WINSTAR Display

OLED SPECIFICATION

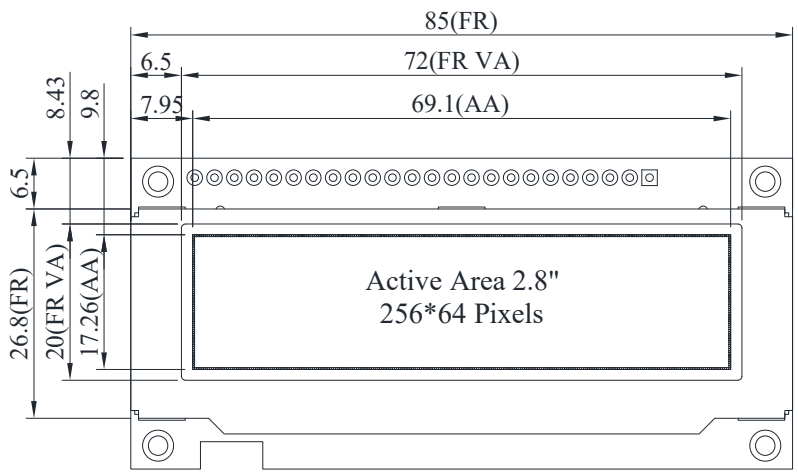
Model No:

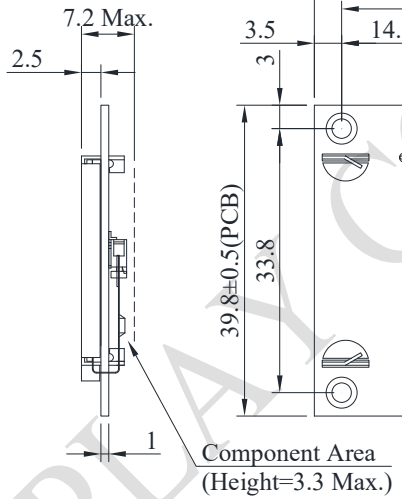
WEN025664A

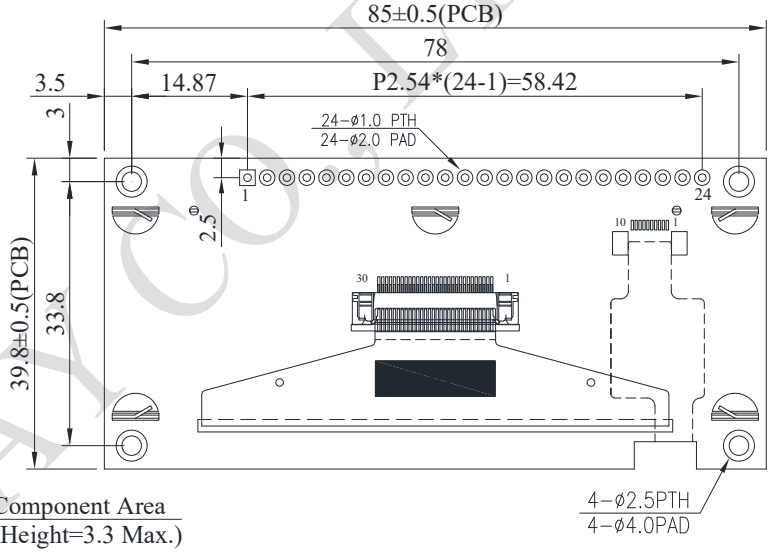
General Specification

Item	Dimension	Unit
Dot Matrix	256 x 64 Dots	—
Module dimension	85.0 x 39.8 x 7.2 Max.	mm
Active Area	69.1 x 17.26	mm
Pixel Size	0.248 x 0.248	mm
Pixel Pitch	0.27 x 0.27	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
IC	SSD1322 (COF)	
Interface	6800, 8080, SPI	
Size	2.8 inch	

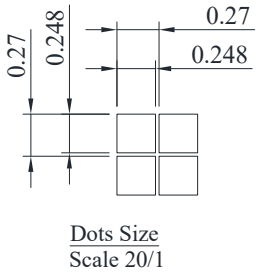
Contour Drawing & Block Diagram

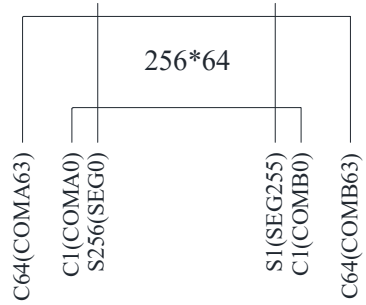






PIN	SYMBOL	PIN	SYMBOL
1	VSS	13	DB6
2	VDD	14	DB7
3	NC	15	NC
4	D/C#	16	RES#
5	R/W#(WR#)	17	CS#
6	E(/RD#)	18	NC
7	DB0	19	BS1
8	DB1	20	BS0
9	DB2	21	NC
10	DB3	22	NC
11	DB4	23	NC
12	DB5	24	NC





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

Interface Pin Function

Pin Number	Symbol	I/O	Function
1	**VSS**	P	Ground.
2	**VDD**	P	***Power Supply for Core Logic Circuit*** Power supply pin for core logic operation. A capacitor is required to connect between this pin and VSS
3	**N.C.**	P	***Reserved Pin*** The N.C. pin between function pins are reserved for compatible and flexible design.
4	**D/C#**	I	***Data/Command Control*** This pin is Data/Command control pin connecting to the MCU. When the pin is pulled HIGH, the content at D[7:0] will be interpreted as data. When the pin is pulled LOW, the content at D[7:0] will be interpreted as command.
5	**R/W#** **(WR#)**	I	***Read/Write Select or Write*** This pin is MCU interface input. When interfacing to a 68XX-series microprocessor, this pin will be used as Read/Write (R/W#) selection input. Pull this pin to "High" for read mode and pull it to "Low" for write mode. When 80XX 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 CS# is pulled low. When serial mode is selected, this pin must be connected to VSS.
6	**E/RD#**	I	***Read/Write Enable or Read*** This pin is MCU interface input. When interfacing to a 68XX-series microprocessor, this pin will be used as the Enable (E) signal. Read/write operation is initiated when this pin is pulled high and the CS# is pulled low. When connecting to an 80XX-microprocessor, this pin receives the Read (RD#) signal. Data read operation is initiated when this pin is pulled low and CS# is pulled low. When serial mode is selected, this pin must be connected to VSS.
7~14	**DB0** **DB1** **DB2** **DB3** **DB4** **DB5** **DB6** **DB7**	I/O	***Host Data Input/Output Bus*** These pins are 8-bit bi-directional data bus to be connected to the microprocessor's data bus. When serial mode is selected, DB1 will be the serial data input SDIN and DB0 will be the serial clock input SCLK.
15	**NC**	P	***Reserved Pin*** The N.C. pin between function pins are reserved for compatible and flexible design.

<table>
<tr><td>16</td><td>RES#</td><td>I</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>17</td><td>CS#</td><td>I</td><td>Data/Command Control
This pin is the chip select input connecting to the MCU. The chip is enabled for MCU communication only when CS# is pulled LOW.</td></tr>
<tr><td>18</td><td>NC</td><td>P</td><td>Reserved Pin
The N.C. pin between function pins are reserved for compatible and flexible design.</td></tr>
<tr><td>19</td><td>BS1</td><td rowspan="2">I</td><td rowspan="2">Communicating Protocol Select
These pins are MCU interface selection input. See the following table:
<table><tr><th>BS[1:0]</th><th>Bus Interface Selection</th></tr><tr><td>00</td><td>4 line SPI</td></tr><tr><td>01</td><td>3 line SPI</td></tr><tr><td>10</td><td>8-bit 8080 parallel</td></tr><tr><td>11</td><td>8-bit 6800 parallel</td></tr></table>Note
(1) 0 is connected to VSS
(2) 1 is connected to VDD</td></tr>
<tr><td>20</td><td>BS0</td></tr>
<tr><td>21~24</td><td>NC</td><td>P</td><td>Reserved Pin
The N.C. pin between function pins are reserved for compatible and flexible design.</td></tr>
</table>

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Display	VDD	-0.3	4	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	VDD	—	2.8	3.0	3.3	V
High Level Input	VIH	—	0.8×VDD	—	VDD	V
Low Level Input	VIL	—	0	—	0.2×VDD	V
High Level Output	VOH	—	0.9×VDD	—	VDD	V
Low Level Output	VOL	—	0	—	0.1×VDD	V
Display 50% Pixel on	IDD	VDD =3V	—	125	250	mA