

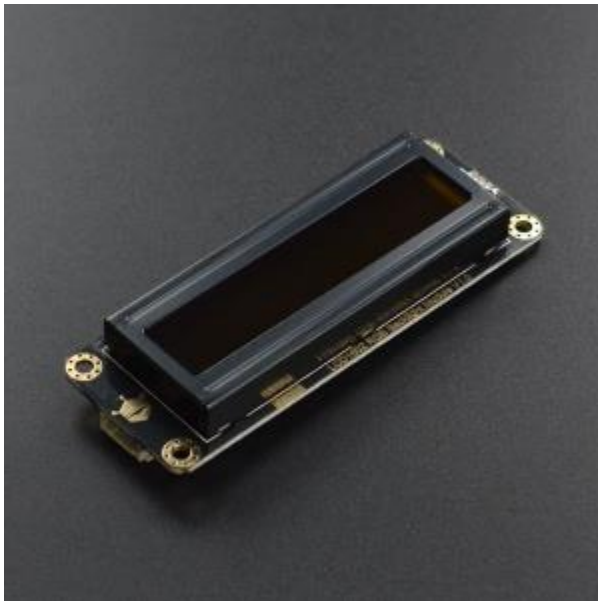
# Gravity: I2C 16x2 Arduino LCD with RGB Font Display SKU: DFR0554

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## Introduction



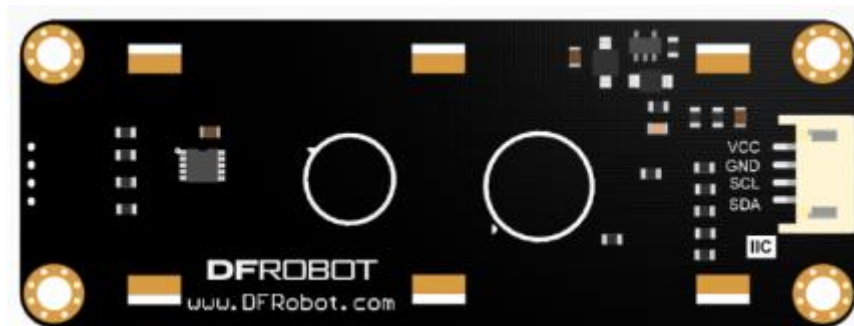
Gravity: I2C 16x2 Arduino LCD with RGB Font Display SKU: DFR0554

Accustomed to the same LCD screen, do you want to have a different experience? DFRobot LCD1602 will bring you a new visual feeling, It is not the same as the previous LCD monochrome screen, supports RGB full-color font, can provide 16 million kinds of color combinations. DFRobot Gravity I2C 16x2 Arduino LCD with RGB Font Display use universal Gravity I2C interface, it means only two communication lines, you can realize communication and backlight control. The LCD screen can display 2x16 characters, support screen scrolling, cursor movement and other functions. Through dedicated Arduino library, you can complete all the design without cumbersome wiring and complex code.

## Specification

- Operating Voltage: 3.3V~5.0V
- Operating Current: ≤60mA
- Display Description: 16\*2
- Communication Mode: IIC/I2C
- Backlight: RGB can adjust backlight
- Operating Temperature: -20 to +70°C
- Storage Temperature: -30 to +80°C
- Dimension: 87.0\*32.0\*13.0mm/3.43\*1.26\*0.51in

## Board Overview



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Num	Label	Description
1	VCC	Positive Pole
2	GND	Negative Pole
3	SCL	IIC Clock Line
4	SDA	IIC Data Line

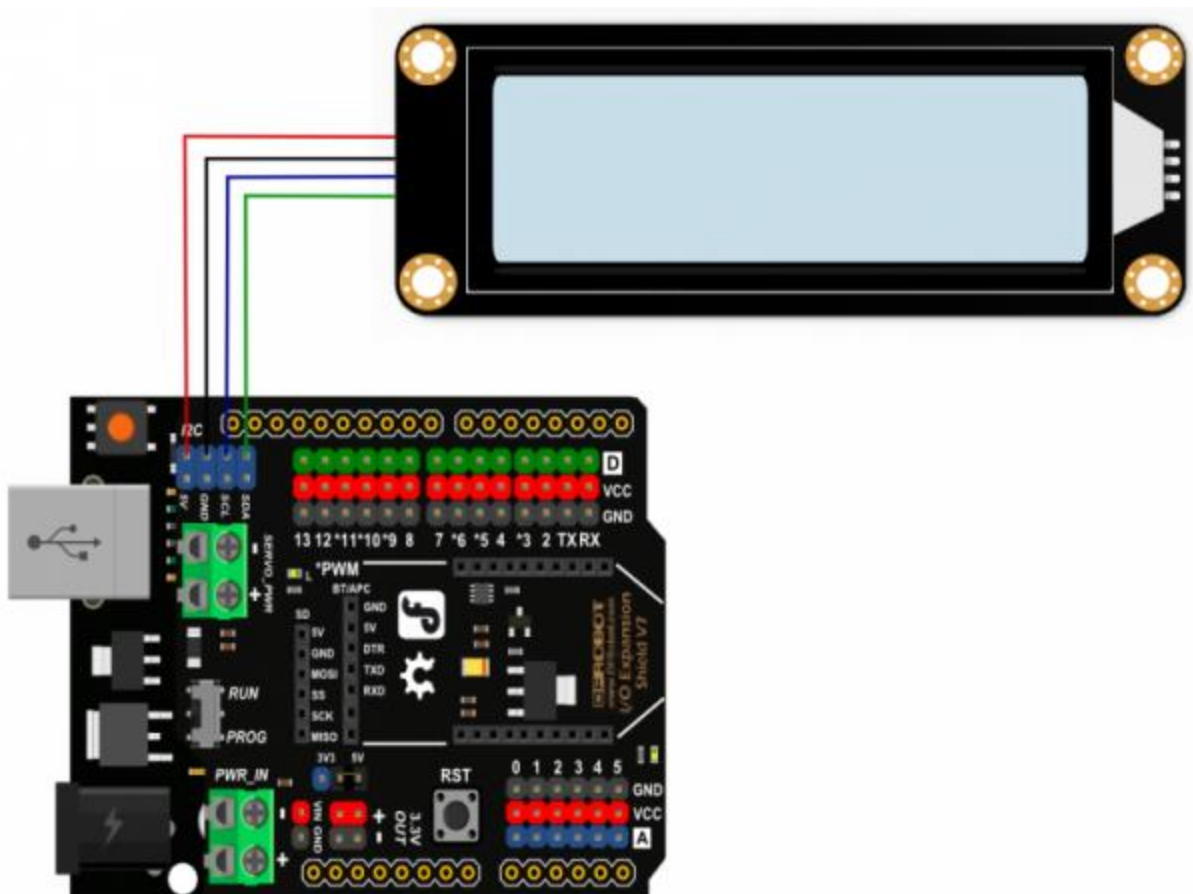
# Tutorial

Follow the pin description to connect the hardware, and download the sample code to UNO, after upload is successful, you can see the LCD display and backlight gradient.

## Requirements

- Hardware
  - DFRduino UNO R3 (or similar) x 1
  - Gravity: I/O Expansion x1
  - Sensor cable
- 
- Software
  - [Arduino IDE](#), Click to Download Arduino IDE from Arduino®

## Connection Diagram



# Sample Code

[Click here to download DFRobot LCD Library\(Github\) How to install Libraries in Arduino IDE](#)

```
/*!
 * file SetColor.ino
 * brief SetColor.
 *
 * Copyright [DFRobot](http://www.dfrobot.com), 2016
 * Copyright GNU Lesser General Public License
 *
 * version V1.0
 * date 2017-2-10
 */

#include <Wire.h>
#include "DFRobot_LCD.h"

int r,g,b;
int t=0;

DFRobot_LCD lcd(16,2); //16 characters and 2 lines of show

void setup() {
  Serial.begin(9600);
  // initialize
  lcd.init();
}

void loop() {

  r= (abs(sin(3.14*t/180)))*255; //get R,G,B value
  g= (abs(sin(3.14*(t+60)/180)))*255;
  b= (abs(sin(3.14*(t+120)/180)))*255;
  t=t+3;
}
```

```
lcd.setRGB(r, g, b); //Set R,G,B Value
lcd.setCursor(0,0);
lcd.print("DFRobot");
lcd.setCursor(0,1);
lcd.print("Gravity: RGB LCD");
//R:0-255 G:0-255 B:0-255

delay(1);
}
```

## Expected Results

LCD changes the font color.

## FAQ

For any questions, advice or cool ideas to share, please visit the DFRobot Forum.

## More Documents

- RGB LCD1602 Datasheet
- RGB LCD1602 Dimension