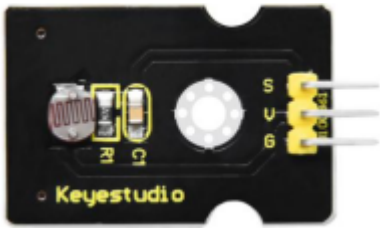# Project 06 Optical Control Light

1. Description

The photocell sensor (photoresistor) is a resistor made by the photoelectric effect of a semiconductor. As highly sensitive to ambient light, its resistance value vary with different light intensity.
Its signal end is connected to the analog port of the microcontroller. When the light intensity increases, the resistance will decrease, but the analog value of the microcontroller will increase. On the contrary, when the light intensity decreases, the analog value of the microcontroller will go down. Therefore, we can use the photoresistor to read the corresponding analog value and sense the light intensity in the environment.
It is commonly applied to light measurement, control and conversion as well as light control circuit.

2. Needed Components

PLUS control board*1	Expansion board*1	Yellow LED*1	Photocell sensor*1	USB cable*1	3Pin F-F Dupont wire*2

3. Wiring Diagram
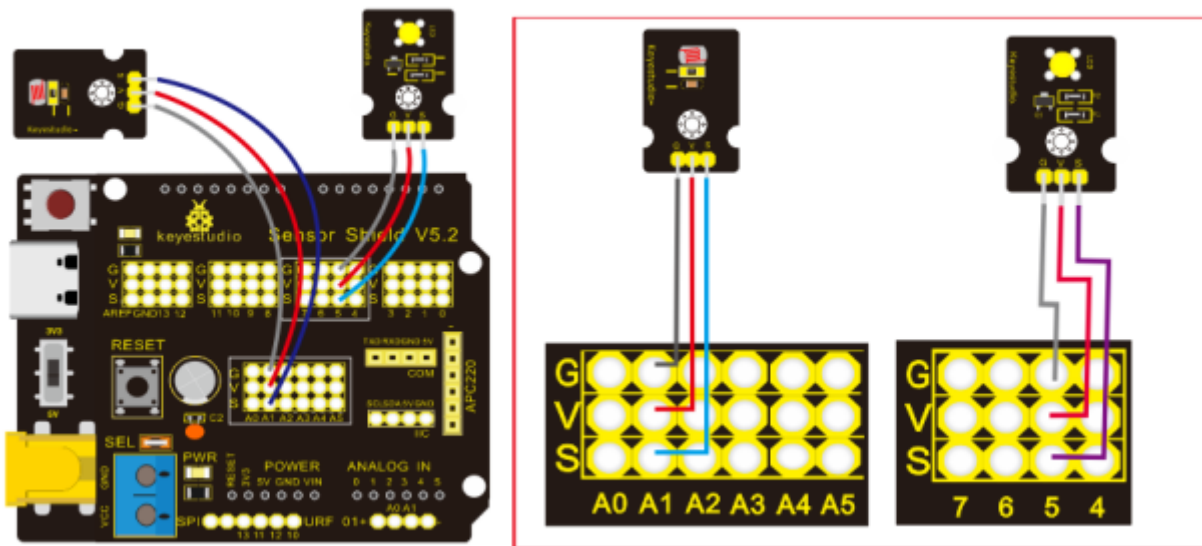
On the expansion board, the G, V, and S pins of the photocell sensor module are connected to G, V, and A1; the G, V, and S pins of the yellow LED are linked with G, V, and 5 separately.

4. Test Code

5. Test Result

After uploading the test code, the LED will light up. When you change the intensity of the ambient light, the brightness of the yellow LED changes.