

Photoresistor (5506)

Overview

We will use a photo resistor to control the brightness of an LED light, the higher the photo resistance , the darker the LED light will be.

Materials

Photo sensitive resistor x 1

Red M5 LED x 1

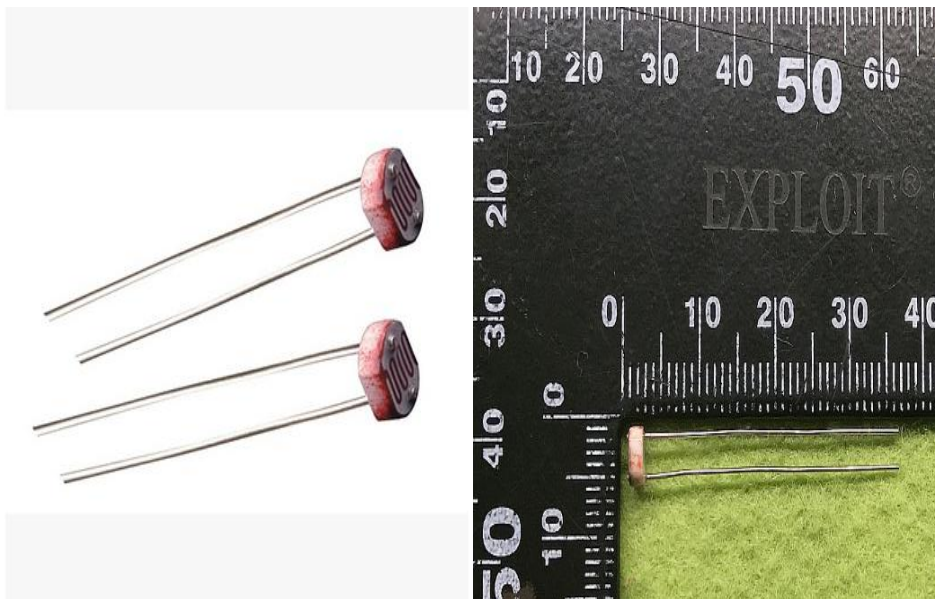
10K line resistance x 1

220 Ohm line resistance x 1

Bread board x 1

Bread board jumper x 1

Product Description



A photo resistor is a kind of resistor using a photoelectric effect of a semiconductor, which changes the resistance depending upon the intensity of incident light. The higher the incident light, the higher the resistance.

Photo resistors are generally used for light measurement and light control

Technical Details

Maximum voltage (V-dc): 150

Maximum power consumption (mW): 100

Ambient temperature (° C): - 30 --- +70

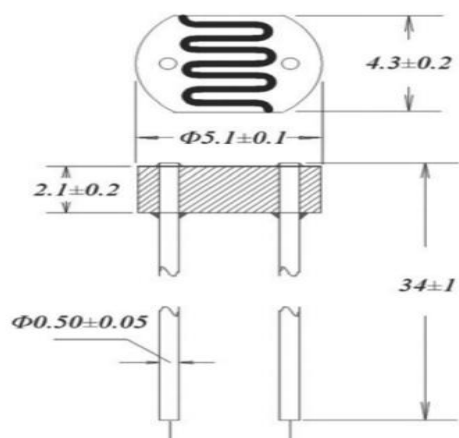
Spectral peak (nm): 540

Bright resistance (10Lux) (KΩ): 10-20

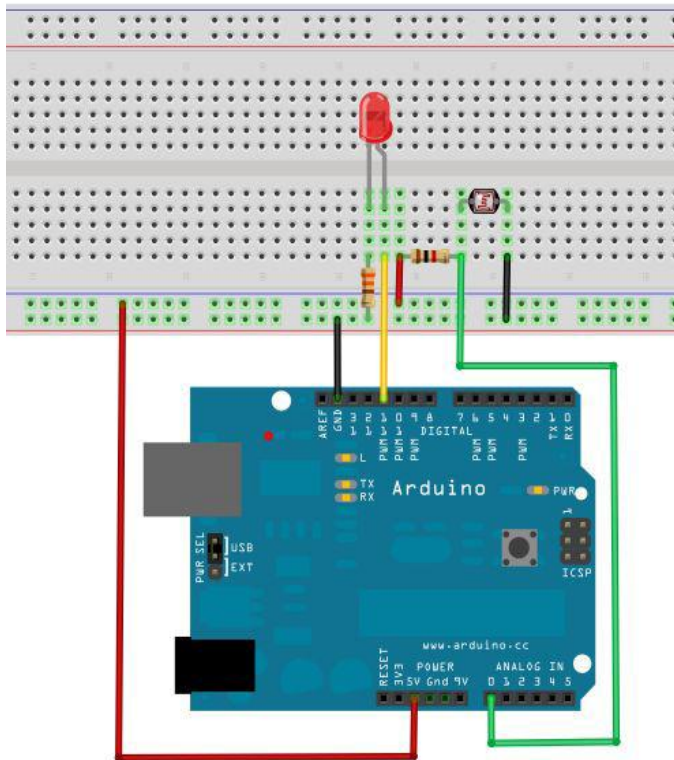
Dark resistance (MΩ): 1100λ10: 0.6

Response time (ms): up: 20

Dimensions



Wiring Diagram



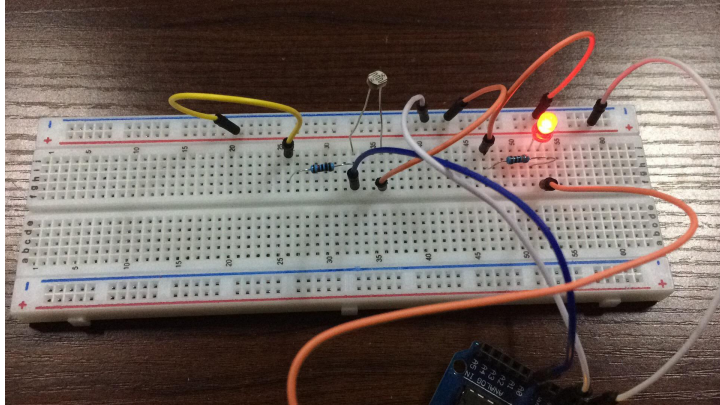
Sample code

```
int light=0;//Define the analog interface 0 connect the photosensitive
resistance
int led=11;//Define digital interface 11 output PWM adjust LED brightness
int val=0;//Defined variable val
void setup() {
  // put your setup code here, to run once:
  pinMode(led,OUTPUT);//Define digital interface 11 for output
}

void loop() {
  // put your main code here, to run repeatedly:
  val=analogRead(light);//Read the sensor's analog values and assign to
val
  analogWrite(led,val);// Turn on the LED and set the brightness (the
maximum value of the PWM output is 255)
  delay(10);//Delay 0.01 seconds
}
```

Results

With no shade the brightness of LED is shown as below:



LED gets brighter when shaded.

