



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

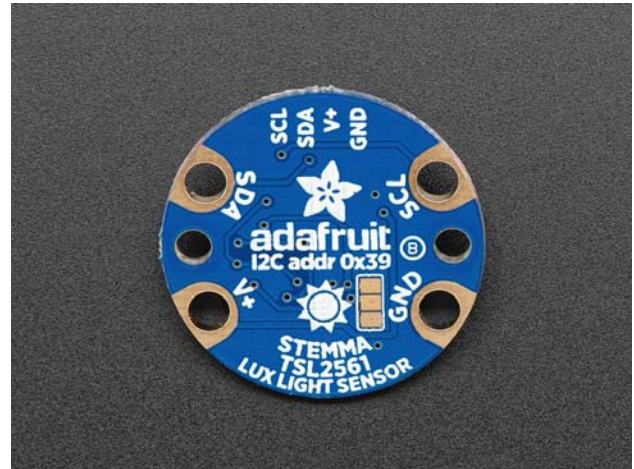
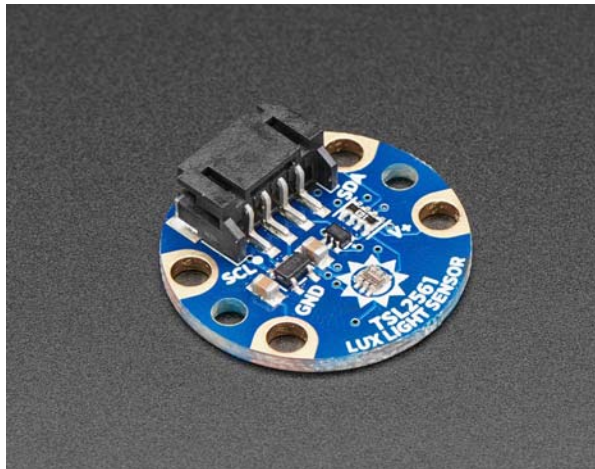
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# STEMMA – TSL2561 Digital Lux / Light Sensor

PRODUCT ID: 3611



## Description

New from Adafruit, we are taking our most popular sensors and making them easier than ever to use! This is the Adafruit STEMMA TSL2561 which takes our favorite lux sensor and gives you two ways to play: you can use alligator clips to connect the sensor to your Flora, Gemma or Circuit Playground, or plug-n-play with STEMMA cables or Seed Grove cables

Each STEMMA board has level-shifting and protection circuitry on the power supply and data lines so you can design with no worries about incompatibilities or accidents.

The TSL2561 luminosity sensor is an advanced digital light sensor, ideal for use in a wide range of light situations. Compared to low cost CdS cells, this sensor is more precise, allowing for exact lux calculations and can be configured for different gain/timing ranges to detect light ranges from up to 0.1 - 40,000+ Lux on the fly. The best part of this sensor is that it contains both infrared and full spectrum diodes! That means you can separately measure infrared, full-spectrum or human-visible light. Most sensors can only detect one or the other, which does not accurately represent what human eyes see (since we cannot perceive the IR light that is detected by most photo diodes)

The sensor has a digital (i2c) interface. You can select one of three addresses so you can have up to three sensors on one board - each with a different i2c address. The built in ADC means you can use this with any microcontroller, even if it doesn't have analog inputs. The current draw is extremely low, so its great for low power data-logging systems. about 0.5mA when actively sensing, and less than 15 uA when in powerdown mode.

Of course, we wouldn't leave you with a datasheet and a "good luck!" - we wrote a detailed tutorial showing how to use it with an Arduino and example code that gets readings and calculates lux <https://cdn-learn.adafruit.com/downloads/pdf/tsl2561.pdf>

## Technical Details

- Approximates Human eye Response
- Precisely Measures Illuminance in Diverse Lighting Conditions
- Temperature range: -30 to 80 \*C
- Dynamic range (Lux): 0.1 to 40,000 Lux
- Voltage range: 2.7-3.6V
- Interface: I2C
- This board/chip uses I2C 7-bit addresses 0x39 (default), 0x29, 0x49, selectable with jumpers

We have a detailed tutorial showing how to use it with an Arduino and example code that gets readings and calculates Lux <https://cdn-learn.adafruit.com/downloads/pdf/tsl2561.pdf>

Product Dimensions: 25.8mm x 25.8mm x 7.3mm / 1.0" x 1.0" x 0.3"

Product Weight: 2.0g / 0.1oz

