

# Light & Motor Driver for Python (V1.0)

DRI0050

## Product Overview

02/03/2023

For the most up-to-date information, visit [www.mouser.com](http://www.mouser.com) or the supplier's website.

## Description

DFRobot Light and Motor Driver for Python (V1.0) is suitable for DC motor speed control and light adjustment applications. This motor driver comes with four adjustment methods, Python code direct control, PC host computer control, UART communication programming control, and potentiometer manual control. The light and motor driver for Python (V1.0) supports 5V to 24V wide voltage input and features a load capacity of 10A, which enables it to drive a DC motor of about 10W or a LED strip light of about 5 meters. Typical applications include cooling fan speed control, light brightness adjustment, power tool transformation, motor/LED strip product testing, motor speed automation, and lighting effect automation control.



## Features

- Simple and easy to use:
  - Python code programming, no motherboard or adapter required
- Plug and play:
  - Windows software control, no programming required
- UART communication control:
  - Convenient for long-term use of embedded equipment
- External potentiometer control:
  - Manual control, no programming required
- Standard MODBUS protocol:
  - The protocol is public and can flexibly customize the control methods
- 5V to 24V wide voltage range:
  - Suitable for various motors and light strips
  - Driven by high current MOS tube, load capacity of 10A

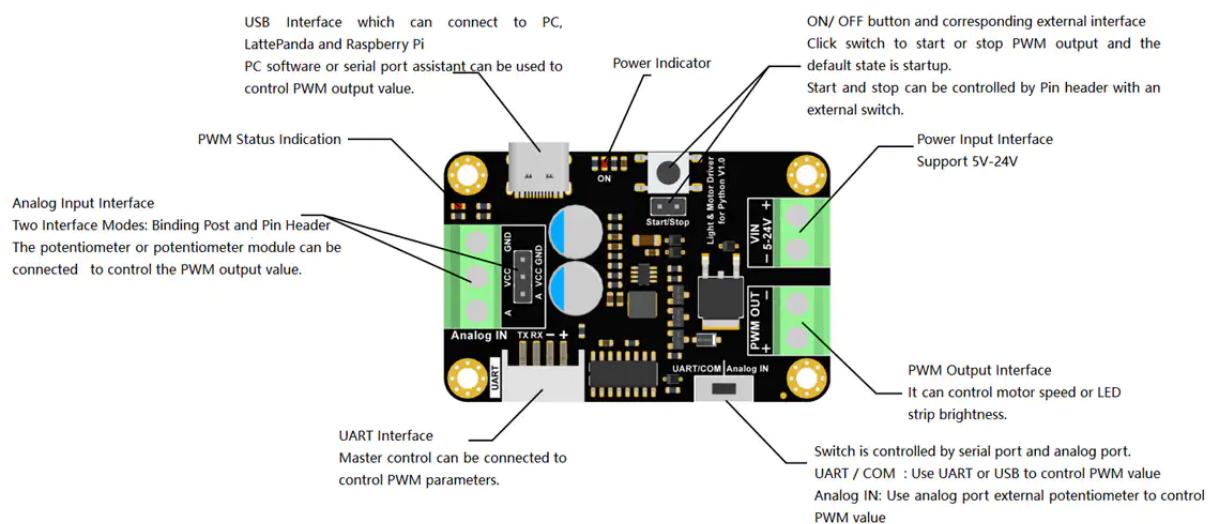
## Specifications

- 5V to 24V input voltage range
- 10A maximum control current
- 0 to 255 PWM duty ratio adjustment range
- 183Hz to 46875Hz PWM frequency adjustment range
- One start/stop button
- One PWM channel
- Control mode:
  - External potentiometer adjustment
  - UART communication control
  - USB port host computer control
  - Python control
- Type-C USB interface
- PH2.0-4P UART interface
- External potentiometer interface:
  - 2.54-pin header, binding post
- Mounting hole size:
  - 30mm x 50mm, 3.1mm diameter
  - 37mm x 57mm PCB size

## Applications

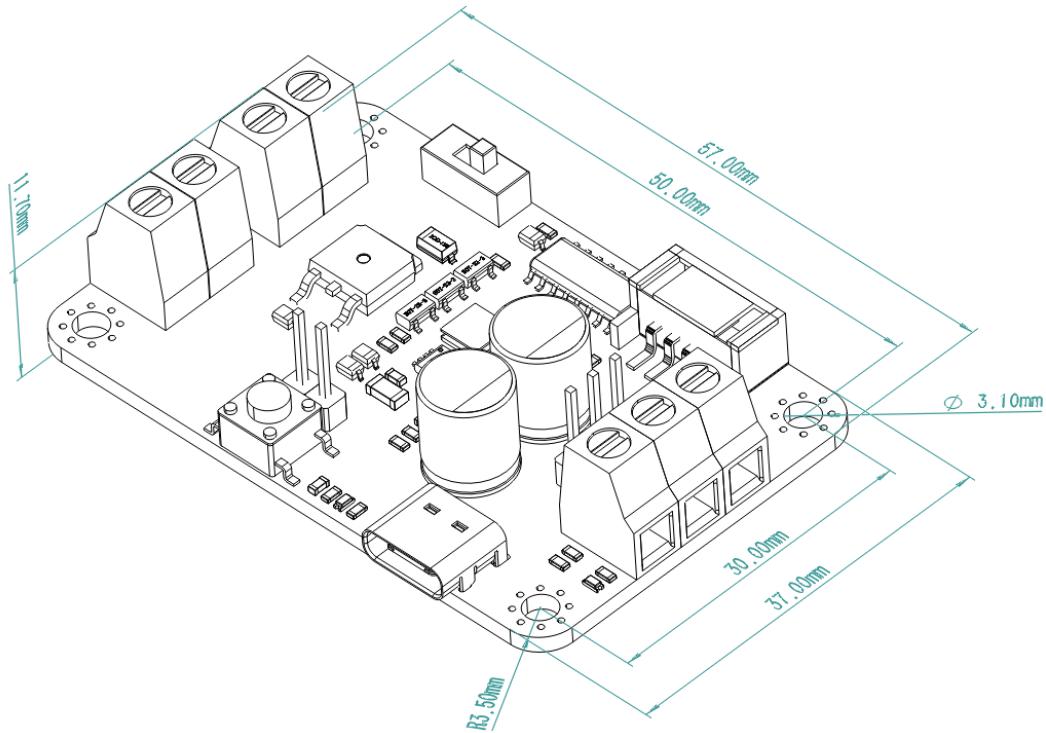
- Python code control
- USB port communication, computer control
- UART communication, programming control
- Manual control of potentiometer

## Board Overview

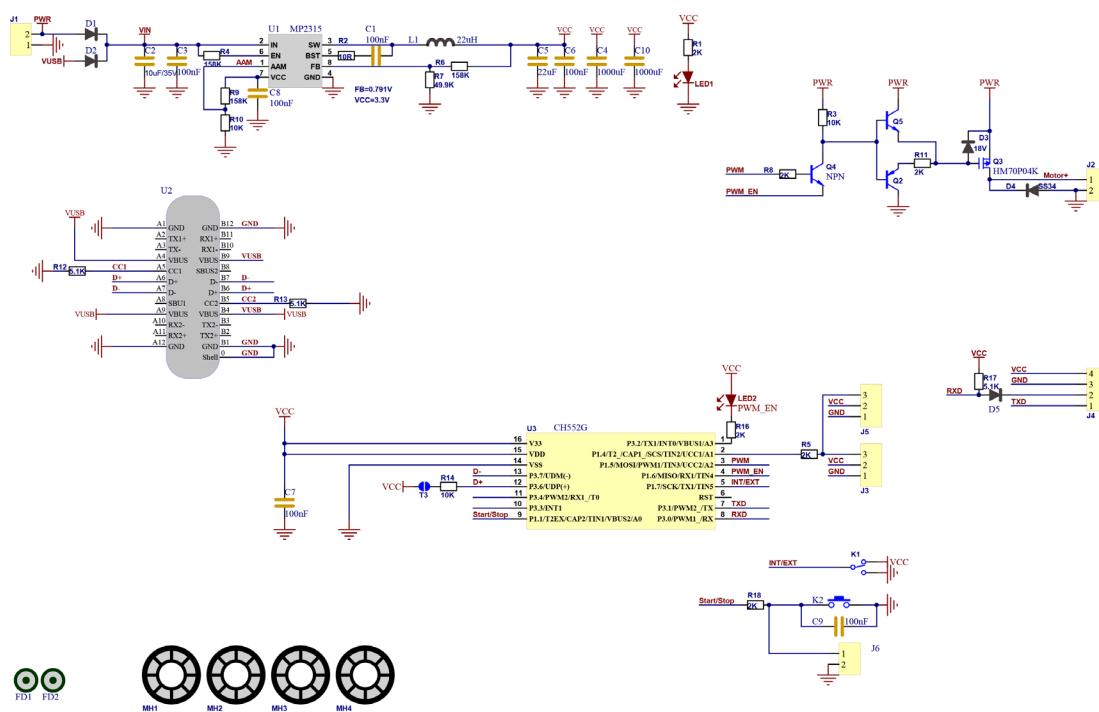




## Board Dimensions



## Schematics



## Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/dfrobot/dfrobot-light-motor-driver/>