

## INTRODUCTION

This OLED display module uses the SSD1306 drive chip, has 128x32 self-illuminating white pixels, and adopts the back chip-mounting pad design. Small size, the length is 33mm and the width is 20mm. With its small size, simple wiring and low power consumption, it can be applied to many display applications, such as wearable display devices, Mini small game consoles, desktop widgets, etc.

The display module adopts a high-contrast, low-power [OLED](#) display. Full-screen lighting consumes approximately 25mA (3.3V) 25mA (5V) and full-screen off power consumption: approx. 2mA (3.3V) 2mA (5V). It is compatible with controllers such as Arduino UNO, Leonardo, [ESP32/ESP8266](#), FireBettle-M0 and so on. Internal power-on reset processing, I2C communication methods, so that your welding line will be more convenient and simpler.

**Note:** Turn the pixels off when you are not using the display to prevent the use of some pixels too long to darken them, which will cause the brightness uniformity problem.

Monochrome I2C OLED Display Selection Guide			
Product Name	0.91" 128x32 OLED-A	0.91" 128x32 OLED-B	0.96" 128x64 OLED
SKU	<a href="#">DFR0647</a>	<a href="#">DFR0648</a>	<a href="#">DFR0650</a>
Chip	SSD1306	SSD1306	SSD1306
Voltage Input	3.3/5V	3.3/5V	3.3/5V
Resolution	128x32	128x32	128x64
Interface	I2C	I2C	I2C/SPI
Welding Method	Chip-mounting pad on the back	Ordinary welding hole	Ordinary welding hole
Size	41x12 mm	33x20 mm	30x30 mm
Price	\$9.90	\$9.90	\$14.50
Features	1. Small size, ultra-narrow design 2. Display 2 rows of 16 pixel characters 3. Chip-mounting pad	1. Small size 2. Display 2 rows of 16 pixel characters	1. Display 4 rows of 16 pixel characters 2. Support I2C/SPI 3. Iron frame to protect the screen
Recommended	Suitable for users with certain hands-on ability to build up applications requiring space and appearance	Suitable for entry-level makers	Applicable for users who want to display much content with high-speed SPI refresh

## FEATURES

- Self-illuminating OLED display
- Controllable pixels and low power consumption
- Supports power-on reset

## APPLICATIONS

- Thermometer
- Desktop weather display
- Kitchen weighing machine

- Air quality detector
- Mini Game consoles
- Wearable display

## SPECIFICATION

- Operating voltage: 3.3V to 5V
- Color: white pixels
- Number of pixels: 128 columns x 32 rows
- Interface: I2C
- Drive chip: SSD1306
- Brightness: 180 (Typ) cd/m<sup>2</sup>
- Full-screen lighting power: approx. 25mA (3.3V) 25mA (5V)
- Full-screen off power consumption: approx. 2mA (3.3V) 2mA (5V)
- Operating temperature: -30°C to 70°C
- Display area: 22.38 x 5.58 mm / 0.88"x 0.22"
- Mounting hole diameter: 2 mm
- Size: 33x20mm / 1.30"x 0.79"
- Weight: 2.7 g

## DOCUMENTS

- [Product wiki](#)