

Part 2

Lesson

14

**MAX7219 LED Dot
Matrix Module**

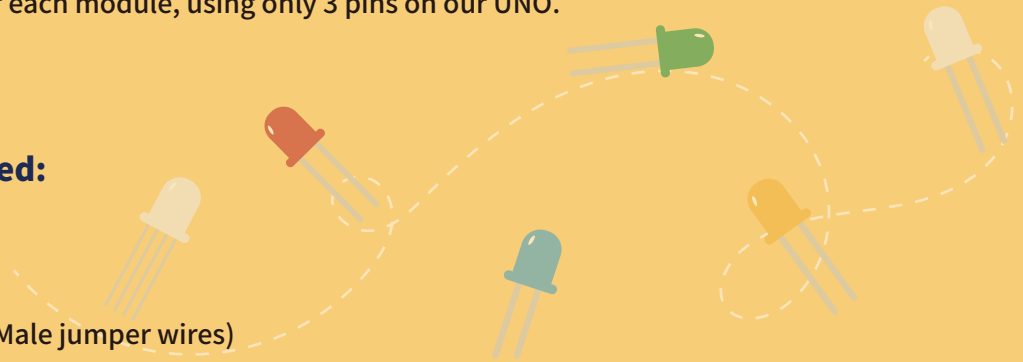
Overview

In this tutorial, we will connect a MAX7219 and scroll the text across.

Since these modules use the MAX7219 LED driver chip, we will be able to turn on and off the 64 LEDs of each module, using only 3 pins on our UNO.

Component Required:

- (1) x Elegoo Uno R3
- (1) x Max7219 module
- (5) x M-M wires (Male to Male jumper wires)



Component Introduction

MAX7219 LED Dot Matrix Module

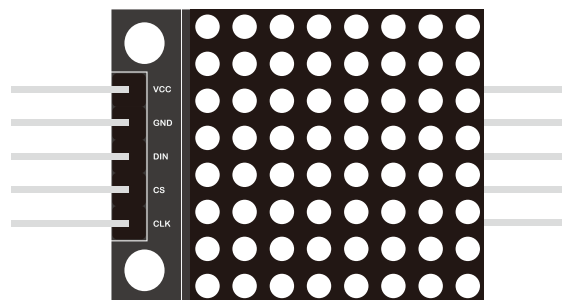
Our project is in fact an Arduino Serially Interfaced to MAX7219 that Operates an 8X8 LED Matrix . The MAX7219 IC is a serial input/output common-cathode display driver that interfaces microprocessors to a 7-segment numeric LED displays of up to 8 digits, bar-graph displays, or 64 individual LEDs. For convenience, here an 8×8 LED matrix, integrated with a MAX7219 IC setup, available as a pre-wired module is used. Typical specification of this LED Matrix Module is shown below:

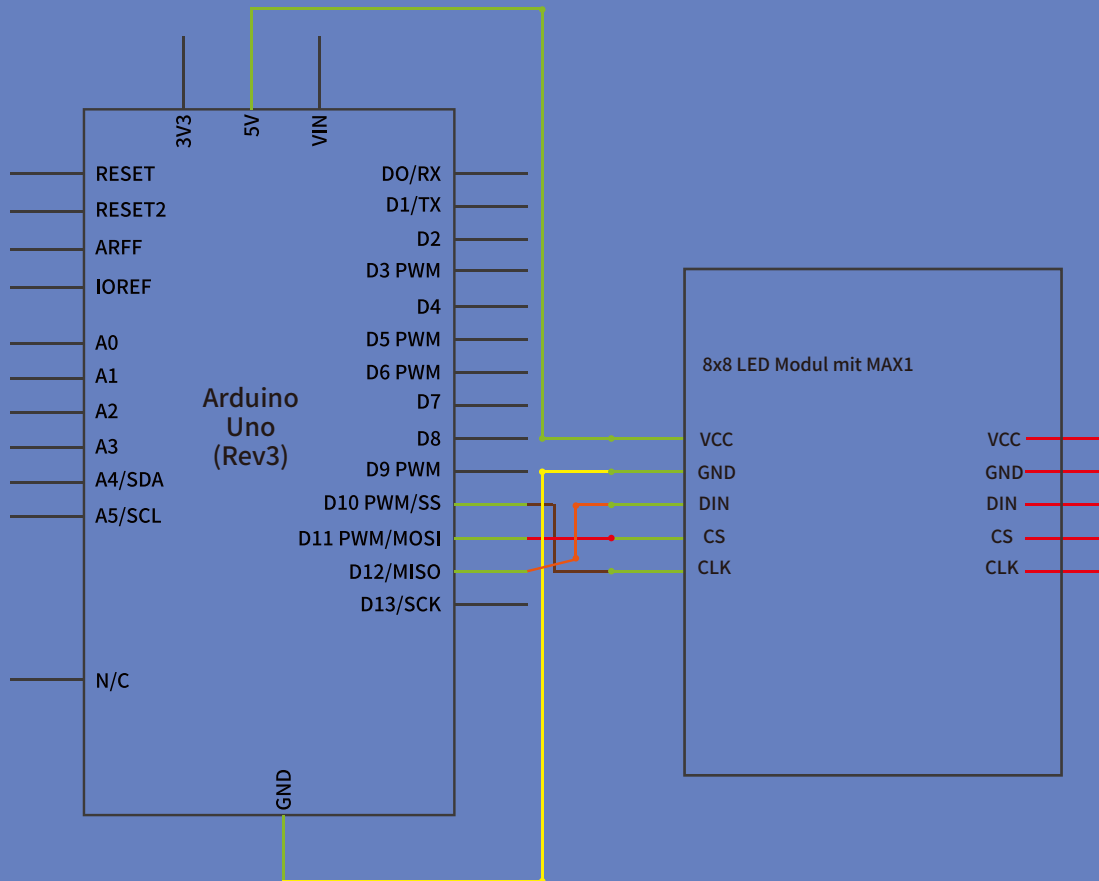
Operating Voltage: DC 4.7V – 5.3V

Typical Voltage: 5V

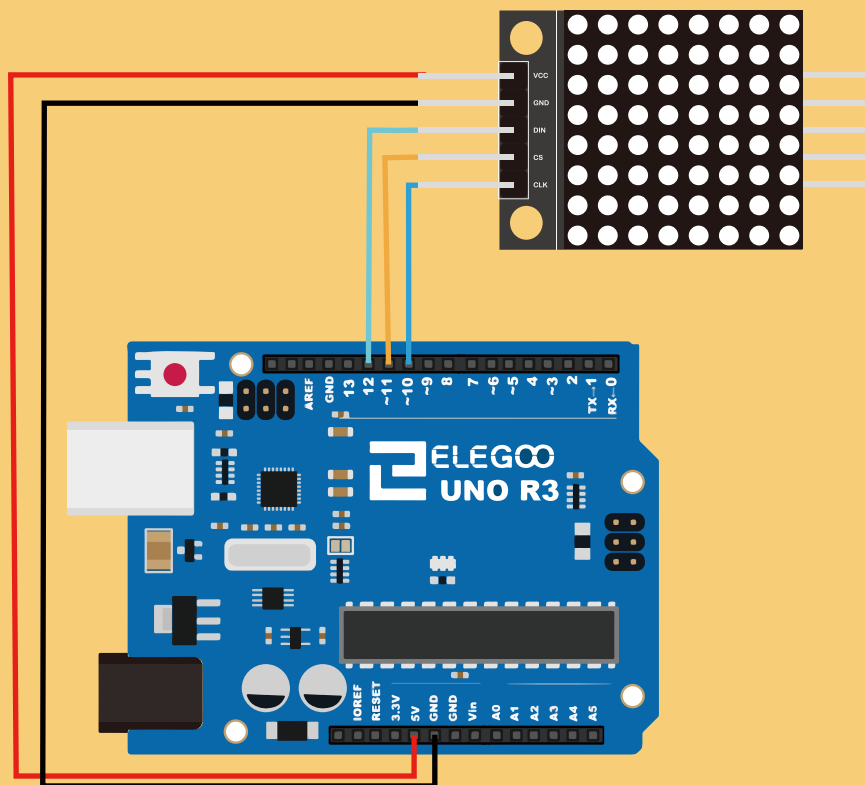
Operating Current: 320mA

Max Operating Current: 2A





Connection Schematic



VCC and Ground are connected to the Arduino.

Pin 12 is connected to DIN, Pin 11 is connected to CS and Pin 10 is connected to CLK.

Wiring diagram

Code

- After wiring, please open the program in the code **MAX7219** and click UPLOAD to upload the program. See Lesson 5 in part 1 for details about program uploading if there are any errors.
- Before you can run this, make sure that you have installed the **< LedControl >** library or re-install it, if necessary. Otherwise, your code won't work.
- For details about loading the library file, see Lesson 5 in part 1.