
15	D2	
16	D3	
17	D4	
18	D5	
19	D6	
20	D7	
21	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 30uA.</p>
22	VCOMH	<p>COM signal deselected voltage level.</p> <p>A capacitor should be connected between this pin and VSS.</p>
23	VCC	<p>Power supply for panel driving voltage. This is also the most positive power voltage supply pin.</p>
24	VLSS	<p>This is an analog ground pin. It should be connected to VSS externally.</p>
25	NC	No connection

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage for Logic	VDD	-0.3	-	4	V
Supply Voltage for Display	VCC	0	-	18	V
Operating Temperature	TOP	-40	-	+80	°C
Storage Temperature	TSTG	-40	-	+85	°C

Electrical Characteristics

6.1 DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for Logic	VDD	—	1.65	3.0	3.3	V
Supply Voltage for Display	VCC	—	7.5	12.0	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
Display 50% Pixel on	ICC	—	—	6	9	mA