Sorry about that.

## DFR0646-G, DFR0646-R

Introduction

This 8-digit 7 segment display module has two colors to choose: red and green. It supports 16-level brigthness adjustment and can be drived via two normal I/O ports. The display features 4 different slave addresses, standard IIC pins, compatible with Gravity interface, and free from MCU scanning.

Specification

- Power Supply: DC 5V
- Operating Current: <130mA
- IIC Bus Interface
- Provides 16-level Brightness Adjustment
- 16 x 8 bits RAM for storing displayed data

- Built-in RC Oscillation
- Four changeable Slave Addresses

Pinout
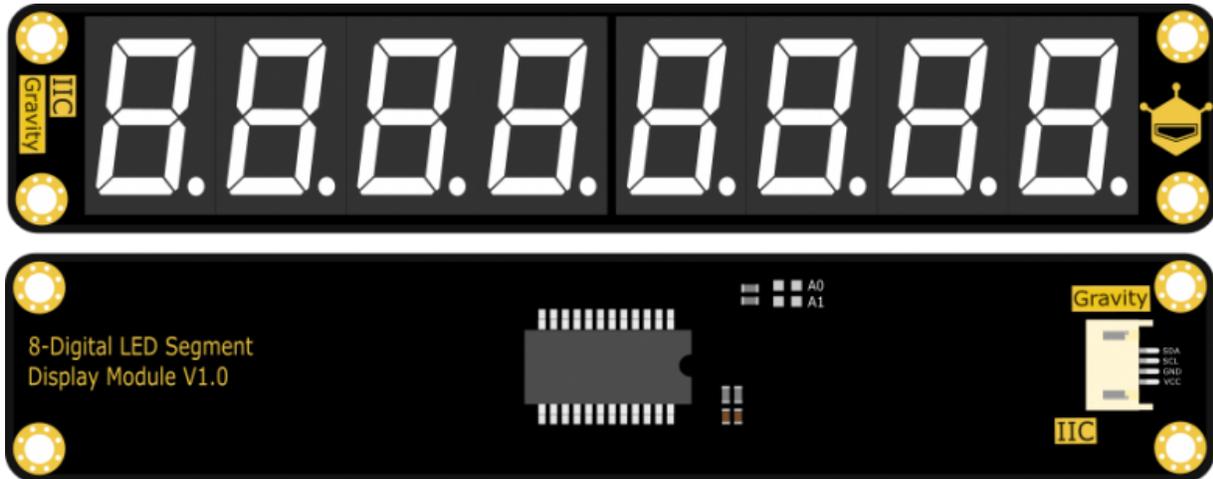
Name	Function
SDA	Date Line
SCL	Control Line
GND	Positive
VCC	Negative

Communication Description

Address Change

There are two solder pads of data bits A0 and A1 on the back of the LED display (disconnect: 0/connect: 1). The four slave addresses can be realized by the combination of A0 and A1, shown as below.

The address format of LED controller:

MSB	D6	D5	D4	D3	D2	D1	LSB
1	1	1	0	0	A1	A0	R/W

Note: D3~D7 should not be changed. When writing, D0 R/W=0, so the addresses are:

| A1	A0	Address
0	0	0xE0
0	1	0xE2
1	0	0xE4
1	1	0xE6

IIC Communication

The data of microprocessor communicate with the LED driver control IC via two-line bus interface. During data input, DIN signal must keep unchanged when CLK is at high level. Only when CLK clock signal is at low level can DIN signal be changed. The condition of starting data input is that DIN changes from high to low when CLK is at high level, and its condition of ending is that DIN changes from low to high when CLK is at high level, which is in accordance with IIC communication protocol.

The operation of writing LED display data shall follow the principle of "from low bit to high bit" of display address and "from low bit to high bit" of data byte.

Data Transmission Format

Tutorial with Arduino
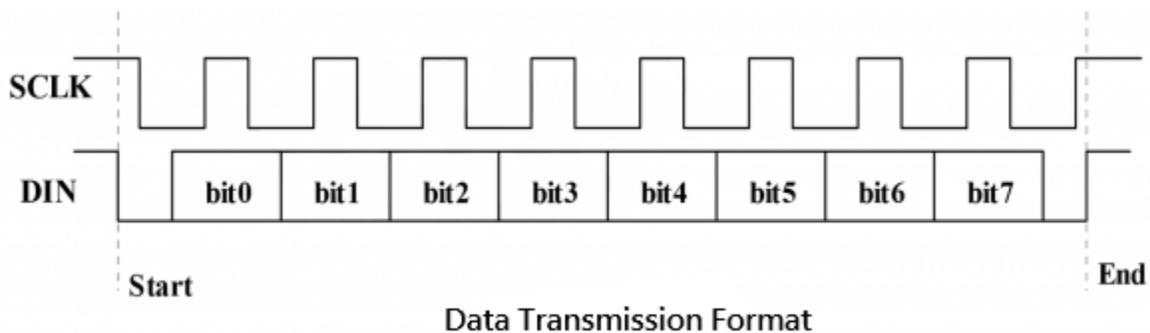
Connection Diagram
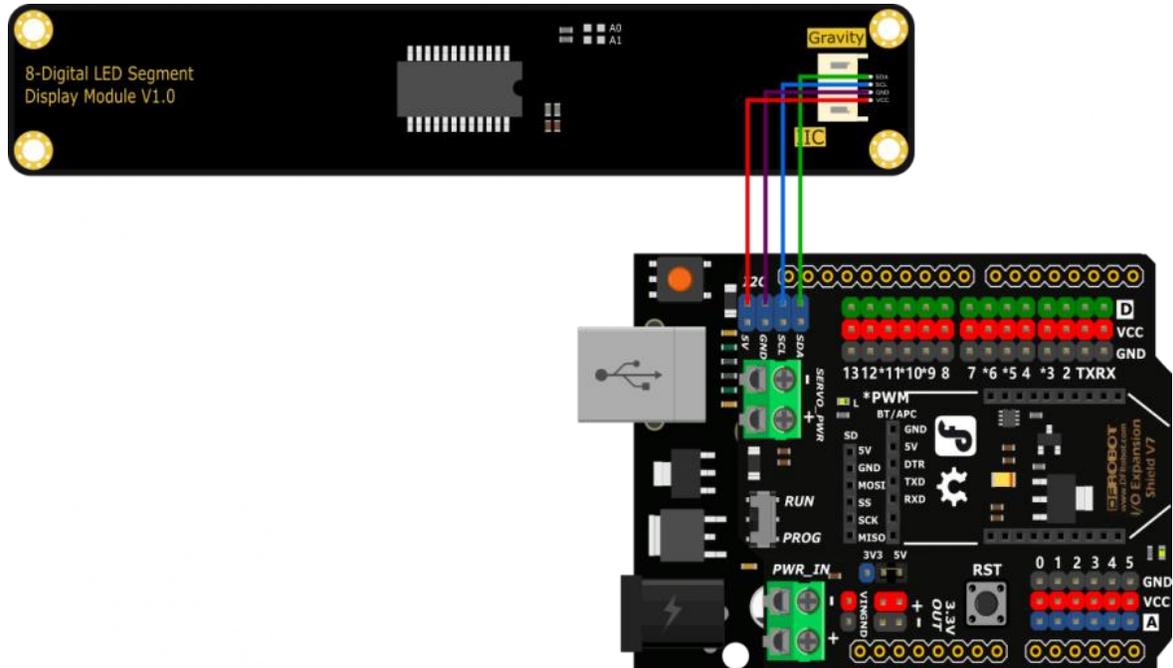
Sample Code

Click to download Library File and Example. How to install a library?

```
/*!
 * file 8_Digital_LED.ino
 * brief display. 0~9, A,B,C,D,E,F,H,L,P,U,-
 *
 * @copyright   Copyright (c) 2010 DFRobot Co.Ltd (http://www.dfrobot.com)
 * @licence     The MIT License (MIT)
 * @author      Alexander(ouki.wang@dfrobot.com)
 * @version  V1.0
 * @date  2019-10-14
 * @get from https://www.dfrobot.com
 */

# include "DFRobot_LED.h"

DFRobot_LED LED(0xE0); //Change it to your address

void setup()
{
  LED.begin();
```

```
}

void loop()
{
  LED.Print("NNHALONN"); //print "halo"    NOTE:'P' is capitalized
  delay(1000);
  LED.Print("N,N,8,Dashes,L,E,D,N"); //print "8-led"  NOTE:"Dashes" is stands for - ,
'N' is stands for off
  delay(1000);
}
```

Result