WINSTAR Display

OLED SPECIFICATION

Model No:

WEO128128W#DP3D00D01-FC

first FC components

Represented by:

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SPECIFICATION Version: A

CUSTOMER :
MODULE NO. : WEO128128W#DP3D00D01-FC

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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RELEASE DATE:			

■APPROVAL FOR SPECIFICATIONS ONLY

□APPROVAL FOR SPECIFICATIONS AND SAMPLE

MODEL NO：

RECORDS OF REVISION			DOC. FIRST ISSUE
VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2021/07/20		First release
A	2021/09/02		Modify Operating Temperature

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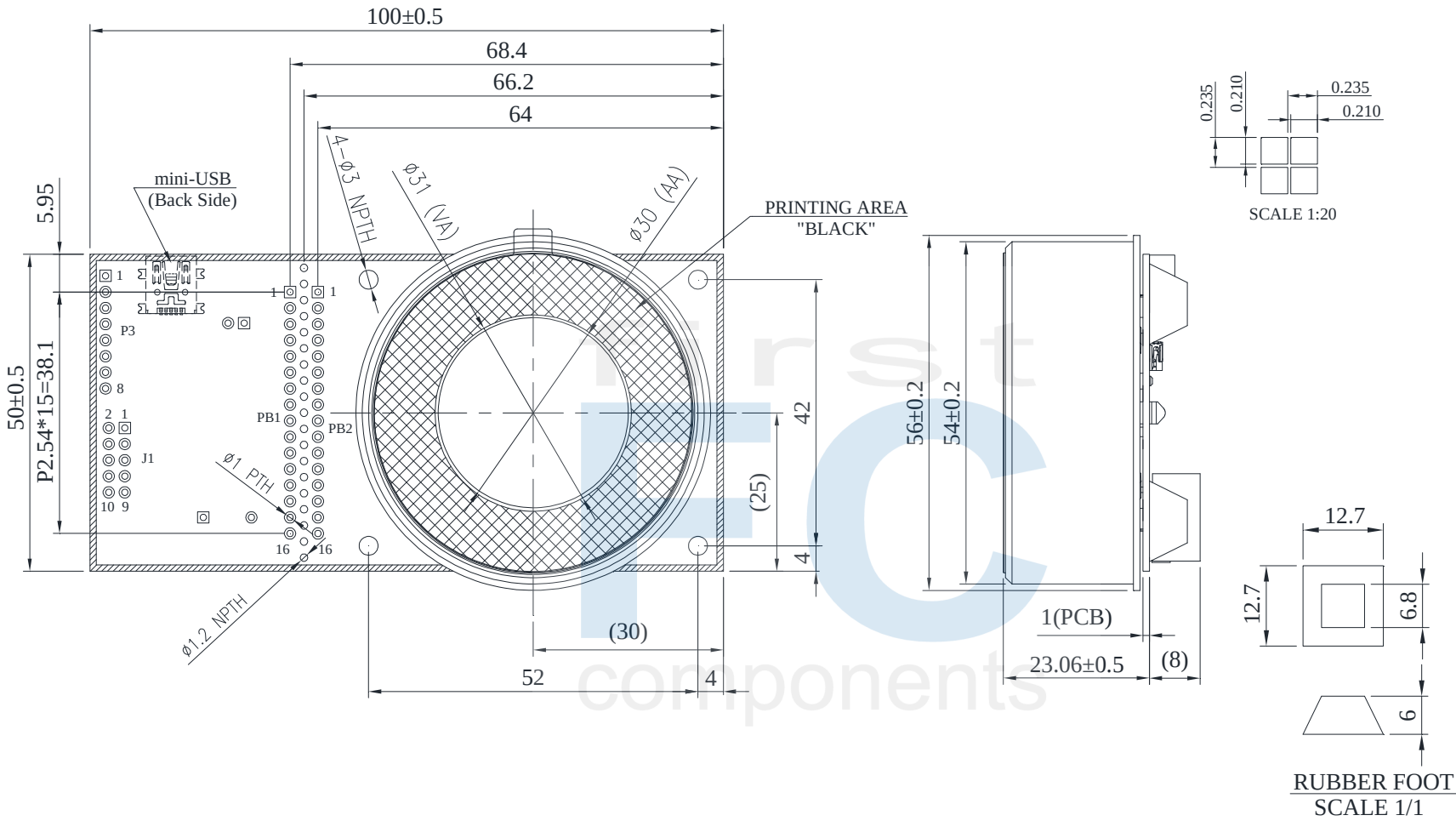
General Specification

Item	Dimension	Unit
Dot Matrix	128 x 128 Dots	–
Module dimension	100 x 56 x 23.06	mm
Active Area	Ø30.0	mm
Pixel Size	0.210 x 0.210	mm
Pixel Pitch	0.235 x 0.235	mm
Display Mode	Passive Matrix	
Panel type	OLED , White	
Duty	1/128	
Gray Scale	4 bits	
OLED IC	SSD1327	
OLED Interface	SPI	
Size	1.18 inch	

CTP IC	FT3268
Detect Point	1
CTP Interface	I2C

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Contour Drawing



PB1 & PB2	
PIN	SYMBOL
1	VSS
2	VDD5
3	VCI
4	CS#
5	RES#
6	DC#
7	SCL
8	SDA
9	TP_SCK
10	TP_SDA
11	TP_INT
12	FSW_A
13	FSW_B
14	FSW_C
15	VDD5
16	VSS

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

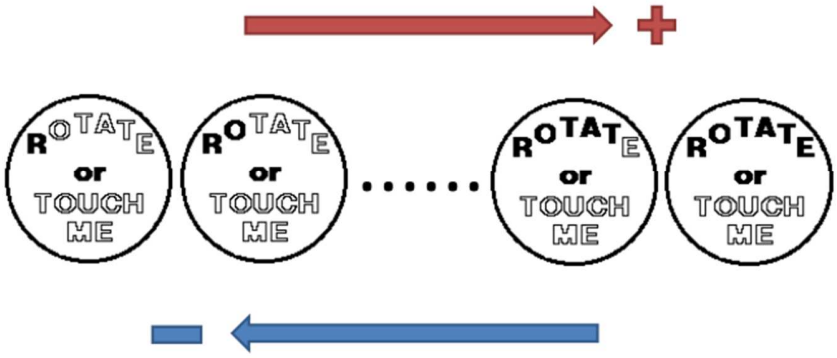
Please refer to the 3D diagram of the following website for the installation and fixing method of Encoder:
https://tech.alpsalpine.com/prod/c/html/encoder/ring/ec35ah/ec35ah240403.html

Demo mode

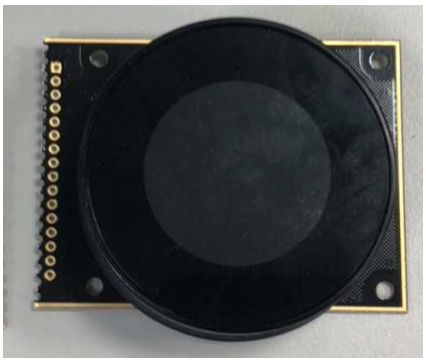
Power Supply: mini USB DC5V 1A



How to use Demo Kit

Function		Introduction
Touch	 Single Tap	
Encoder		

Developing mode



Interface Pin Function

Pin No.	Symbol	Description
1	VSS	Ground pin.
2	VDD5	Voltage Regulator Input
3	VCI	Low voltage power supply and power supply for interface logic level.
4	CS#	The chip is enabled for MCU communication only when CS# is pulled LOW (active LOW).
5	RES#	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.
6	DC#	This pin is Data/Command control pin connecting to the MCU.
7	SCL	The serial clock input
8	SDA	The serial data input
9	TP_SCK	Touch IC I2C clock signal
10	TP_SDA	Touch IC I2C data signal
11	TP_INT	Touch IC Interrupt signal
12	FSW_A	Encoder terminal signal-A
13	FSW_B	Encoder terminal signal-B
14	FSW_C	Encoder terminal signal-C
15	VDD5	Voltage Regulator Input
16	VSS	Ground pin.

Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit	Notes
Voltage Regulator Input	VDD5	-0.3	5.5	V	—
Supply Voltage	VCI	-0.3	3.6	V	1, 2
Operating Temperature	TOP	-20	+70	°C	—
Storage Temperature	TST	-30	+70	°C	—

Note 1: All the above voltages are on the basis of “VSS = 0V”.

Note 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

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Electrical Characteristics

DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Voltage Regulator Input	VDD5	—	4.5	5.0	5.25	V
Supply Voltage	VCI		2.8	3.3	3.5	V
Input High Volt.	VIH	—	0.8xVCI	—	VCI	V
Input Low Volt.	VIL	—	0	—	0.2xVCI	V
Output High Volt.	VOH	Iout = 100uA	0.9xVCI	—	VCI	V
Output Low Volt.	VOL	Iout = 100uA	0	—	0.1xVCI	V

Touch Panel Controller FT3268

Item	Symbol	Condition	Min	Typ	Max	Unit
Input High Volt.	VIH	—	0.7×VCI	—	VCI	V
Input Low Volt.	VIL	—	-0.3	—	0.3×VCI	V
Output High Volt.	VOH	I_{OH} = 0.1mA	0.7×VCI	—	—	V
Output Low Volt.	VOL	I_{OL} = 0.1mA	—	—	0.3×VCI	V

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Initial code

```
void Initial_SSD1327(){

  write_command(0xAE);      // Set Display Off

  write_command(0x15);      //Set Column Address
  write_command(0x00);      //Start Column Address
  write_command(0x3F);      //End Column Address

  write_command(0x75);      //Set Row Address (segment)
  write_command(0x00);      //Start Row Address
  write_command(0x7F);      //End Row Address

  write_command(0x81);      //Set Contrast Control
  write_command(0x9b);      //Contrast Level

  write_command(0xA0);      //Set Re-map
  write_command(0x51);      //Default Setting

  write_command(0xA1);      //Set Display Start Line
  write_command(0x00);

  write_command(0xA2);      //Set Display Offset
  write_command(0x00);

  write_command(0xA4);      //Set Display Mode

  write_command(0xA8);      //Set Multiplex Ratio
  write_command(0x7F);      //Multiplex

  write_command(0xAB);      //Set Function Selection A
  write_command(0x01);

  write_command(0xB1);      //Set Phase Length
  write_command(0x74);

  write_command(0xB3);      //Set Display Clock Divide Ratio/Oscillator Frequency
  write_command(0x40);

  write_command(0xBC);      //Set Pre-change Voltage
  write_command(0x05);

  write_command(0xBE);      //Set VCOMH Voltage
  write_command(0x05);

  write_command(0xB6);      //Set Second Pre-charge period
  write_command(0x08);
```