

Article Overview

To connect a light sensor module like an LDR or LM393 to an Arduino, connect VCC to 3.3-5V, GND to ground, and use the AO (analog) or DO (digital) pins to read light levels or detect light thresholds.

Pin Connections

Most light sensor modules have four pins:

- o VCC: Connect to 3.3V or 5V on the Arduino .
- o GND: Connect to Arduino ground (0V), .
- o AO (Analog Output): Provides a continuous voltage proportional to light intensity. Connect to an analog input pin (e.g., A0) to measure light levels .
- o DO (Digital Output): Provides a HIGH or LOW signal depending on a light threshold. Connect to a digital input pin if you want to detect light/dark events . For a simple LDR without a module, you can use a voltage divider: connect the LDR in series with a fixed resistor between 5V and GND, and read the voltage at the junction with an analog pin .

Wiring Example

- o LDR Module (LM393):
 - o VCC -> 5V
 - o GND -> GND
 - o AO -> A0 (analog reading)
 - o DO -> D2 (digital reading, optional)
- o Basic LDR with resistor:
 - o 5V -> LDR -> junction -> analog pin A0 -> resistor -> GND

Programming Basics

- o Analog Reading: Use `analogRead(A0)` to get a value between 0 (dark) and 1023 (bright), .
- o Digital Reading: Use `digitalRead(D2)` to detect if light is above or below the threshold set by the module's potentiometer .
- o Example to turn on an LED when it's dark:

```
CppCopyint sensorPin = A0;int ledPin = 13;int sensorValue;void setup() { pinMode(ledPin, OUTPUT); Serial.begin(9600);}void loop() { sensorValue = analogRead(sensorPin); Serial.println(sensorValue); if(sensorValue < 300) { // adjust threshold digitalWrite(ledPin, HIGH); } else { digitalWrite(ledPin, LOW); } delay(200);}
```

How to connect the light sensor module

Tips

- o Adjust the potentiometer on LM393 modules to set the light threshold for digital output .
- o Use AO for precise light measurement and DO for simple light/dark detection .
- o Ensure proper voltage levels to avoid damaging the sensor. By following these steps, you can reliably connect a light sensor module to an Arduino and use it for projects like automatic lighting, alarms, or light intensity monitoring .

Learn how light sensor works, how to connect light sensor to Raspberry Pi, how to code for light sensor, how to program Raspberry

Learn how a LDR light sensor module works, how to connect the LDR light sensor module to ESP32, how to program ESP32 to

Wire the KY-018 (HW-486) photoresistor/LDR module to Arduino, read light levels, and build a light-triggered LED.

Have you ever wondered how to connect a light sensor? Don't worry, you're in the right place! With technology

Photojunction devices are specifically designed for detector application and light penetration with their spectral response tuned to the

Rain Drop Sensor Module Interfacing with Arduino - Rain Detector Circuit Today's tutorial is about the interfacing of Rain drop

In this tutorial, we'll explore what light sensors are, how they work, and then we'll build a project where an LED

Discover how to use Arduino UNO R4 with an LDR light sensor module. You will also learn how to program the Arduino UNO R4 to

Light Sensor with Arduino Connect the LDR to the Arduino using the analog pin specified in the LDR's documentation.

The Light Sensor module is an electronic component designed to detect the presence and intensity of light in the surrounding

How to connect the light sensor module

Learn how a LDR light sensor module works, how to connect the LDR light sensor module to Arduino, how to program Arduino to

The Photoresistor Sensor module, also known as a Light Dependent Resistor (LDR), is an essential component for

This basic blog tutorial helps us to understand how to connect the LDR sensor module with Arduino, how to reads

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The Charan Light Dependent Resistor (LDR) Module is an electronic sensor that detects the intensity of light. As the ambient light

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