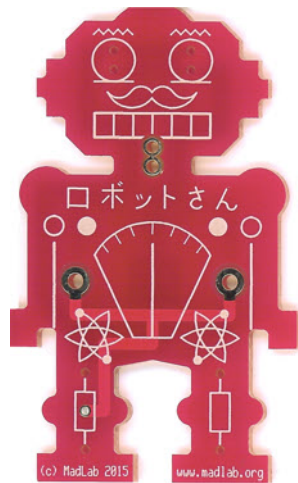
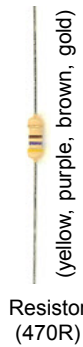


# ROBOTTO-SAN (MR. ROBOT)

a cute little robot badge



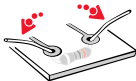
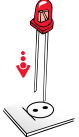


Circuit board



Coin cell retainer



Butterfly clip and pin

- 1 Identify the different components using the spotter chart.
- 2 Bend the leads of the resistors into a U-shape then fit them flat within the legs of the robot on the front side of the circuit board. Bend the leads outwards into a V-shape to hold them in place. They can be fitted either way around and are both the same. 
- 3 Fit the LEDs to the board over the robot's eyes putting the shorter lead into the hole with the line. The shorter lead also has a flattened edge on the rim. Bend the leads away from each other. 
- 4 Solder the leads of the components to the back side of the board then clip the leads close to each solder joint.  
- 5 Add a small blob of solder to the middle of the metal square on the back side of the board to help make a better connection with the coin cell. Spread the solder around a little with the soldering iron so it is not too high then fit the coin cell retainer to this same side of the board within the marked outline. The bar that stops the coin cell dropping out should be towards the legs of the robot. Solder the coin cell retainer on the front side of the board using plenty of solder to make the joints physically strong.
- 6 Insert a **CR2032** coin cell into the retainer with the positive (+) side uppermost. The LEDs should start flashing.
- 7 Fit the pin through the hole in the neck and then through your clothing. Use the butterfly clip to hold your robot securely in place.