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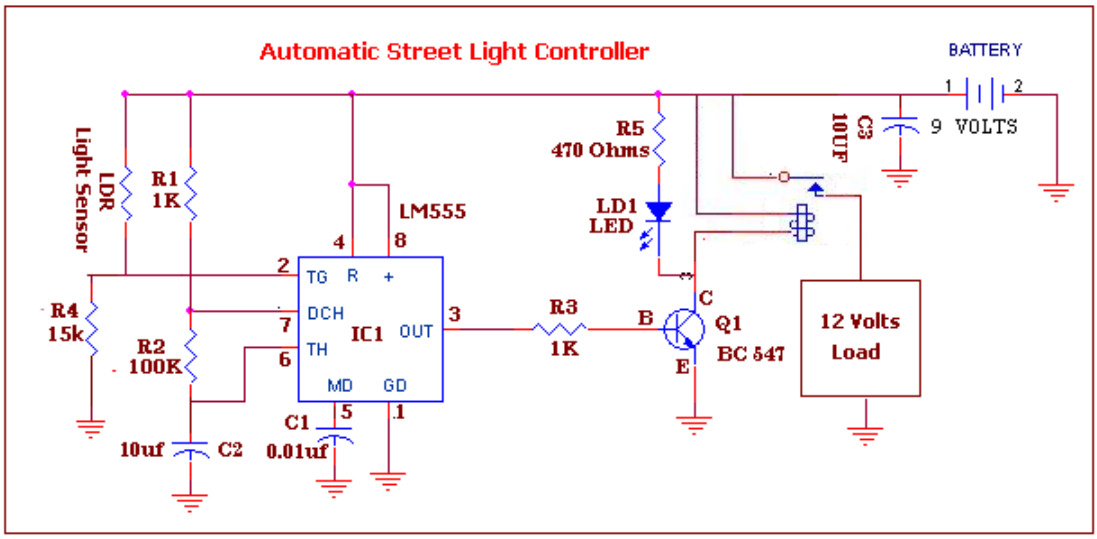
Automatic Street Light:



This is an automated energy saving street light system which works only in the dark hours and switched OFF in the day time. This circuit utilizes a LDR for sensing the light intensity. The resistance of the LDR goes low when exposed to light and the resistance goes high in the dark. When the resistance value of LDR varies, the voltage across it also is varied, which would trigger the input of IC 555 at its Pin no.2. These results in switching ON the output followed by a relay switch using Q1 a NPN Transistor BC 547. In this circuit R1, R2 and C2 is responsible for creating a delay period of 2seconds on time. This time duration can be extended by increasing the value of R2 or C2. The relay switch in this circuit is an electromagnetic switch which gets activated in the dark. We can switch ON the street light using this relay switch. This Circuit is operated with a 9volt battery.

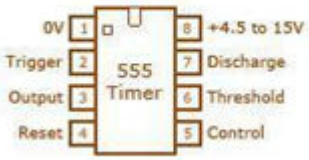
Components used: R1 = 1k resistor, R2 = 100k resistor, R3 = 1k Resistor, R4 = 15k resistor R5 = 470 E resistor, C1 = 0.01uf capacitor, C2 = 10uf capacitor, C3 = 10uf capacitor, Q1 = BC 547 NPN Transistor, LD1 = L E D, IC 1 = LM 555 (with base), Battery = 9volt, 12 volt load = relay, Battery snapper, Buzzer.

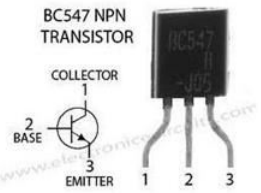
Brown Black Red

Brown Green Orange

Yellow Violet Brown

Brown Black Yellow



Battery snapper

Relay Switch