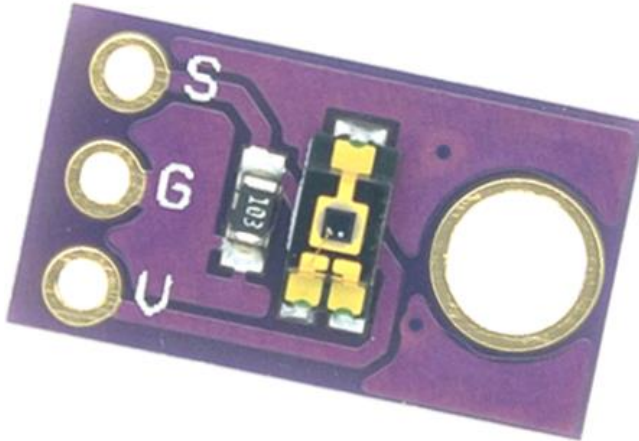




Data Specs

TEMT6000 Ambient Light Sensor Module

This is ambient light sensor based on TEMT6000X01 silicon NPN epitaxial planar phototransistor in a miniature transparent 1206 package. It is sensitive to visible light much like the human eye and has peak sensitivity at 570nm.



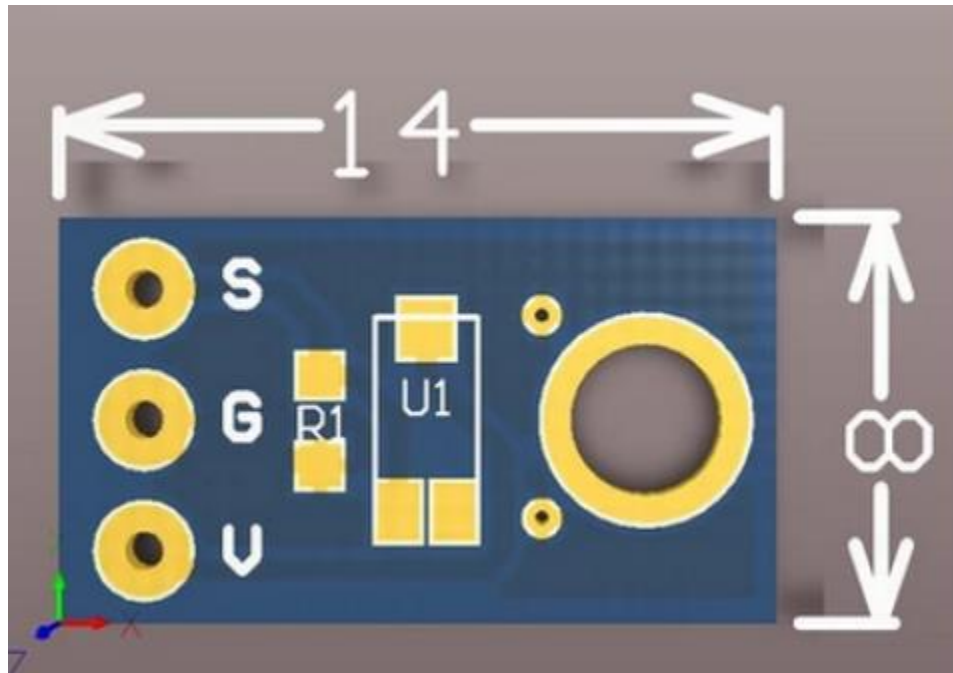
SKU: [SSR1057](#)

Brife Data:

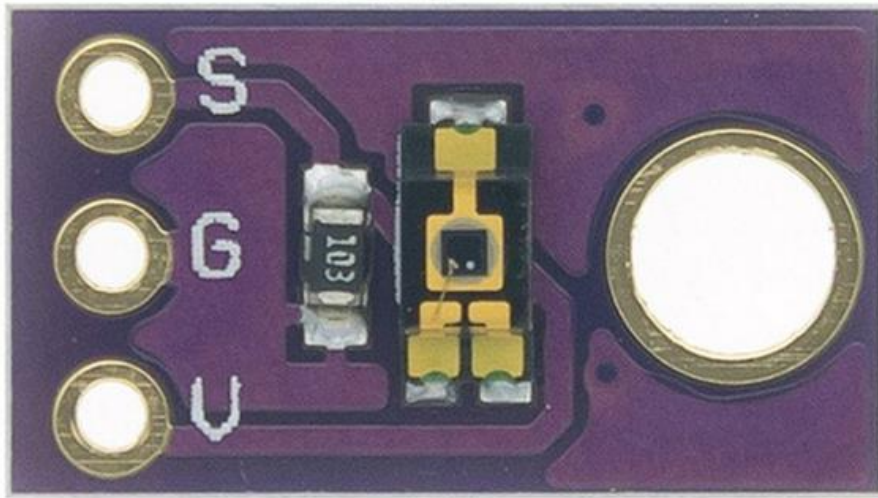
- Module Type: TEMT6000.
- Angle of half sensitivity ϕ : $\pm 60^\circ$.
- Spectrums Detected: Visible Light.
- Visible Spectrum: 390~700nm.
- Wavelength of peak sensitivity λ : 570nm.
- Power Supply: 5Vdc.
- Maximum Light Current: 50 μ A.
- Maximum Dark Current: 50nA.
- For a wide range of brightness for 1 lux high precision measurement
- Size: 14 mm x 8 mm.

Mechanical Dimension:

Unit: mm



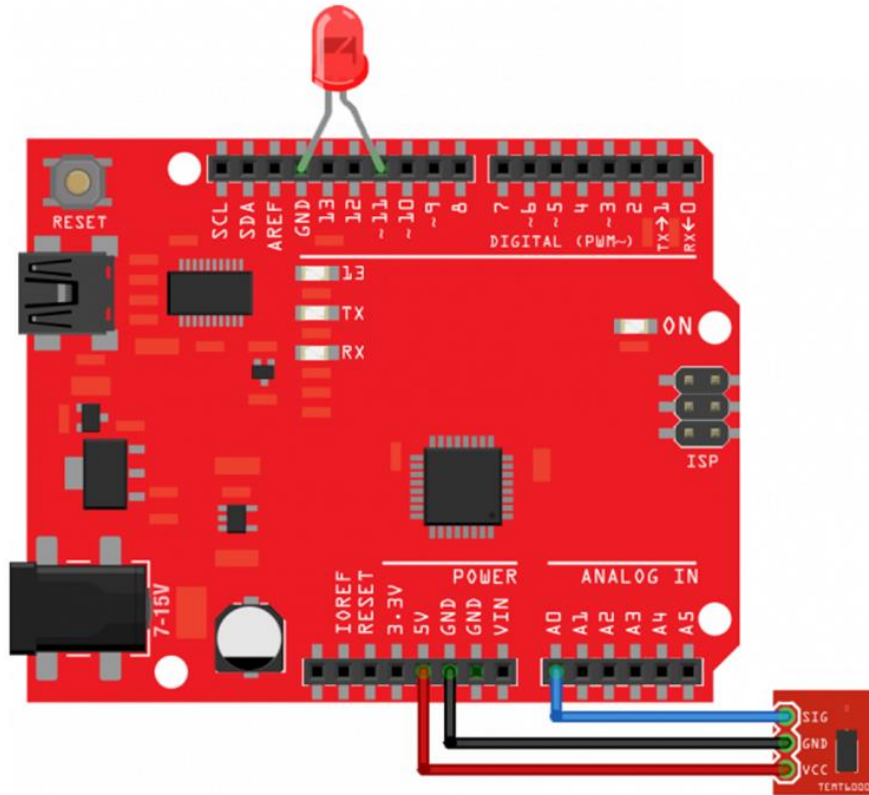
Functional Pin Diagram:



- VIN - Power Supply 5Vdc.
- GND – Power Supply Ground.
- S – Signal Output.

Connecting to Arduino Board:

Wire up the TEMT6000 module to Arduino Board as shown below:



TEMT6000 Pin	Arduino Pin
SIG	A0
GND	GND
VCC	5V

Upload the below Arduino Sketch to Uno board:

```
#define LEDPIN 11      //LED brightness (PWM) writing
#define LIGHTSENSORPIN A0 //Ambient light sensor reading

void setup() {
  pinMode(LIGHTSENSORPIN, INPUT);
  pinMode(LEDPIN, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  float reading = analogRead(LIGHTSENSORPIN); //Read light level
  float square_ratio = reading / 1023.0;    //Get percent of maximum value (1023)
  square_ratio = pow(square_ratio, 2.0);    //Square to make response more obvious

  analogWrite(LEDPIN, 255.0 * square_ratio); //Adjust LED brightness relatively
  Serial.println(reading);                  //Display reading in serial monitor
  delay(500);
}
```

Open up the serial monitor and observe the reading with expose to difference light environment.

Web Resources:

- <https://learn.sparkfun.com/tutorials/temt6000-ambient-light-sensor-hookup-guide#example-project-night-light>



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