

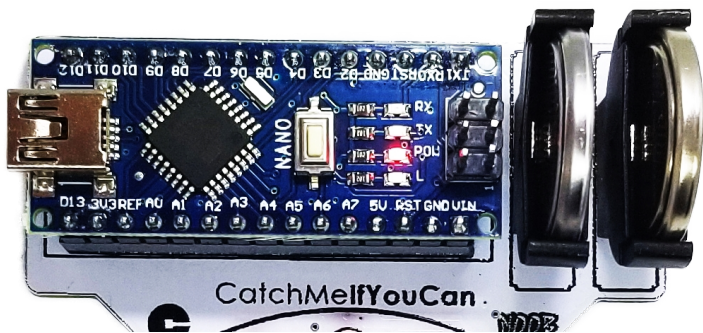


Ledring

Ledring is a circuit for playing a game with **Arduino**. You can make games with leds with **Ledring**.

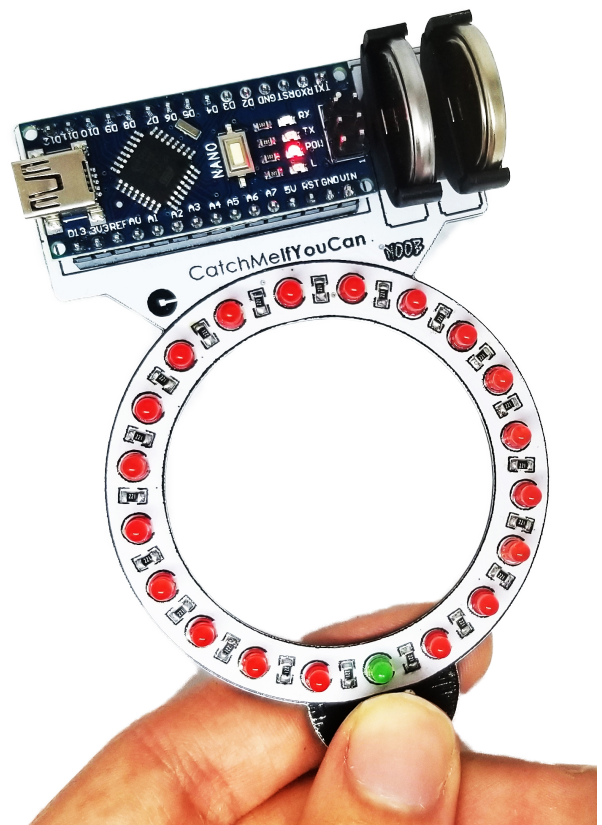
There are 19 leds, 18 of them are red and 1 of them is green. Specially designed for the game called **Ledcatching**. This game start with the leds turning quickly in order. When the leds turn rapidly, if the green led lights up, you can win the game by pressing the button. It will be a great deal to code it with Arduino.

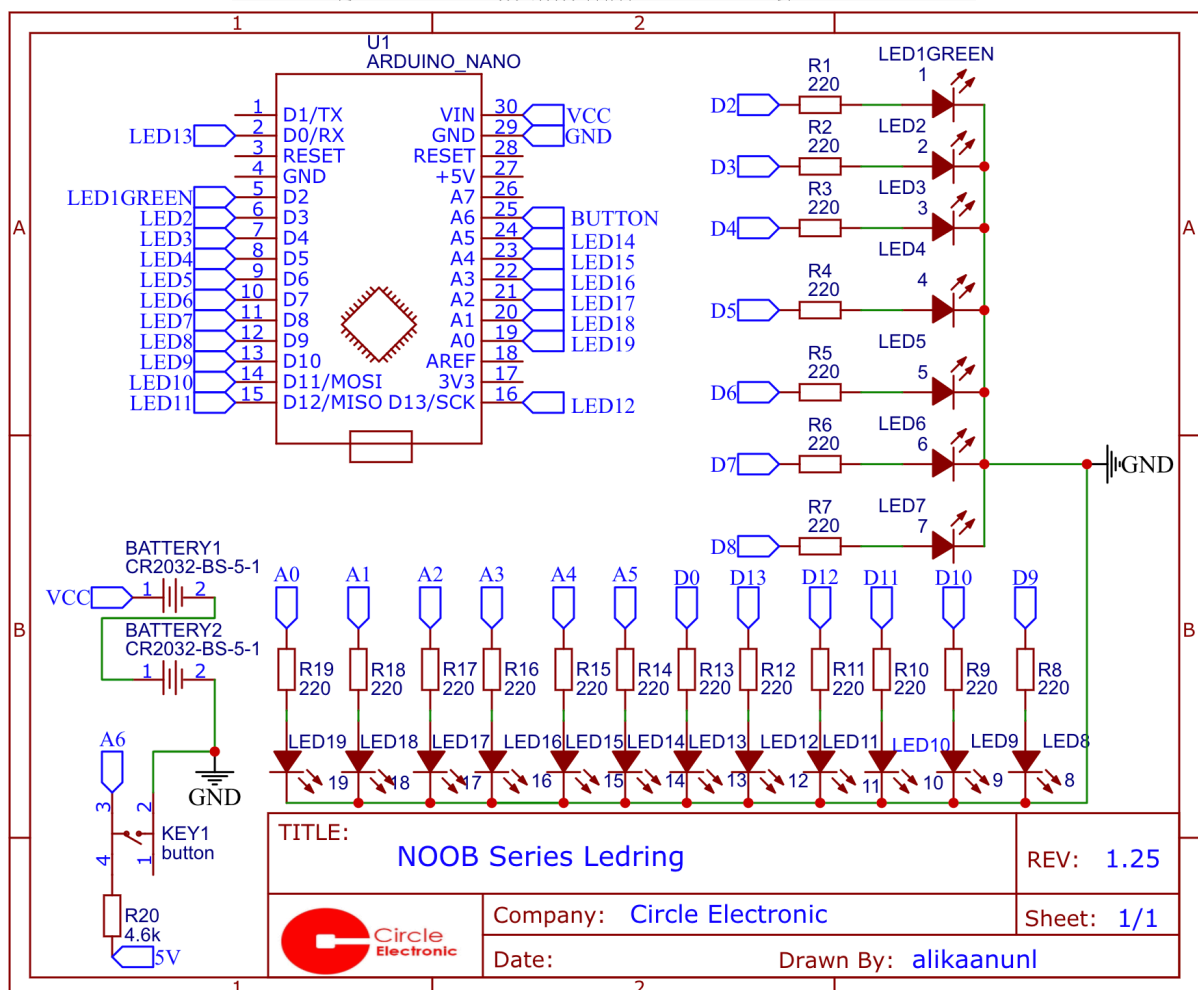
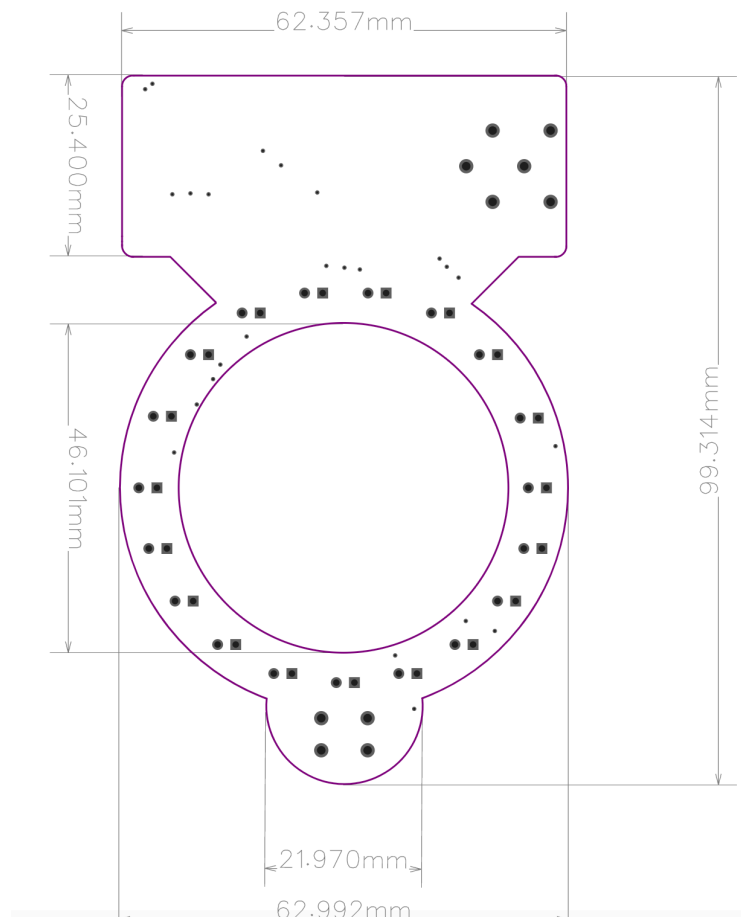
There is another game designed by *Circle Electronic*. The name of this second game is **Ledoverlap**. **Ledoverlap** is a game that starts with the leds flashing clockwise. When the last one of the leds is on, if you press the button and continue it for 18 leds, you win the game. Each time the last led is on, the cycle speed will increase.



Ledring does not need an external power supply to work. It has **2x Coin Cell Battery CR2032** slots on it. Arduino gets the power from here.

**Battery supports only ledcatching game and comes with ledring when you buy ledring. If you want, you can also power Arduino with a cable. Arduino Nano does not come when you buy Ledring. You need to purchase the Arduino Nano externally.*







Learn how to code

Ledcatching

```
int leds[] = {14, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 0, A5, A4, A3, A2, A1, A0, 2};
int buton = A6;
int butonstate;
int butoninit = 0;
static int i = 0;
int num_pins = 20;

void setup()
{
  pinMode(buton, INPUT);
  for (int z = 0; z < 20; z++) {
    pinMode(leds[z], OUTPUT);
  }
  digitalWrite(0, LOW);
}
void loop()
{
  butonstate = analogRead(buton);
  if (butonstate == 0) {
    butoninit = 1;
  }
  if (butonstate == 1) {
    butoninit = 0;
  }
  if (butoninit == 1 && i == 19) {
    digitalWrite(leds[19], HIGH);
    delay(200);
    digitalWrite(leds[19], LOW);
    delay(200);
    digitalWrite(leds[19], HIGH);
    delay(200);
    digitalWrite(leds[19], LOW);
    delay(200);
    digitalWrite(leds[19], HIGH);
    delay(200);
    digitalWrite(leds[19], LOW);
    delay(200);
    digitalWrite(leds[19], HIGH);
    delay(200);
    digitalWrite(leds[19], LOW);
    delay(200);
    digitalWrite(leds[19], HIGH);
    delay(200);
    digitalWrite(leds[19], LOW);
    delay(200);
    butoninit = 0;
    i = 0;
  }
  if (butoninit == 1 && i != 19) {
    digitalWrite(leds[i], HIGH);
    delay(300);
    digitalWrite(leds[i], LOW);
    delay(300);
    digitalWrite(leds[i], HIGH);
    delay(300);
    digitalWrite(leds[i], LOW);
    butoninit = 0;
    i = 0;
  }
  ledaction();
}

void ledaction() {
  static unsigned long time = millis();
  if (millis() - time >= 80) //80 easy 40 normal 10 hard
  {
    time = millis();
    i++;
    digitalWrite(leds[i], HIGH);
    delay(15);
    if (i == 20) {
      i = 0;
    }
    digitalWrite(leds[i], LOW);
  }
}
```



Ledoverlap

```
int leds[] = {14, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 0, A5, A4, A3, A2, A1, A0, 2};
int buton = A6;
int butonstate;
int butoninit = 0;
static int i = 0;
static int tourtime = 120;
static int lednumber = 18;
static int lednumber1 = 19;
void setup()
{
  pinMode(buton, INPUT);
  for (int z = 0; z < 20; z++) {
    pinMode(leds[z], OUTPUT);
  }
  digitalWrite(0, LOW);
}
void loop()
{
  butonstate = analogRead(buton);
  if (butonstate == 0) {
    butoninit = 1;
  }
  if (butonstate == 1) {
    butoninit = 0;
  }
  ledaction();
}
void ledaction() {
  static unsigned long time = millis();
  if (millis() - time >= tourtime) {
    time = millis();
    i++;
    digitalWrite(leds[i], HIGH);
    delay(15);
    digitalWrite(leds[i], LOW);
    if (i == lednumber1) {
      ledsoff();
      tourtime = 120;
      lednumber = 18;
      lednumber1 = 19;
      butoninit = 0;
      i = 0;
    }
    if (butoninit == 1 && i == lednumber) {
      digitalWrite(leds[lednumber], HIGH);
      tourtime - 20;
      lednumber--;
      lednumber1--;
      butoninit = 0;
      i = 0;
      delay(150);
    }
    if (butoninit == 1 && i != lednumber) {
      ledsoff();
      tourtime = 120;
      lednumber = 18;
      lednumber1 = 19;
      butoninit = 0;
      i = 0;
    }
  }
}
void ledsoff() {
  digitalWrite(leds[0], LOW);
  digitalWrite(leds[1], LOW);
  digitalWrite(leds[2], LOW);
  digitalWrite(leds[3], LOW);
  digitalWrite(leds[4], LOW);
  digitalWrite(leds[5], LOW);
  digitalWrite(leds[6], LOW);
  digitalWrite(leds[7], LOW);
  digitalWrite(leds[8], LOW);
  digitalWrite(leds[9], LOW);
  digitalWrite(leds[10], LOW);
  digitalWrite(leds[11], LOW);
  digitalWrite(leds[12], LOW);
  digitalWrite(leds[13], LOW);
  digitalWrite(leds[14], LOW);
  digitalWrite(leds[15], LOW);
  digitalWrite(leds[16], LOW);
  digitalWrite(leds[17], LOW);
  digitalWrite(leds[18], LOW);
  digitalWrite(leds[19], LOW);
  digitalWrite(leds[20], LOW);
}
```