IR Receiver

An IR receiver is a sensor module that detects modulated infrared signals and converts them into electrical signals readable by microcontrollers.

Working Principle:

It detects the 38kHz infrared signal sent by an IR remote. The photodiode inside receives the modulated light, which is decoded by an internal circuit and sent as a digital output.

Types:

- TSOP1738 (common model)
- Integrated with microcontrollers or as standalone modules

Applications:

- TV/AC/Set-top box receivers
- Arduino IR control systems
- Smart home appliances

Advantages:

- Compact and reliable
- Low power consumption
- Easy to interface with Arduino

Disadvantages:

- Requires line-of-sight
- Limited range and angle

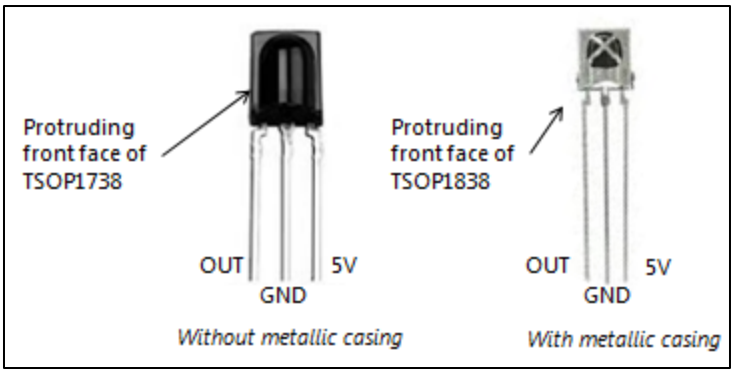

Fig: IR Receiver Pin Layout