LDR Sensor Module Interface with Arduino

by **mybotic** on June 26, 2016

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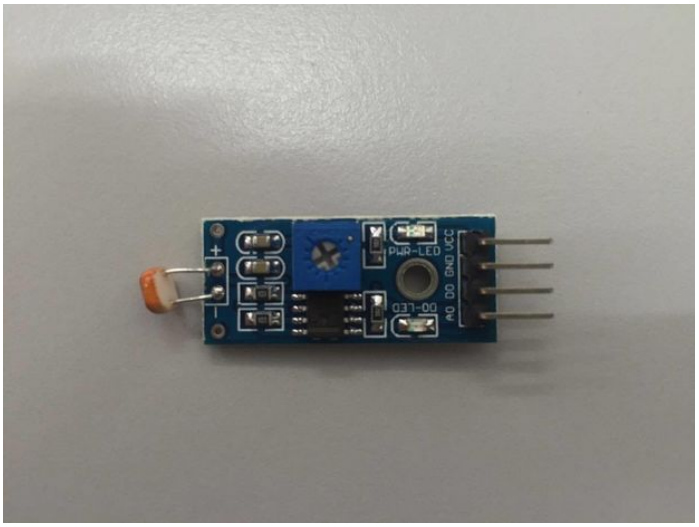
Intro: LDR Sensor Module Interface with Arduino

This tutorial teaches the basics on using LDR Sensor Module.



Step 1: Introduction

LDR sensor module is used to detect the intensity of light. It is associated with both analog output pin and digital output pin labelled as AO and DO respectively on the board. When there is light, the resistance of LDR will become low according to the intensity of light. The greater the intensity of light, the lower the resistance of LDR. The sensor has a potentiometer knob that can be adjusted to change the sensitivity of LDR towards light.

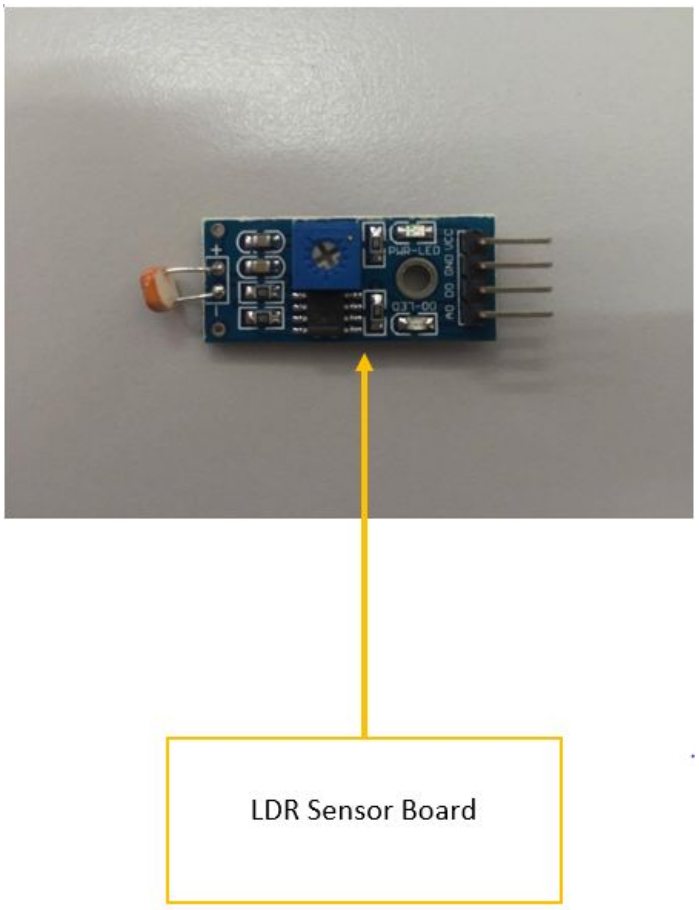
Specification:

- Input Voltage: DC 3.3V to 5V
- Output: Analog and Digital
- Sensitivity adjustable

Step 2: Packaging List

The LDR sensor module comes with

- LDR sensor board



Step 3: Pin Definition

Pin: VCC

Description: +3.3V~+5V

Function: Connect to +3.3V ~ +5V

Pin: GND

Description: 0V

Function: Connect to Ground

Pin: D0

Description: Digital Output

Function:

1. Output Signal: HIGH

- There is enough intensity of light.
- LED status: ON

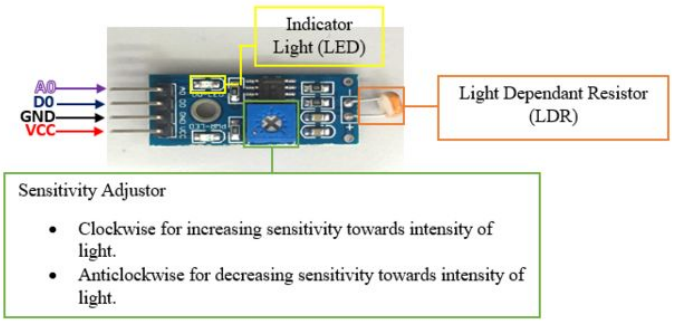
2. Output Signal: LOW

- There is not enough intensity of light.
- LED status: OFF

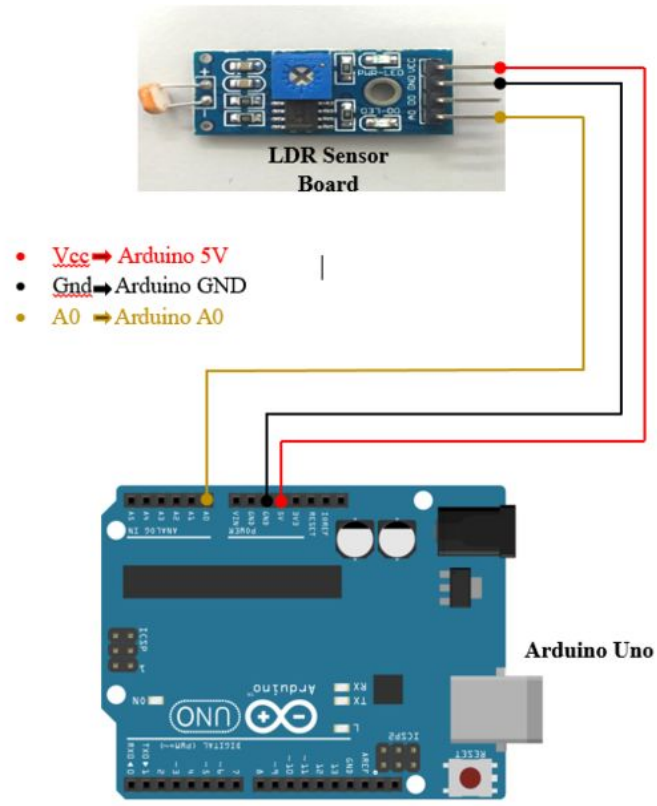
Pin: A0

Description: Analog Output

Function: Analog output varies due to intensity of light.



Step 4: Hardware Installation



Step 5: Sample Source Code

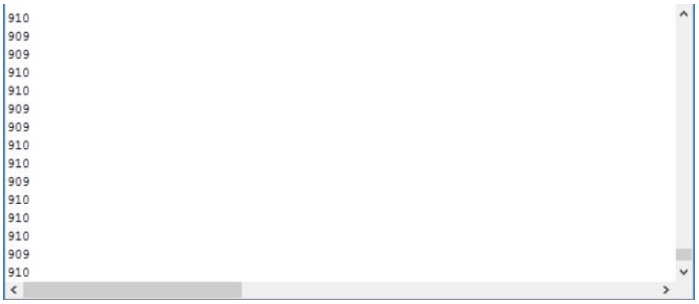
```
void setup()

{

Serial.begin(9600);

}

void loop()

{

unsigned int AnalogValue;

AnalogValue = analogRead(A0);

Serial.println(AnalogValue);

}
```

Step 6: Result (1)

The reading shown on Serial Monitor when LDR sensor board is being exposed to sunlight.

Step 7: Result (2)

The reading shown on Serial Monitor when LDR sensor module is kept in a room with very little light /no light.



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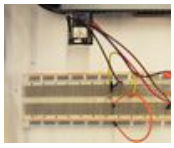

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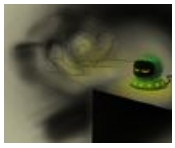

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Cool project