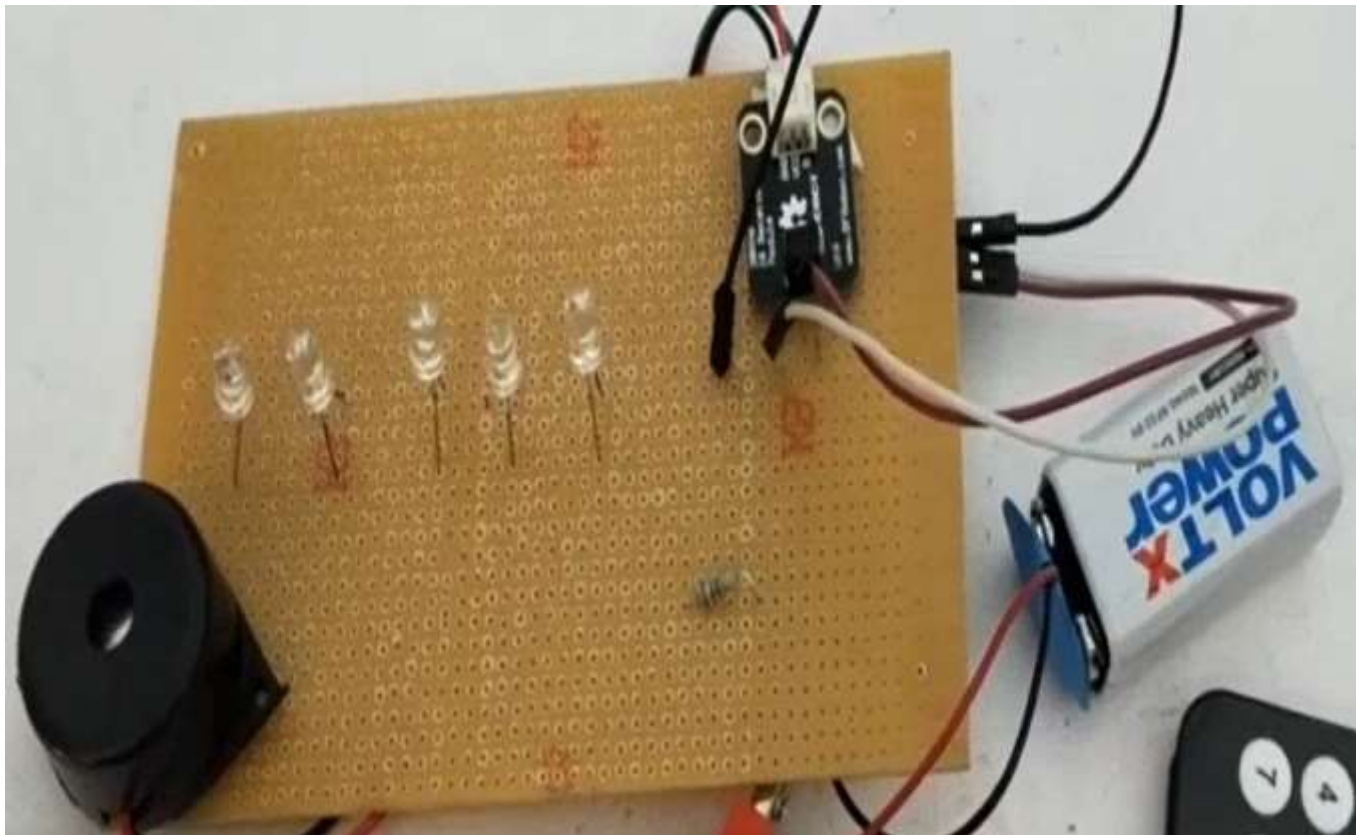
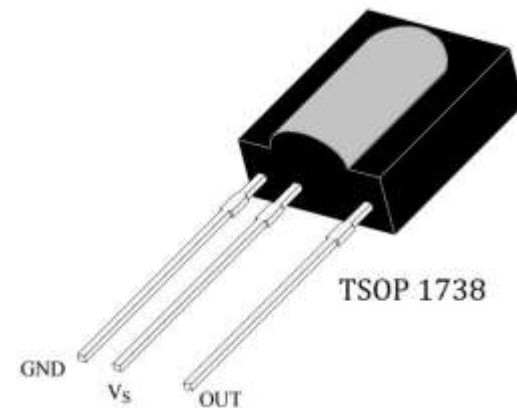


# Remote Control Light



# TSOP1738

- **TSOP1738** is an infrared receiver tuned to receive IR of frequency 38 kHz only. It is perfect for making obstacle sensors and to read signals from most IR remotes (TV, AC, Home Theatre Remotes, etc).
- It is used as a receiver in distance sensors, also provides better performance as it allows better reception and protection from ambient light compared to other IR receivers. It can be used to read signals of most IR Remotes.



# Working principle

- The TSOP1738 IR sensor module consists of a PIN diode and a pre amplifier which are embedded into a single package.
- The output of TSOP is active low and it gives +5V in off state. When IR waves, from a source, with a centre frequency of 38 kHz incident on it, its output goes low.
- Lights coming from sunlight, fluorescent lamps etc. may cause disturbance to it and result in undesirable output even when the source is not transmitting IR signals.

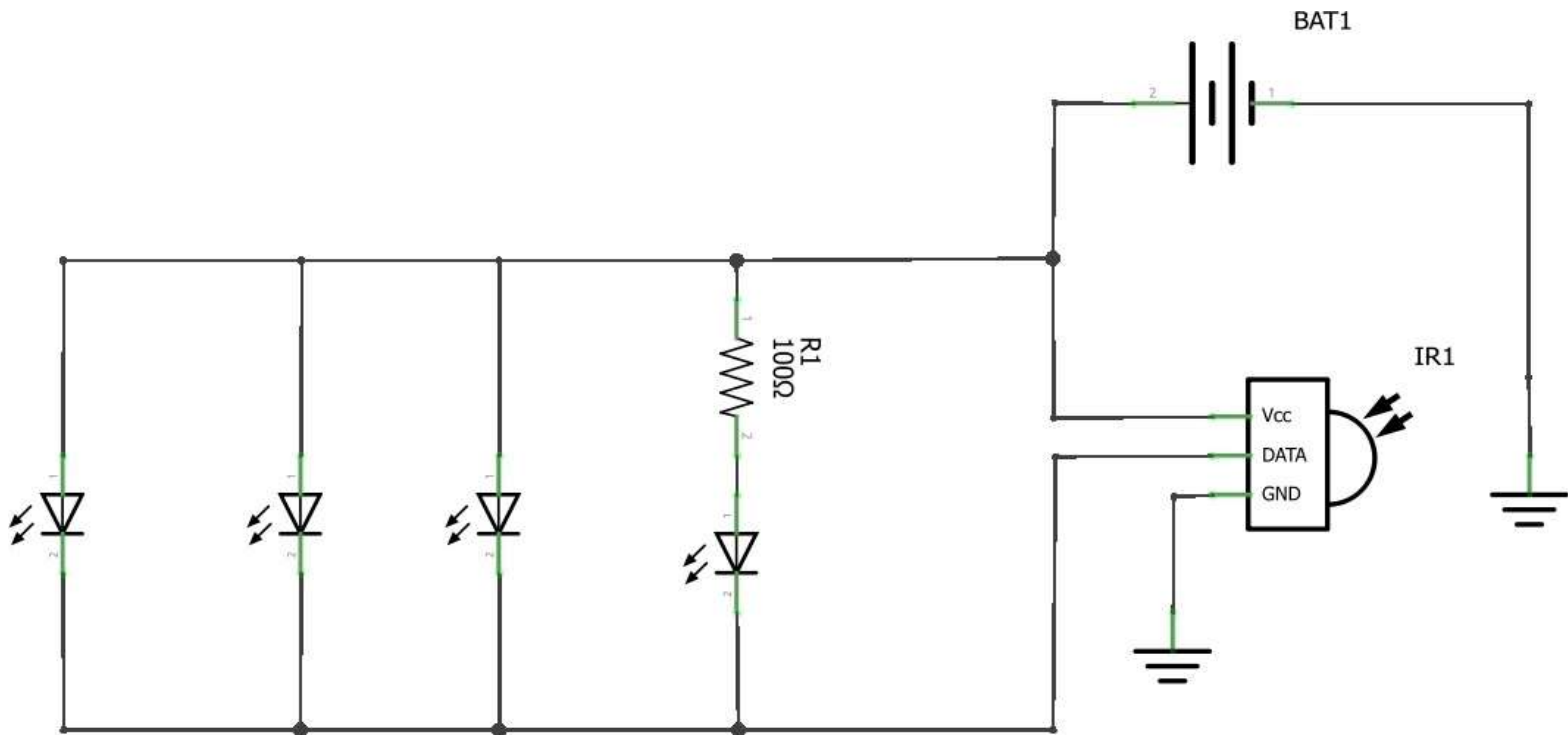
# About Project

- Remote Controlled Light Switch is an application where a remote is used to turn ON or OFF an AC Light. We used a simple remote and TSOP 1738 IR Receiver at the transmitter and receiver side of the circuit.
- Normally, we **use remote** controls to turn ON or OFF appliances like TV, DVD Player, Music System, etc.

# Components

- Zero PCB
- Soldering iron
- Soldering Wire
- Led [5]
- 100ohm Resistor
- TSOP1738
- IR LED or Remote
- Big Buzzer
- 9V battery and battery connector

# Connection Diagram



# Working of project

- When an IR LED is transmitting data onto the TSOP, every time the IR led goes high, the TSOP will go LOW and vice versa. Remote control signals are often bytes of data that is encoded and transmitted by pulsing (switching ON & OFF the IR LED at a specific frequency).
- Most TV remote controls work at 32-40 KHz frequency and most receivers can receive this range.

## Future Scope

- You can connect this circuit to any of the home appliances like TV, radio, lamp, fan etc, to make their switching on and off options simpler. This circuit can be activated from about 10 meters distance.
- Infrared remote control switches are used to control multiple things like, thyristor power control, TVs, video games, space related equipments (NASA), etc.



**Project Link :** <https://youtu.be/eTi8lvh3iqo>