

## Infrared Sensor Research

- How it works
  - Infrared light is reflected from the object or surface
  - Insulation passes over the sensor telling the system when to start measuring, then the system will stop the insulation at the desired length so that it can be cut
- The sensor can detect motion and measure distance
  - These are both very useful to us in our design of the system as of right now
- Advantages of using an infrared sensor
  - Little power consumption
  - Does not require contact with target, needs to be within 10mm
  - Good response time
  - Small and cheap
  - High repeatability
- Disadvantages of using an infrared sensor
  - Can be interrupted by smoke or fog (fumes from heated wire may affect efficiency)
  - Supports low data transmission (wired transmission is better)
  - Requires line of sight between transmitter and the communicating device

### Video Links:

- [Using basic Infrared sensor for distance measurement](#)
- [Measuring distance with a IR sensor](#)