



EC210 – Solid State Electronics

Lab 4

Photo-Electric Effect Experiment & Photo-resistor Project

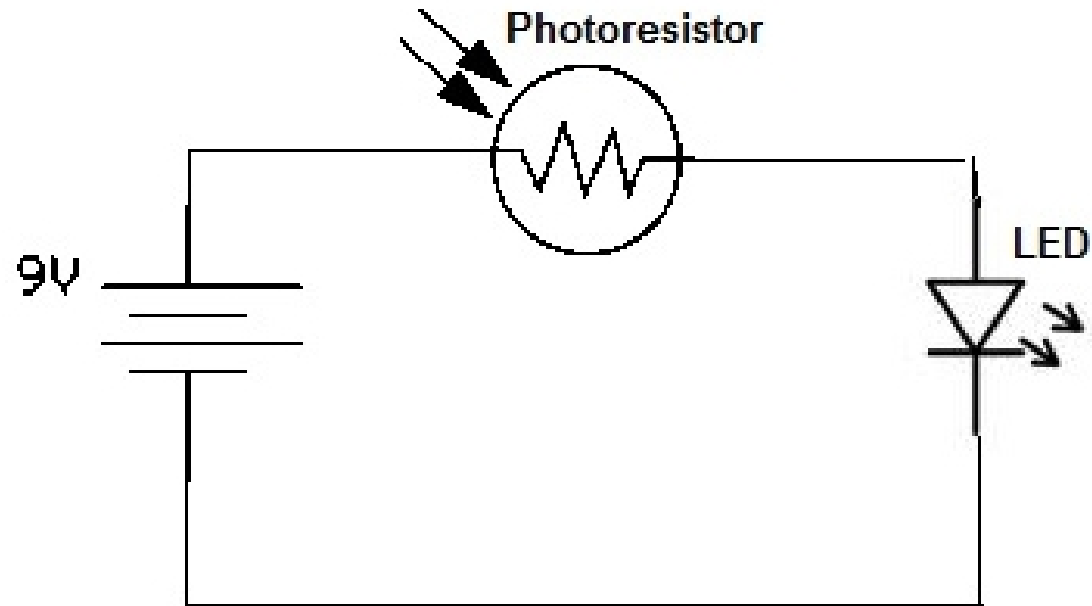
Notes Prepared by: Eng. Nourhan Hazem (GTA)
Class : Solid State Electronics - EC210, Spring 2015
Lecturer: Dr. Amr Bayoumi

Outline

- Photo-Electric Effect experiment
- Photo-resistors project description
- Report on Photo-Electric Effect !
- Project on Photo-resistors !

Photo-resistor Project

- **Circuit Diagram:**



<http://www.britannica.com/EBchecked/topic/340594>

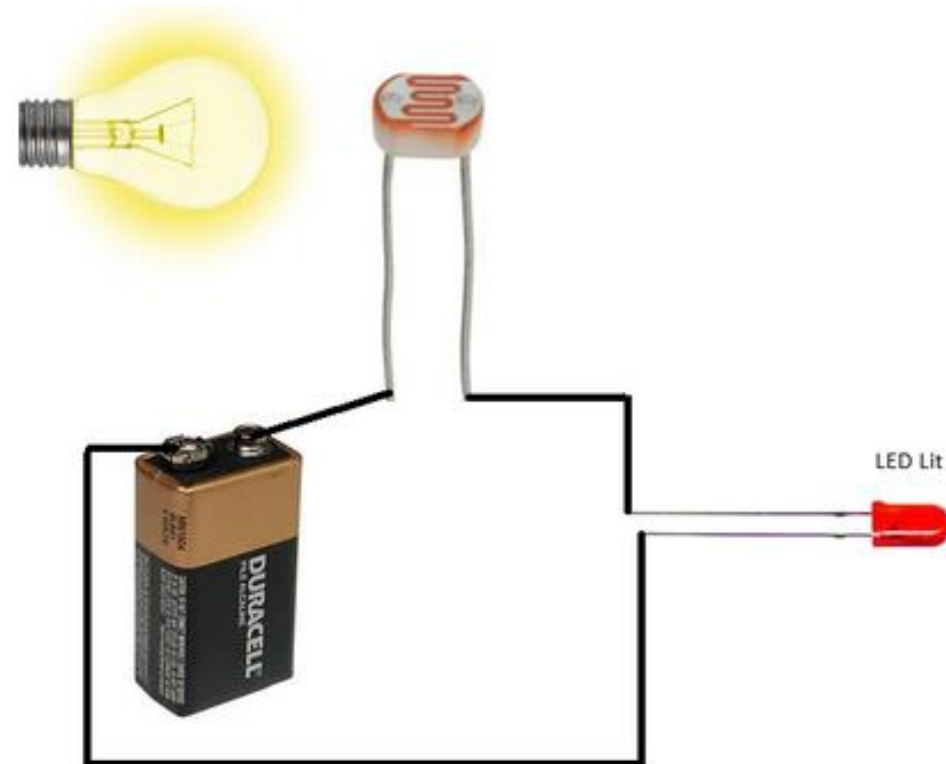
<http://www.learningaboutelectronics.com/Articles/How-to-build-a-simple-photoresistor-circuit>

Photo-resistors Project (cont.)

- **Parts:.**
 1. **9v Battery**
 2. **Photoresistor**
 3. **LED**
 4. **Bread Board**

Photo-resistors Project (cont.)

- **Process:**
 - **Step (1):** Turning on the light this leads to lighting the LED

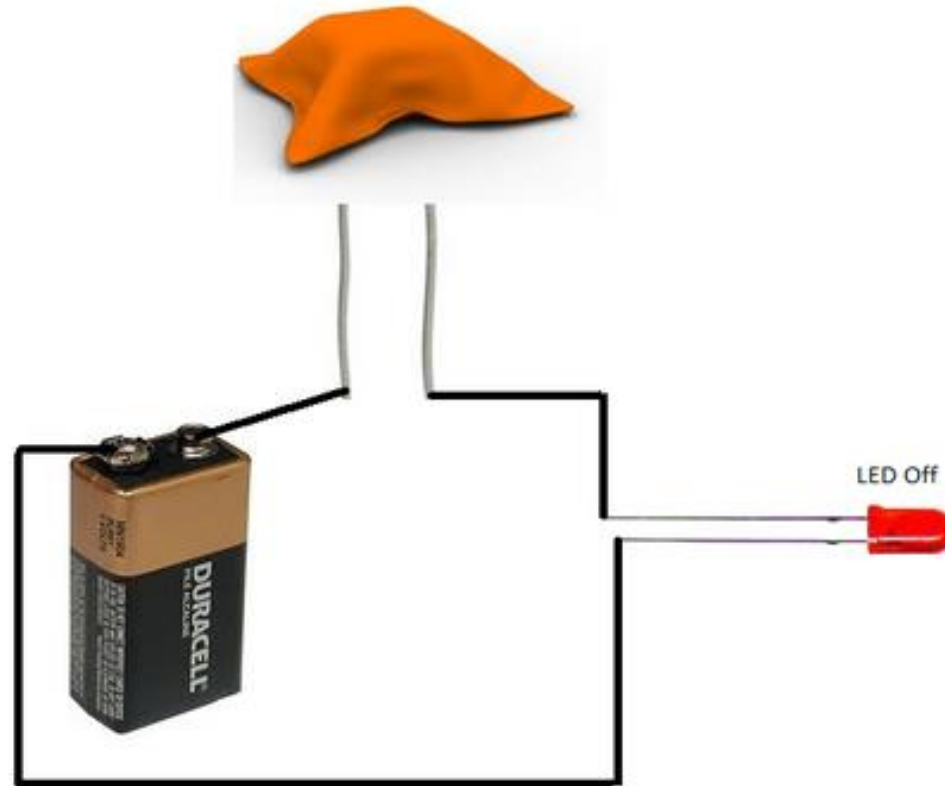


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<http://www.learningaboutelectronics.com/Articles/How-to-build-a-simple-photoresistor-circuit>

Photo-resistors Project (cont.)

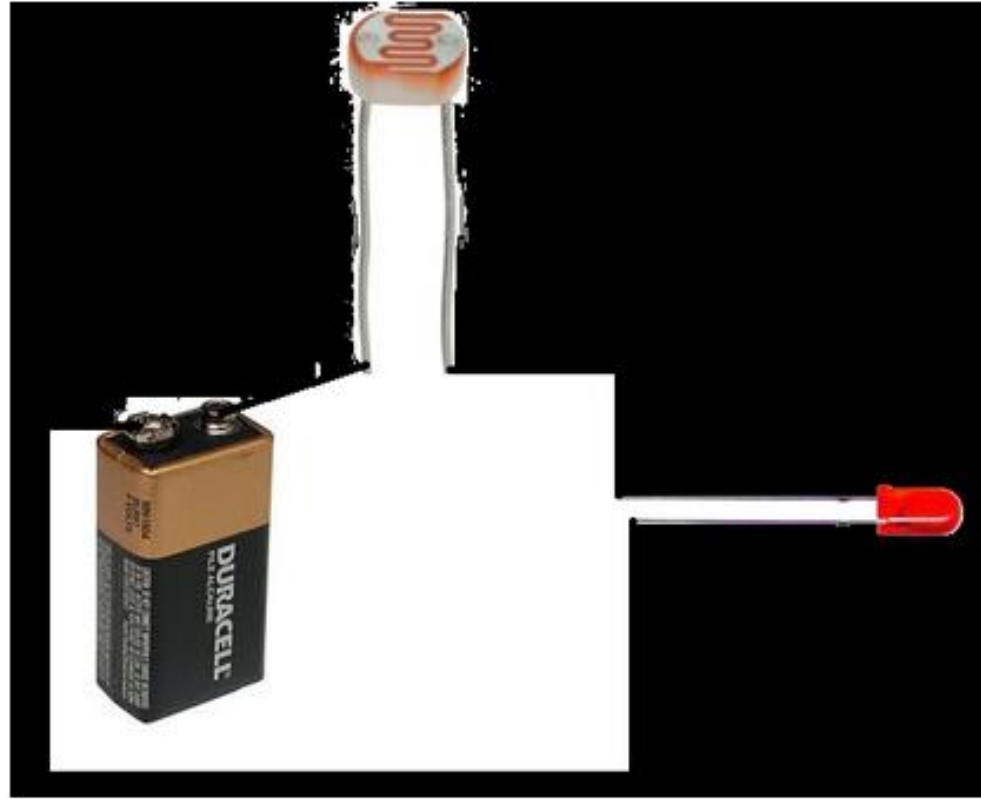
- **Step (2):** Putting a thick cloth or pen lid or any object that doesn't absorb light over the photoresistor which leads to turning off the LED.



<http://www.britannica.com/EBchecked/topic/340594>
<http://www.learningaboutelectronics.com/Articles/How-to-build-a-simple-photoresistor-circuit>

Photo-resistors Project (cont.)

- **Step (3):** Turning off the room light which leads to turning off the LED.

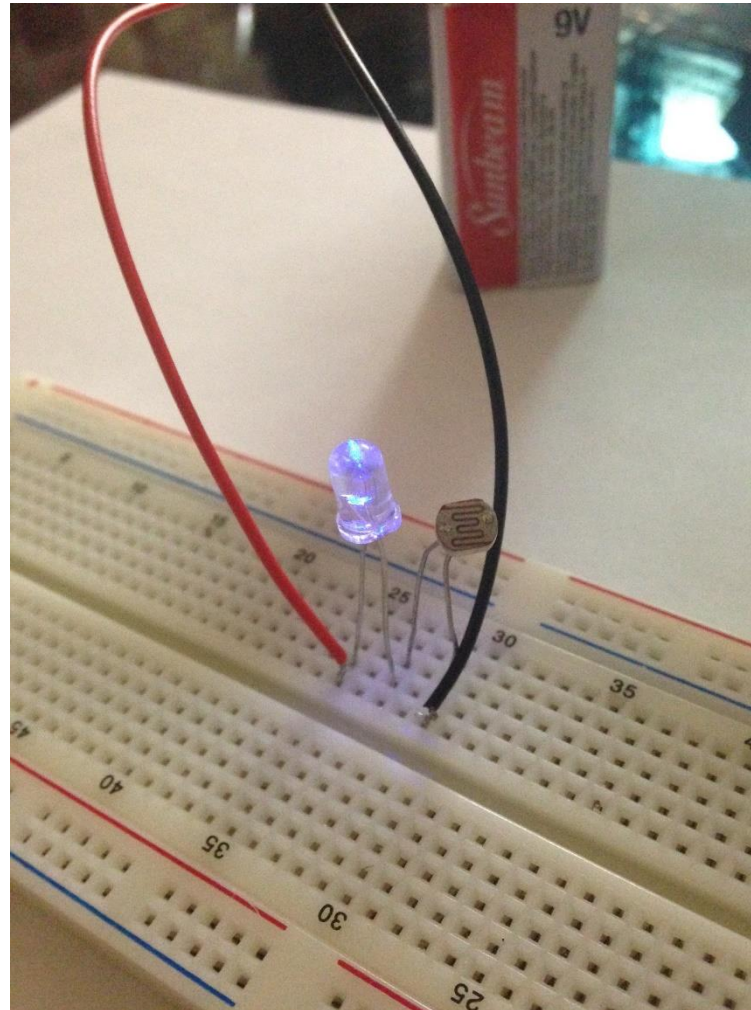


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Photo-resistors Project (cont.)

- Real Life Schematic:.



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<http://www.learningaboutelectronics.com/Articles/How-to-build-a-simple-photoresistor-circuit>

Assignment !

- A very brief report on the Photo-Electric Effect which indicates the Blanks man's Constant for different materials and experiment objective (Hard Copy)
- **Due Date:17-Mar-15**

Thank you for your attention