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深圳市优瑞泰克科技有限公司
SHENZHEN YOURITECH TECHNOLOGY CO.,LTD

OLED SPECIFICATION

Model No:

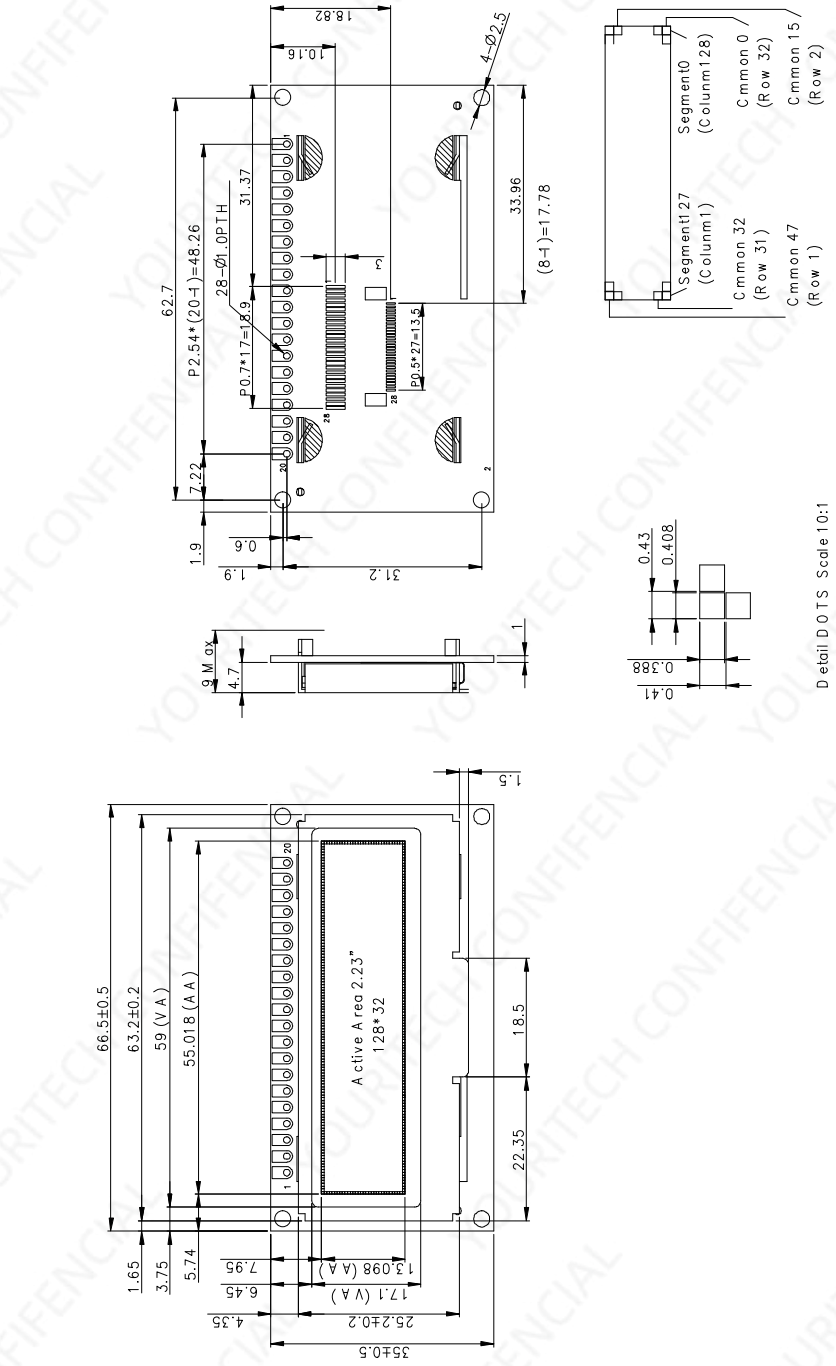
ET223-12832X001-P20

General Specification

Item	Dimension	Unit
Dot Matrix	128 x 32 Dots	-
Module dimension	66.5 x 35.0 x 9.0	mm
Active Area	55.018 x 13.098	mm
Pixel Size	0.408 x 0.388	mm
Pixel Pitch	0.43 x 0.41	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/32 Duty	
IC	SSD1305Z	
Interface	6800,8080,SPI,I2C	
Size	2.23 inch	

Contour Drawing & Block Diagram

PIN NO.	SYMBOL
1	VSS
2	VDD
3	NC
4	D/C#
5	R/W#
6	E/RD#
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	NC
16	RES
17	CS
18	NC
19	BS2
20	BS1



Interface Pin Function

<table>
<tr><th>No.</th><th>Symbol</th><th>Function</th></tr>
<tr><td>1</td><td>VSS</td><td>Ground.</td></tr>
<tr><td>2</td><td>VDD</td><td>Power supply pin for core logic operation</td></tr>
<tr><td>3</td><td>NC</td><td>No connection.</td></tr>
<tr><td>4</td><td>D/C#</td><td>This is Data/Command control pin. When it is pulledHIGH (i.e.connect to VDDIO), the data at D[7:0] is treated asdata. When it ispulled LOW, the data at D[7:0] will be transferredto the commandregister.
In I2C mode, this pin acts as SA0 for slave addressselection</td></tr>
<tr><td>5</td><td>R/W#</td><td>This is read / write control input pin connecting to the MCU interface.When interfacing to a 6800-series microprocessor, this pin will beused as Read/Write (R/W#) selection input. Read mode will becarried out when this pin is pulled HIGH (i.e.connect to VDDIO) andwrite mode when LOW. When 8080 interface mode is selected, thispin will be the Write (WR#) input. Data write operation is initiatedwhen this pin is pulled LOW and the chip is selected.
When serial interface is selected, this pin must beconnected to VSS</td></tr>
<tr><td>6</td><td>E/RD#</td><td>When interfacing to a 6800-series microprocessor, this pin will beused as the Enable (E)signal. Read/write operation is initiated whenthis pin is pulled HIGH (i.e. connect to VDDIO) and the chip is selected.
When connecting to an 8080-microprocessor, this pinreceives theRead (RD#) signal. Readoperation is initiated when this pin is pulledLOW and the chip is selected.
When serial interface is selected, this pin must beconnected to VSS</td></tr>
<tr><td>7-14</td><td>DB0~DB7</td><td>These are 8-bit bi-directional data bus to be connected to themicroprocessor’s data bus. When serial interface mode is selected, D0 will bethe serial clockinput: SCLK; D1 will bethe serial data input: SDIN and D2 should beleft opened. When I2C mode is selected, D2, D1 should be tiedtogether and serve as SDAout, SDAin in applicationand D0 is theserial clock input, SCL.</td></tr>
<tr><td>15</td><td>NC</td><td>No connection.</td></tr>
<tr><td>16</td><td>RES#</td><td>This pin is reset signal input. When the pin is LOW, initialization ofthe chip is executed. Keep this pin HIGH (i.e. connect to VDDIO) during normal operation.</td></tr>
<tr><td>17</td><td>CS</td><td>This pin is the chip select input. (active LOW)</td></tr>
<tr><td>18</td><td>NC</td><td>No connection.</td></tr>
<tr><td>19,20</td><td>BS2,BS1</td><td>Communicating Protocol Select.
These pins are MCU interface selection input. See the followingtable:
<table>
<tr><th></th><th>68XX-paralle</th><th>80XX-parallel</th><th>Serial</th><th>I2C</th></tr>
<tr><td>BS1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>BS2</td><td>1</td><td>1</td><td>0</td><td>0</td></tr>
</table>
</td></tr>
</table>

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Logic	VCC	-0.3	4.0	V
Supply Voltage for Display	V0	0	16.0	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	VDD	-	2.8	3.3	5.0	V
Supply Voltage for Display	V0	-	11.5	12.0	12.5	
Input High Volt.	VIH	-	0.8xVDD	-	VDD	V
Input Low Volt.	VIL		0	-	0.2xVDD	V
Output High Volt.	VOH	IOUT = 100uA,3.3MHz	0.9xVDD	-	VDD	V
Output Low Volt.	VOL	IOUT = 100uA,3.3MHz	0	-	0.1xVDD	V
Operating Current for VDD	IDD	V0 =12.0V	-	12.0(Ref)	14.0(Ref)	mA
Supply Voltage for Buzzer	BSW	VDD=5.0V1/2 square	0.8xVDD	-	VDD	V
Supply Voltagefor Vibration Motor	MSW	-	2.7	-	3.3	V

Circuit Diagram