WINSTAR Display

OLED SPECIFICATION

Model No:

WEN25664G#DP3N00000-FC

Represented by:

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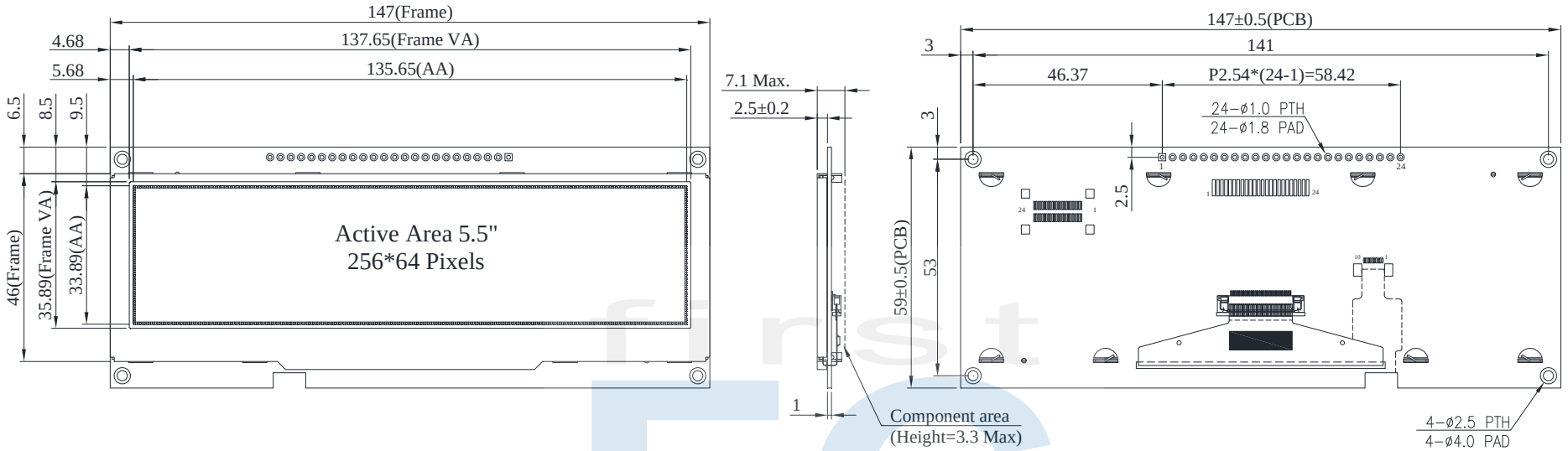
FIRST Components s.r.l.
www.first-components.com
technical@first-components.com
+39 0332 1888005

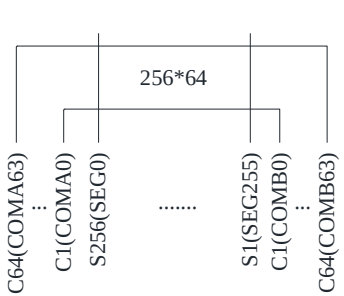
General Specification

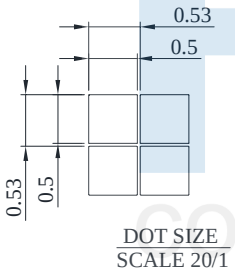
Item	Dimension	Unit
Dot Matrix	256 x 64 Dots	—
Module dimension	147.0 × 59 × 2.5	mm
Active Area	135.65 x 33.89	mm
Pixel Size	0.50 x 0.50	mm
Pixel Pitch	0.53 x 0.53	mm
Display Mode	Passive Matrix	
Display Color	Green	
Drive Duty	1/64 Duty	
Gray scale	4 bits	
IC	SSD1322	
Interface	6800, 8080, SPI	
Size	5.5 inch	

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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 .

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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, D1 will be the serial data input SDIN and D0 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.
16	RES#	I	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.

<table>
<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</td><td>NC</td><td>—</td><td>No connection</td></tr>
<tr><td>22</td><td>NC</td><td>—</td><td>No connection</td></tr>
<tr><td>23</td><td>NC</td><td>—</td><td>No connection</td></tr>
<tr><td>24</td><td>NC</td><td>—</td><td>No connection</td></tr>
</table>

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Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Notes
Supply Voltage for Display	VDD	-0.3	4	V	1, 2
Operating Temperature	TOP	-40	80	°C	-
Storage Temperature	TSTG	-40	85	°C	-

Note ：

1. All the above voltages are on the basis of “VSS = 0V”.
2. When this module is used beyond the above absolute maximum ratings, permanent breakage of the module may occur. Also, for normal operations, it is desirable to use this module under the conditions according to Section 6 ‘’Electrical Characteristics’’. If this module is used beyond these conditions, malfunctioning of the module can occur and the reliability of the module may deteriorate.
3. The absolute limit temperature was verified according to the test conditions of reliability test (See section 9. Reliability) , and module was met all criteria.
4. The defined temperature ranges do not include the polarizer. The maximum withstood temperature of the polarizer should be 80 ℃.

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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	–	240	400	mA

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Optical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
View Angle	(V)θ	—	160	—	—	deg
	(H)φ	—	160	—	—	deg
Contrast Ratio	CR	Dark	10,000:1	—	—	—
Response Time	T rise	—	—	10	—	μs
	T fall	—	—	10	—	μs
Display with 50% checkerboard Brightness			60	80	—	cd/m^2
CIEx(Green)		(CIE1931)	0.24	0.28	0.32	—
CIEy(Green)		(CIE1931)	0.59	0.63	0.67	—

Note：50% checkerboard means half of the display area turn on & half area turn off, shown as a checkerboard.

