

# Grove - 4-Digit Display



Grove - 4-Digit Display module is a 12-pin module. In this module, we utilize a TM1637 to scale down the number of controlling pins to 2. That is to say, it controls both the content and the luminance via only 2 digital pins of Arduino or Seeeduino. For projects that require alpha-numeric display, this can be a nice choice.

## Features

- 4 digit red alpha-numeric display
- Grove compatible interface (3.3V/5V)
- 8 adjustable luminance levels

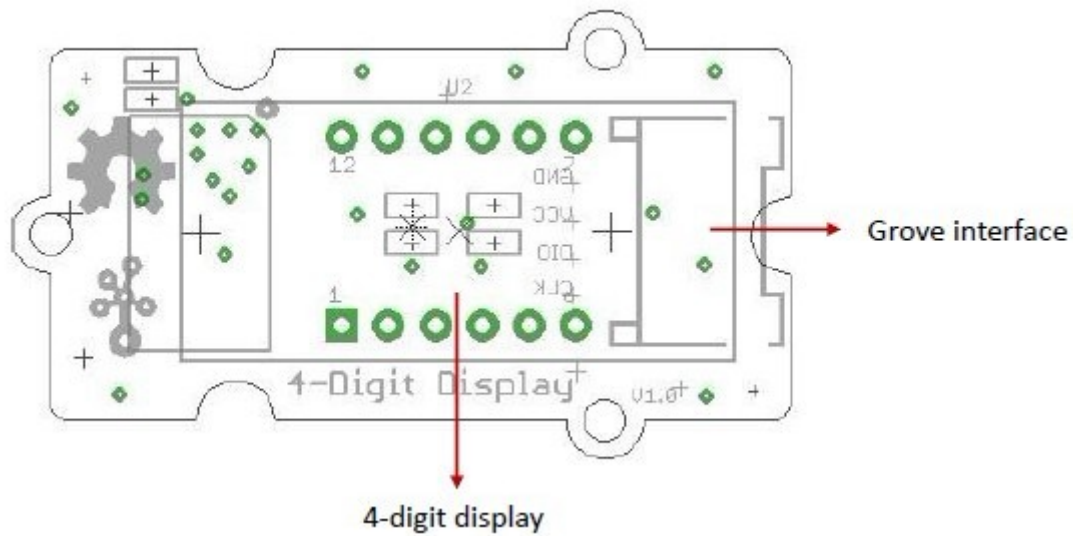
## Application Ideas

- Time display
- Stopwatch
- Sensors' input display

## Specifications

Item	Min	Typical	Max	Unit
Voltage	3.3	5.0	5.5	VDC
Current	0.2	27	80	mA
Dimensions	42x24x14			mm
Net Weight	7±1			g

## Interface Function



**Grove interface** - Can be connected to digital port on Grove - Base Shield.

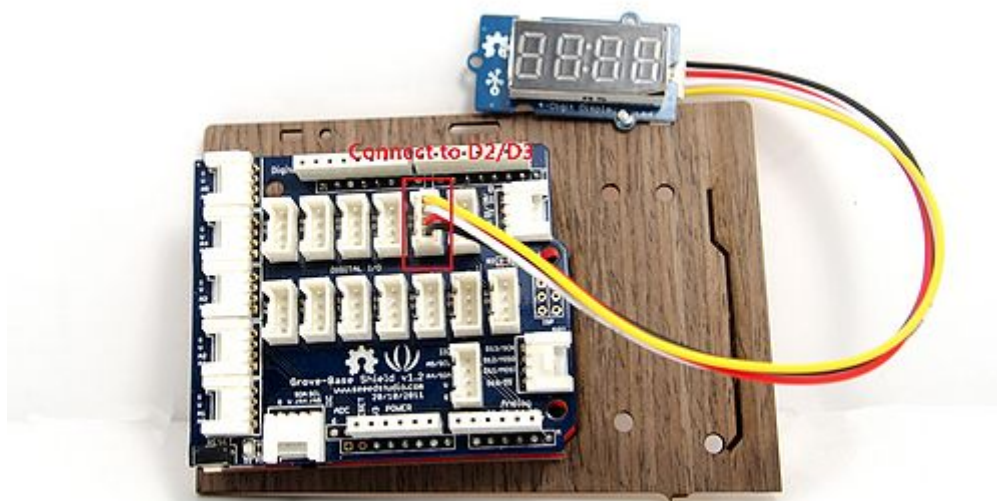
**4 - digit display** - Common anode digital tube.

**Pin definition:** CLK DIO VCC GND

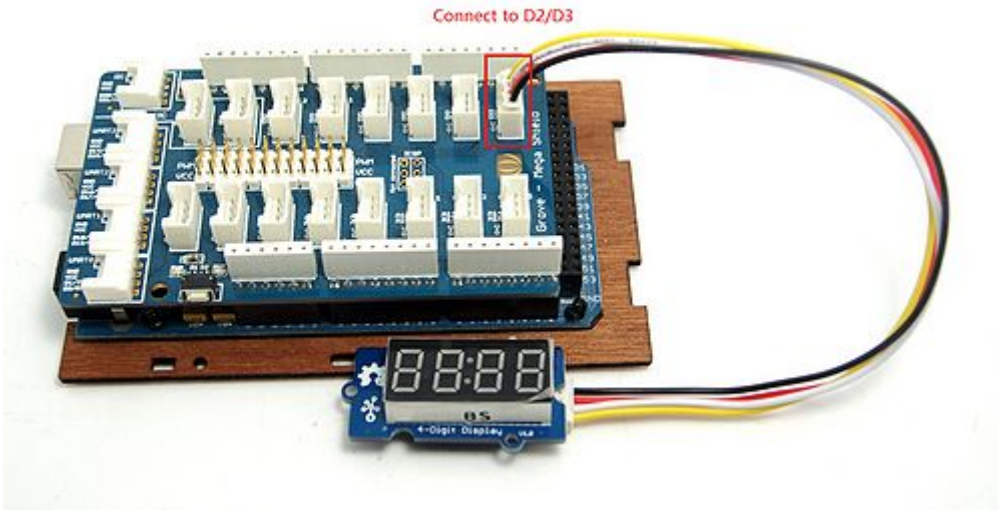
## Usage

The module uses an LED drive chip - TM1637 to control the contents and change the luminance. Here we drive it to display time.

1. Connect the Grove socket marked "IN" on the LED Strip Driver and digital port 2 of the Grove - Base Shield with a Grove cable. You can change to the digital port as you like. But don't forget to change the port number in the definition of the demo code at the same time.
  2. Plug onto Arduino/Seeeduino or plug Grove - Mega Shield onto Arduino Mega.
- Seeeduino and Grove - 4-digit display:



Arduino Mega and Grove - 4-digit display:



3. Connect Arduino/Seeeduino to PC via a USB cable.
4. Download [the 4-Digit Display library](#) and [TimerOne library](#). Unzip and put them in the libraries file of Arduino IDE by the path: ..\arduino-1.0\libraries.
5. Restart the Arduino IDE, open one demo code you like, for example ClockDisplay directly by the path:File -> Example ->DigitalTube->ClockDisplay.

```
Arduino IDE - ClockDisplay | Arduino 1.0
File Edit Sketch Tools Help
ClockDisplay
// Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
//
// Modified record:
//
//*****
#include <TimerOne.h>
#include "TM1637.h"
#define ON 1
#define OFF 0

int8_t TimeDisp[] = {0x00, 0x00, 0x00, 0x00};
unsigned char ClockPoint = 1;
unsigned char Update;
unsigned char halfsecond = 0;
unsigned char second;
unsigned char minute = 0;
unsigned char hour = 12;

Done uploading.
Binary sketch size: 4064 bytes (of a 14336 byte maximum)
1 Arduino Diecimila or Duemilanove w/ ATmega168 on COM27
```

6. Upload the demo code and the clock will be ticking in a few seconds. Please click [here](#) if you do not know how to upload.

You can see this:

ClockDisplay demo

