

Light & Dark sensor

Technical Manual Rev 1r0

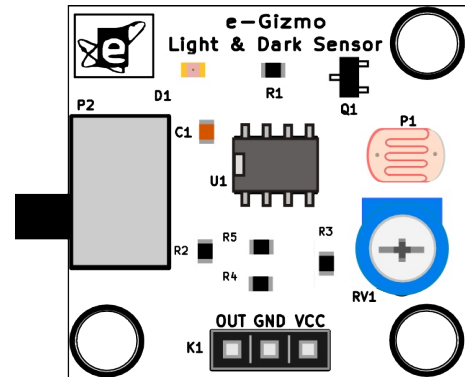
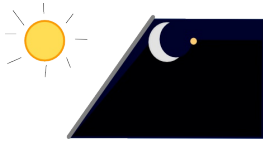


Figure 1. Light & Dark sensor Illustration

The e-Gizmo Light & Dark sensor for simple automatic light switch to your project. The 2-in-1 board on its 2 functions (light & dark) with the DPDT switch and adjustable sensitivity. With analog output pin connection to measured.

FEATURES:

- 2 functions (the light and dark) - in - 1 board.
- with analog output pin connection to measured.
- with adjustable sensitivity and using DPDT - switch for the selection of light and dark sensed mode.
- Supply input: +5V DC, Compatible with your gizDuino, or any MCU.

GENERAL SPECIFICATION:

- **Supply Input:** +5V DC
- **On board IC:** LM358
- **PCB Dimension:** 26 mm x 25 mm

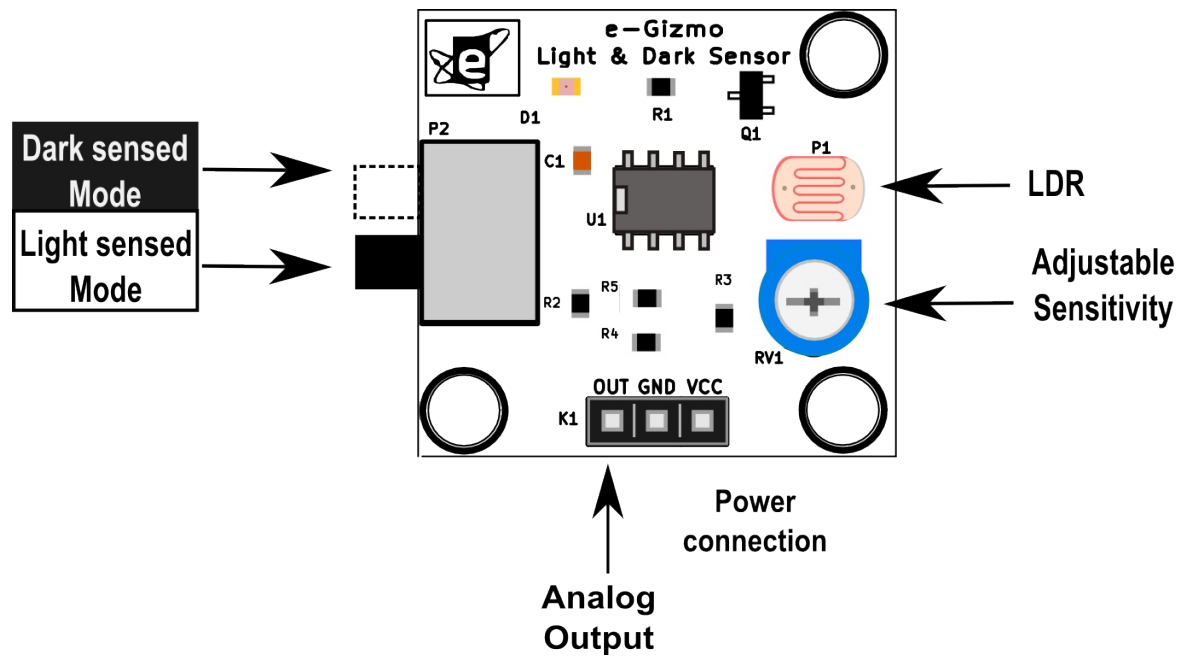


Figure 2. Major parts presentation of e-Gizmo Light & Dark sensor

Table 1. *K1* connections and descriptions

PIN Name	Descriptions
VCC	+ 5V DC Supply Input
GND	Ground connection
OUT	Analog Output connection

Table 2. *RV1* connections and descriptions

PIN Name	Descriptions
RV1	For sensitivity calibration.

For Light sensor

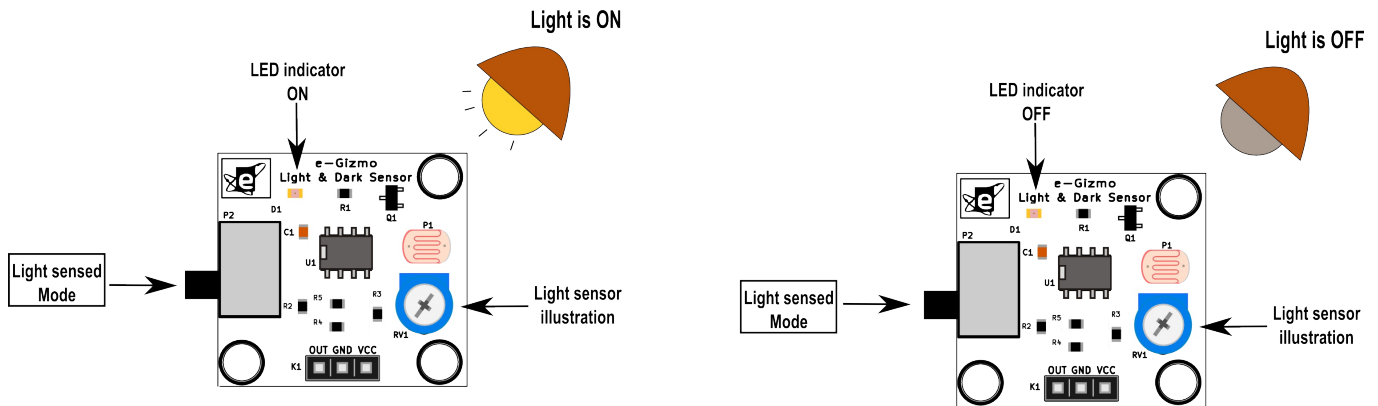


Figure 3. Light Mode Illustration

For Dark sensor

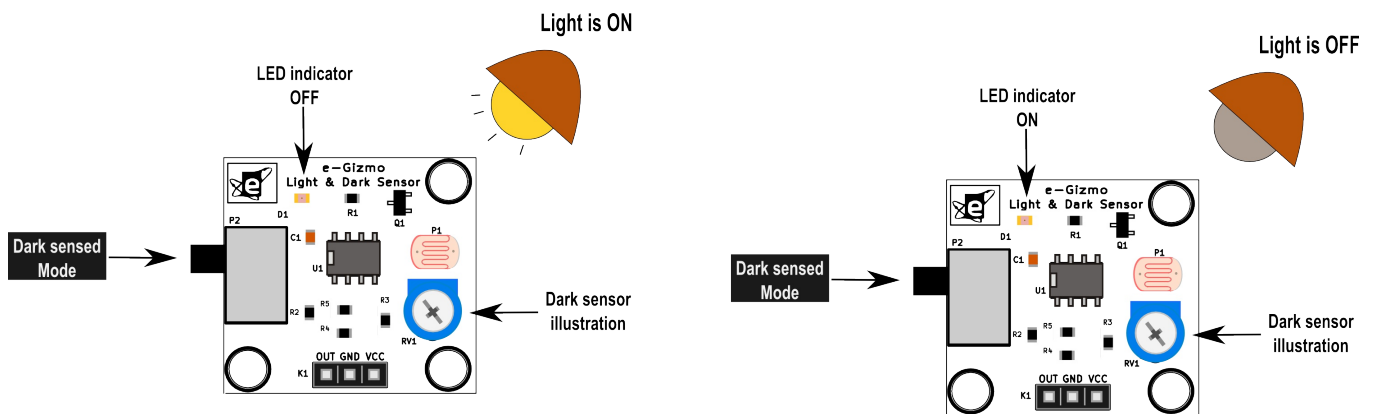


Figure 4. Dark Mode Illustration

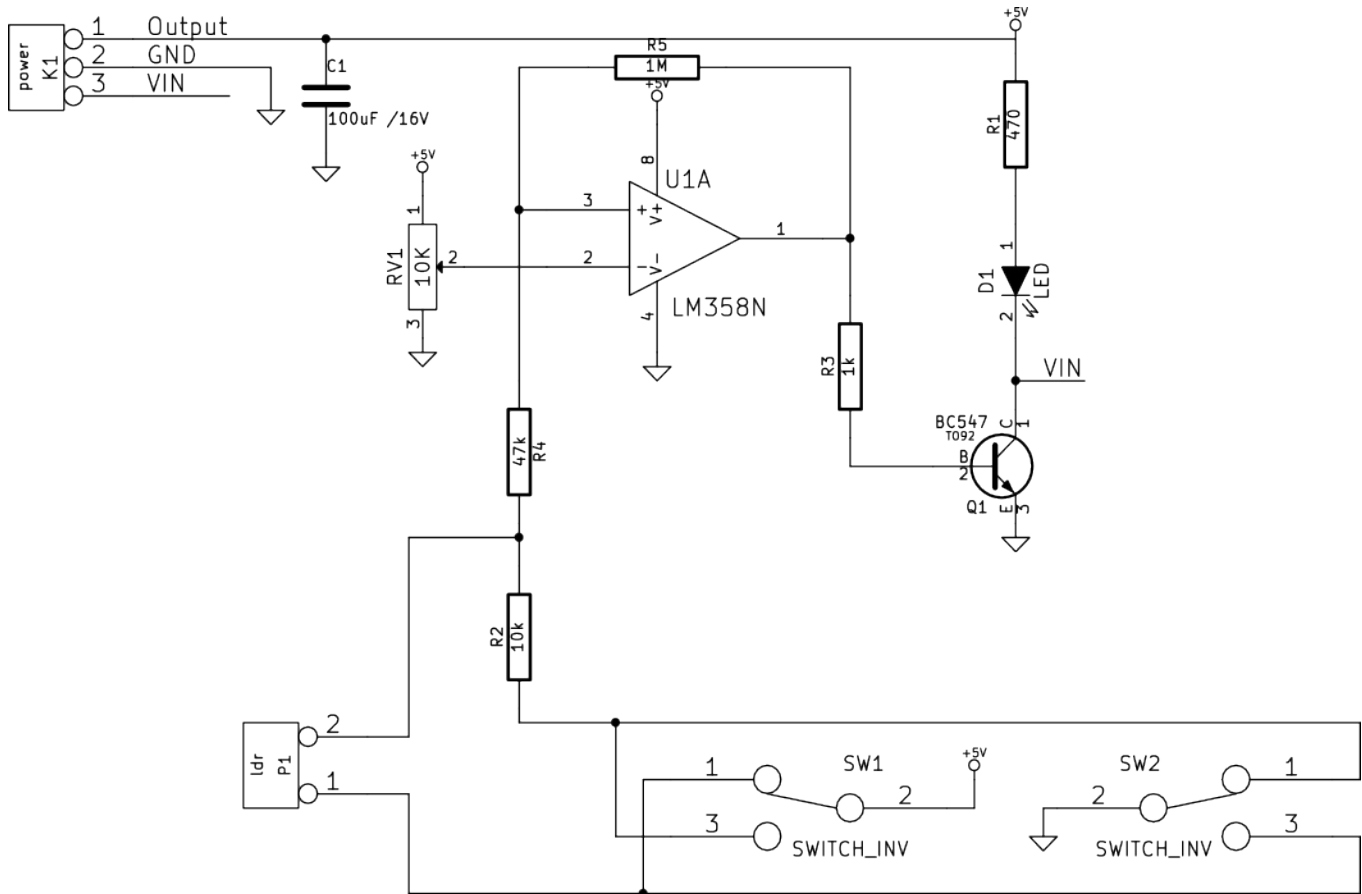


Figure 5. Schematic Diagram of e-Gizmo Light & Dark sensor

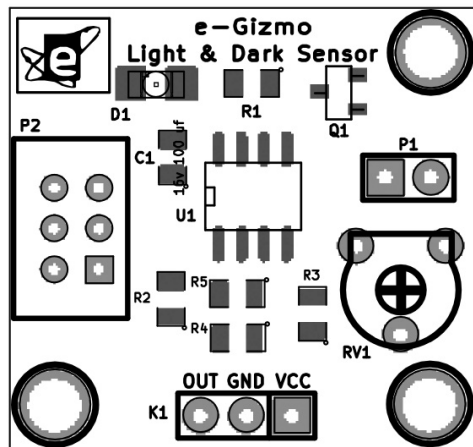


Figure 6. Parts Placement

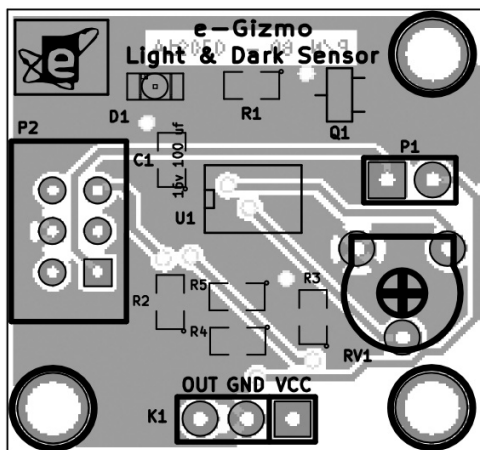


Figure 7. BottomPCBGuide

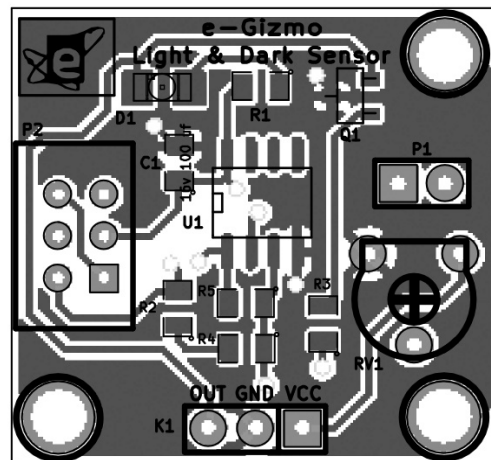
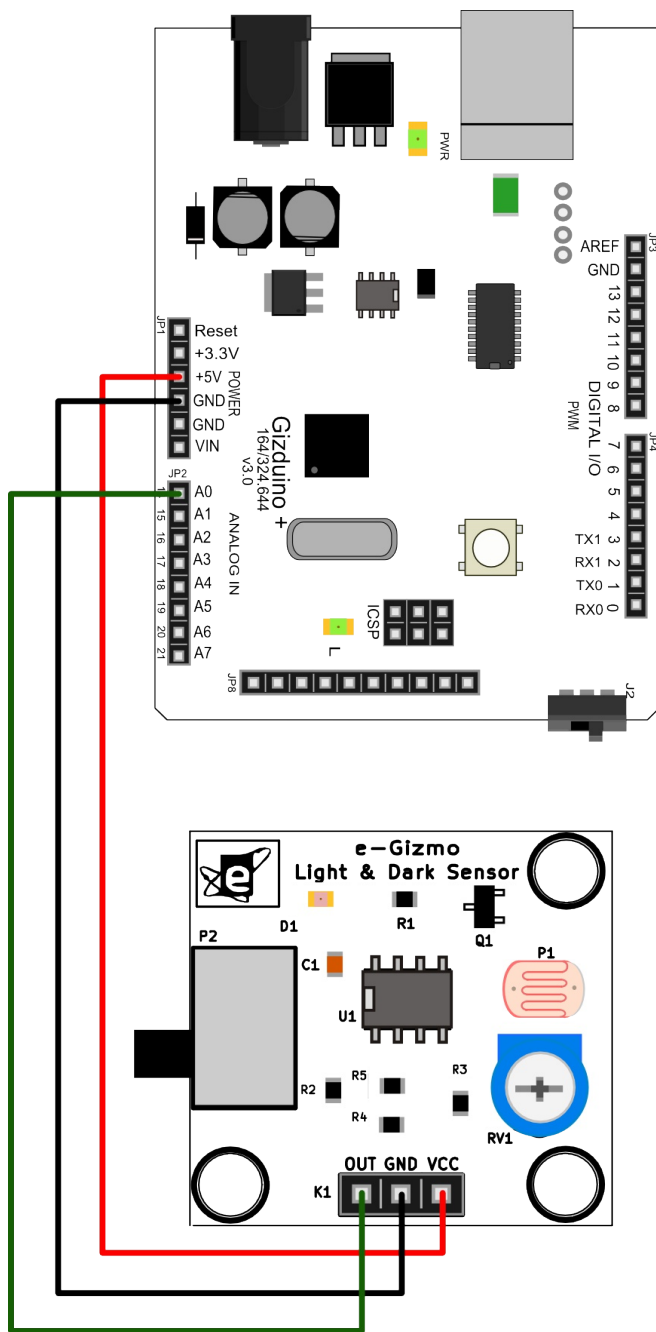


Figure 8. TopPCBGuide



Sample Codes

```
/*
```

e-Gizmo Light & Dark sensor

Reads an analog input on pin 0 and prints the result to the serial monitor.

This example code is in the public domain.

Connections:

Gizduino	Light & Dark Sensor
+5V	-----> VCC
GND	-----> GND
A0	-----> Output

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<http://www.e-gizmo.com>

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```
*/
```

```
// the setup routine runs once when you press reset:
```

```
void setup() {
  // initialize serial communication at 9600
  bits per second:
  Serial.begin(9600);
}
```

```
// the loop routine runs over and over again forever:
```

```
void loop() {
  // read the input on analog pin 0:
  int LDR = analogRead(A0);

  // print out the value you read:
  Serial.print("Output= ");
  Serial.println(LDR);
}
```

Figure 8. Sample Application of e-Gizmo Light & Dark sensor with sample codes