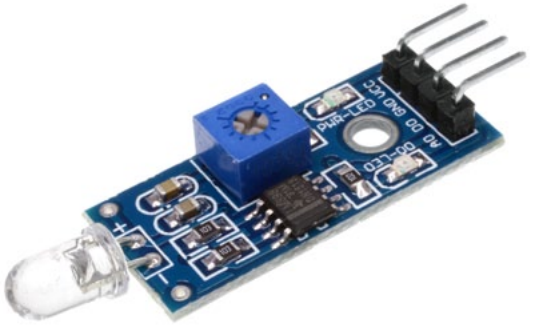
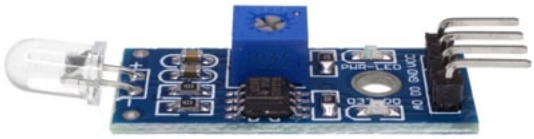
ARD 2 Arduino Compatibles

Controllers, Shields, Modules & Sensors

Light Brightness Sensor — ARD2-2090





- **Use an LED as a photodiode to detect light**
- **Brightness of LED changes depending on ambient light**

Description

This module uses an LED as a photodiode to detect light. The module will adjust the LED's brightness level based on the light intensity of the surrounding environment.

Specifications

Operating Voltage	3.3–5.0VDC
Dimensions	32mm x 14mm
Weight	5g
Material	PCB

Pinout

Module	Arduino	Function
VCC	5V	Power Supply
GND	GND	Ground Connection
DO	D13	Digital Output
AO	A0	Analog Output

Test Code

```
#define LED_N_SIDE 2
#define LED_P_SIDE 3

void setup()
{}

void loop()
{
  unsigned int j;

  // Apply reverse voltage, charge up the pin and led capacitance
  pinMode(LED_N_SIDE,OUTPUT);
  pinMode(LED_P_SIDE,OUTPUT);
  digitalWrite(LED_N_SIDE,HIGH);
  digitalWrite(LED_P_SIDE,LOW);

  // Isolate the pin 2 end of the diode
  pinMode(LED_N_SIDE,INPUT);
  digitalWrite(LED_N_SIDE,LOW);  // turn off internal pull-up resistor
```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Test Code (cont.)

```
  // Count how long it takes the diode to bleed back down to a logic zero
  for ( j = 0; j < 30000; j++) {
    if ( digitalRead(LED_N_SIDE)==0) break;
  }
  // You could use 'j' for something useful, but here we are just using the
  // delay of the counting.  In the dark it counts higher and takes longer,
  // increasing the portion of the loop where the LED is off compared to
  // the 1000 microseconds where we turn it on.

  // Turn the light on for 1000 microseconds
  digitalWrite(LED_P_SIDE,HIGH);
  digitalWrite(LED_N_SIDE,LOW);
  pinMode(LED_P_SIDE,OUTPUT);
  pinMode(LED_N_SIDE,OUTPUT);
  delayMicroseconds(1000);
  // we could turn it off, but we know that is about to happen at the loop()
start
}
```


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