



About Project

It senses the light intensity from surroundings and find whether its day or night. And it automatically turns ON when the surrounding is dark and it turns OFF when it receives light from surroundings. A sensor called **LDR**, which is used to detect the light intensity.

Light Dependent Resistor [LDR Sensor]

An **LDR** is a component that has a (variable) resistance that changes with the light intensity that falls upon it. They are used in light **sensing** circuits. A Light Dependent **Resistor (LDR)** or a photo **resistor** whose resistivity is a **function** of the incident electromagnetic radiation. Hence, they are light sensitive devices. They are also called as photo conductors, photo conductive cells or simply photocells.

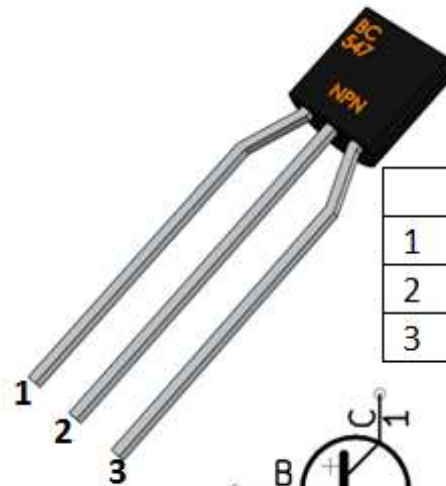


Working of LDR sensor

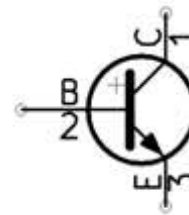
- We will use a LDR and a resistor together in series. An LDR is simply a device that changes resistance based on ambient light. The brighter the light, the lower the resistance, the dimmer the light, the higher the resistance.
- When there is no light , LDR will offer high resistance and less current flows through the

BC547

BC547 is a NPN and emitter will be forward biased when the base pin is closed (Forward biased to base pin).



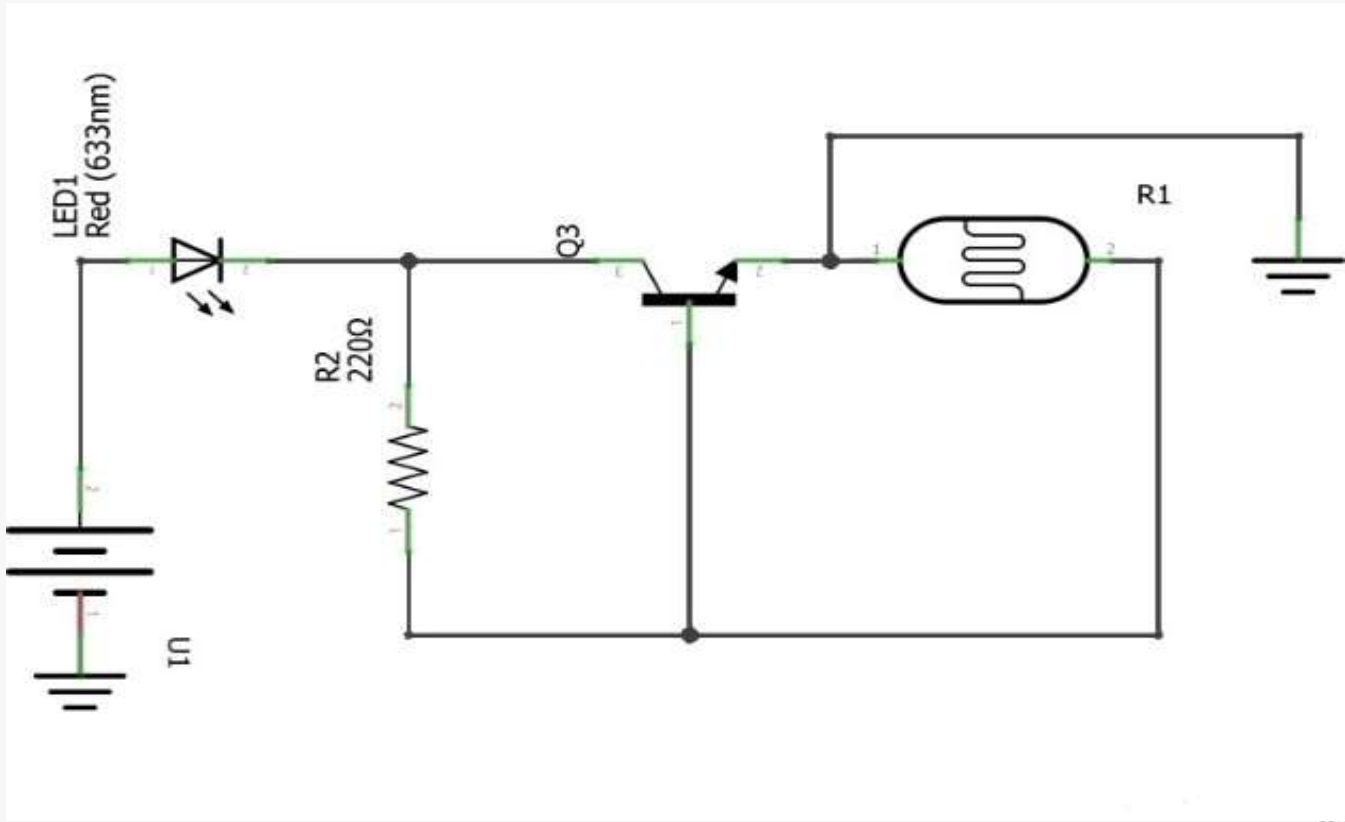
BC-547	
1	Collector
2	Base
3	Emitter



Components Required

- Zero PCB
- Soldering machine
- Soldering wire
- LDR [1]
- BC547 Transistor [1]
- LED [1]
- Resistor 220ohm*1
- Battery 9v
- Battery connector

Connection Diagram



Future Scope

Automatic street light system have the various advantages. These makes the work easier so you don't have require the labor force because as the name indicate it is **automatic**. These are reliable **lights** for streets and effective one. Whenever you want these can be converted from auto to manual mode easily.

Project Link : <https://youtu.be/rTD9n20815M>