

## WINSTAR Display

# OLED SPECIFICATION

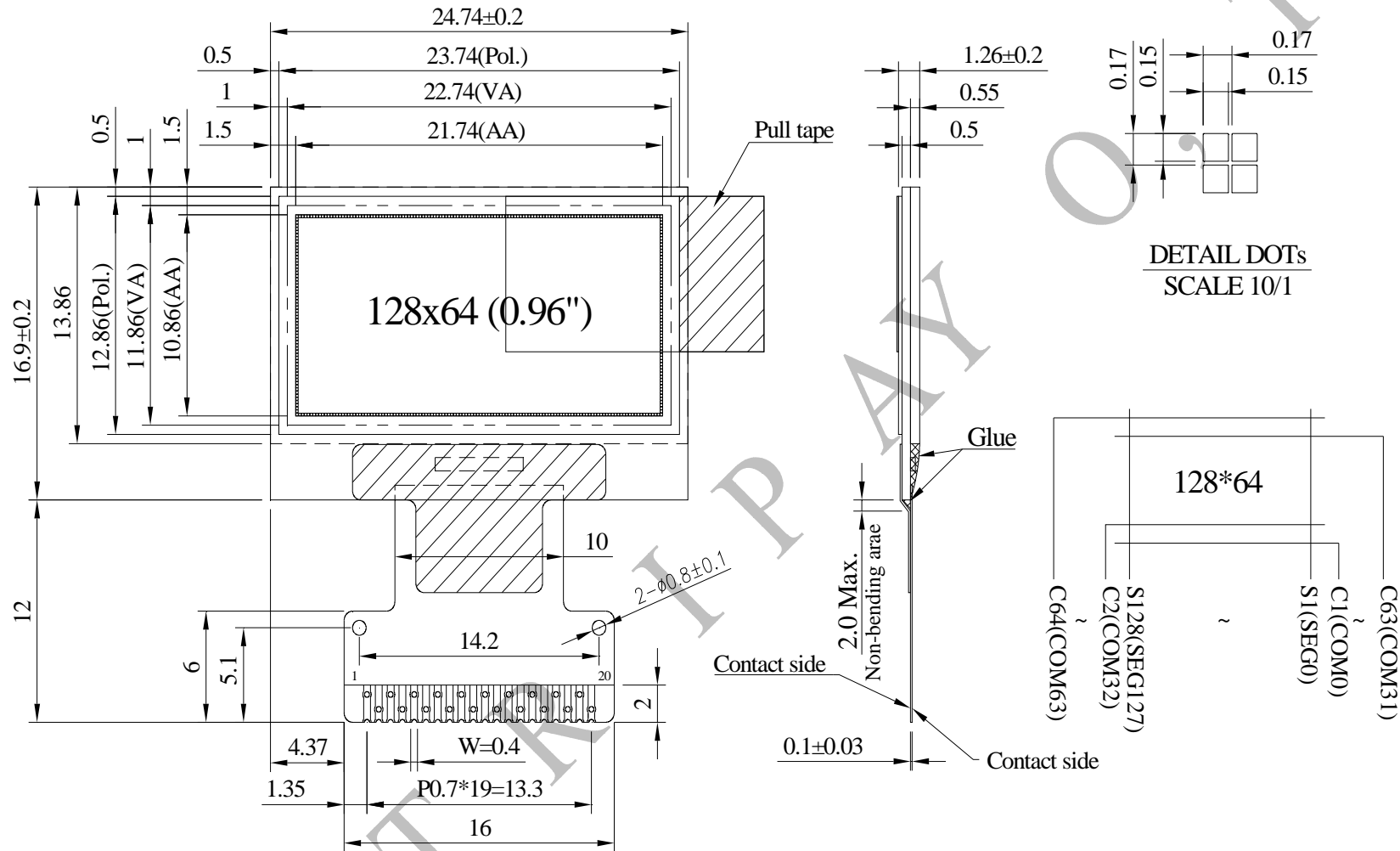
Model No:

**WEO012864V**

## General Specification

Item	Dimension	Unit
Dot Matrix	128 x 64 Dots	—
Module dimension	24.74 x 16.90 x 1.26	mm
Active Area	21.74 x 10.86	mm
Pixel Size	0.15 x 0.15	mm
Pixel Pitch	0.17 x 0.17	mm
Display Mode	Passive Matrix	
Display Color	Monochrome	
Drive Duty	1/64 Duty	
IC	SSD1315	
Interface	SPI, I2C	
Size	0.96 inch	

# Contour Drawing & Block Diagram



PIN	SYMBOL
1	C2N
2	C2P
3	C1P
4	C1N
5	VBAT
6	VCC
7	VSS
8	VDD
9	BS0
10	BS1
11	CS#
12	RES#
13	D/C#
14	D0
15	D1
16	D2
17	IREF
18	VCOMH
19	VCC
20	VLSS

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

## Interface Pin Function

No.	Symbol	Function	
1	C2N	<i>C2P/C2N – Pin for charge pump capacitor; Connect to each other with a capacitor.</i>	
2	C2P		
3	C1P		
4	C1N		
5	VBAT	<i>Power Supply for DC/DC Converter Circuit</i> This is the power supply pin for the internal buffer of the DC/DC voltage converter. It must be connected to external source when the converter is used. It should be float when the converter is not used.	
6	VCC	<i>Power supply for panel driving voltage. This is also the most positive power voltage supply pin.</i> <i>When charge pump is enabled, a capacitor should be connected between this pin and VSS.</i>	
7	VSS	<i>Ground of Logic Circuit</i> This is a ground pin. It acts as a reference for the logic pins. It must be connected to external ground.	
8	VDD	<i>Power Supply for Logic</i> This is a voltage supply pin. It must be connected to external source.	
9	BS0	<i>Communicating Protocol Select</i> These pins are MCU interface selection input. See the following table:	
10	BS1	BS[1:0]	Interface
		00	4-line SPI
		01	3-line SPI
		10	I2C
11	CS#	<i>Chip Select</i> This pin is the chip select input. The chip is enabled for MCU communication only when CS# is pulled low.	
12	RES#	<i>Power Reset for Controller and Driver</i> This pin is reset signal input. When the pin is low, initialization of the chip is executed.	
13	D/C#	<i>In I2C mode, this pin acts as SA0 for slave address selection.</i> <i>When 3-wire serial interface is selected, this pin must be connected to VSS.</i>	
14~16	D0~D2	<i>When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SDIN.</i> <i>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.</i>	
17	IREF	<i>Current Reference for Brightness Adjustment</i> This pin is segment current reference pin. A resistor should be connected between this pin and VSS. Set the current lower than 30uA.	
18	VCOMH	<i>COM signal deselected voltage level.</i> <i>A capacitor should be connected between this pin and VSS.</i>	

19	VCC	<i>Power supply for panel driving voltage. This is also the most positive power voltage supply pin. When charge pump is enabled, a capacitor should be connected between this pin and VSS.</i>
20	VLSS	<i>Ground of Analog Circuit This is an analog ground pin. It should be connected to VSS externally.</i>

## Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Logic	VDD	-0.3	4.0	V
Charge Pump Regulator	VBAT	-0.3	6.0	V
Supply Voltage for Display	VCC	0	18.0	V
Operating Temperature	TOP	-30	+70	°C
Storage Temperature	TSTG	-30	+70	°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
Supply Voltage for Display	VCC	—	7.0	7.5	8.0	V
Input High Volt.	VIH	—	0.8×VDD	—	VDD	V
Input Low Volt.	VIL	—	0	—	0.2×VDD	V
Output High Volt.	VOH	—	0.9×VDD	—	VDD	V
Output Low Volt.	VOL	—	0	—	0.1×VDD	V
Operating Current for VCC (50% display ON)	ICC	—	—	6	12	mA