

Teensy

Potentiometer

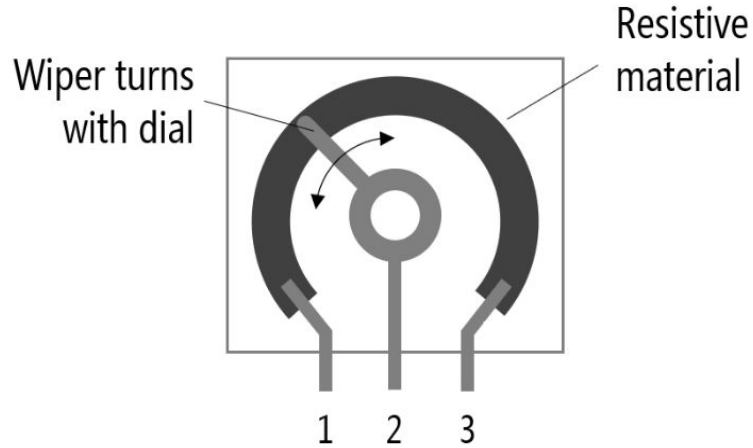




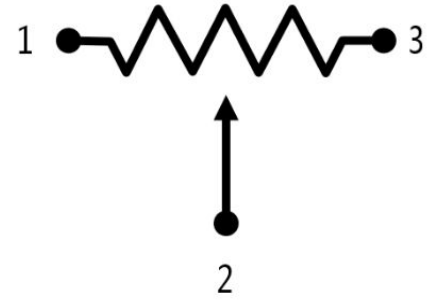
Working potmeter



Wiper contact



Wiper contact



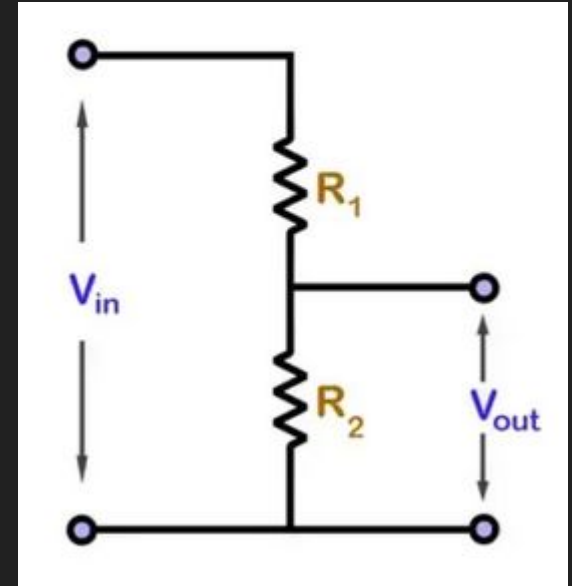
Wiper contact

Voltage divider

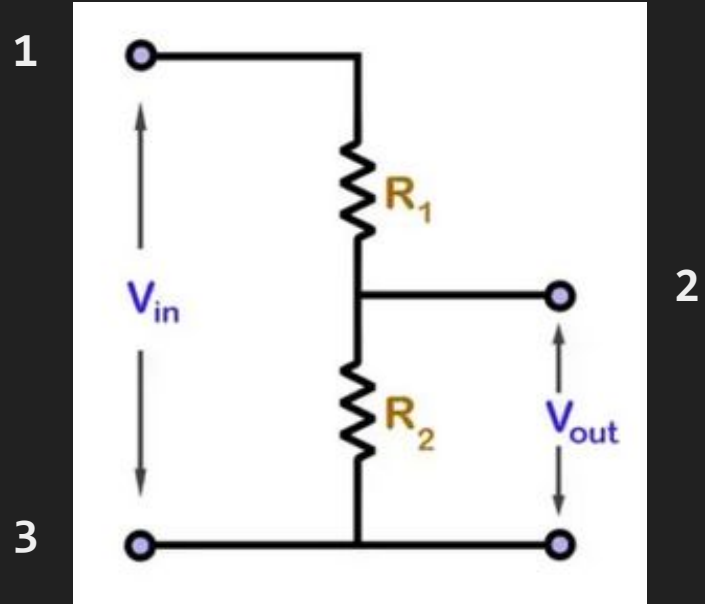
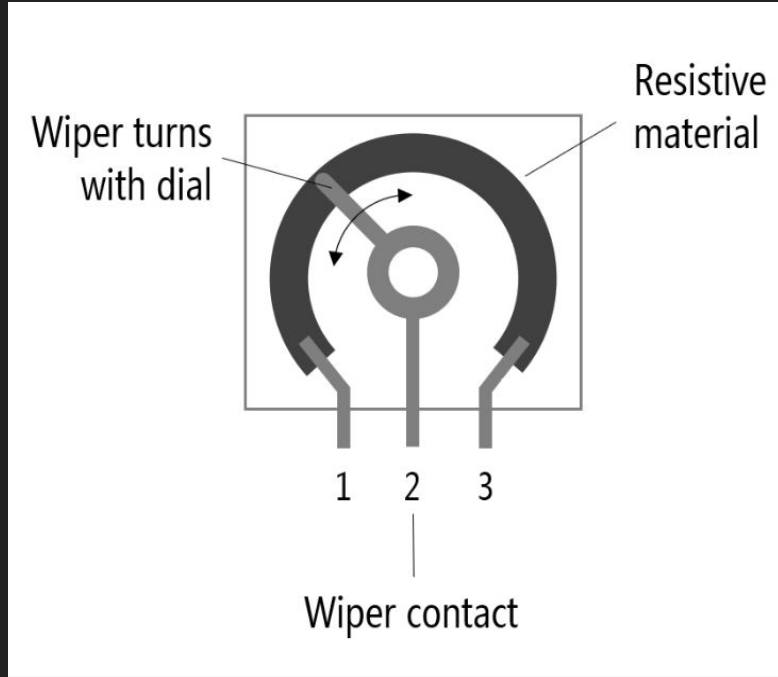
verzwakt voltage door verhouding
tussen twee weerstanden

$$V_{\text{out}} = \frac{Z_2}{Z_1 + Z_2} \cdot V_{\text{in}}$$

[interactief voorbeeld](#)



Potmeter als voltage divider



Potmeter aan de Teensy

Kies een analoge pin uit

Bijvoorbeeld A0 / 14

Digital Pins

digitalRead
digitalWrite
pinMode

Analog Pins

analogRead

PWM Pins

analogWrite

Digital Audio

Audio Library

Serial Ports

Serial1 - Serial7

I²C Port

Wire Library

SPI Port

SPI Library

CAN Bus

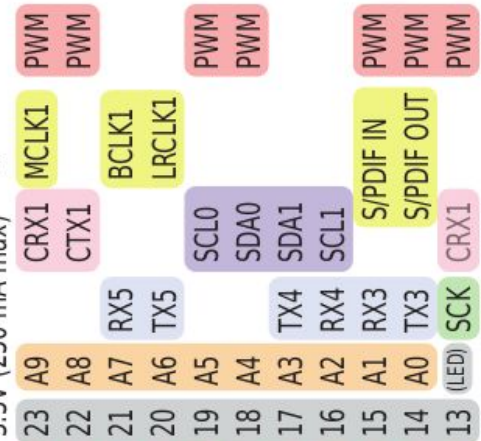
FlexCAN_t4
Library

Red LED
Loading Status
dim: Ready
bright: Writing
blink: No USB

Vin (3.6 to 5.5 volts)
GND
3.3V (250 mA max)

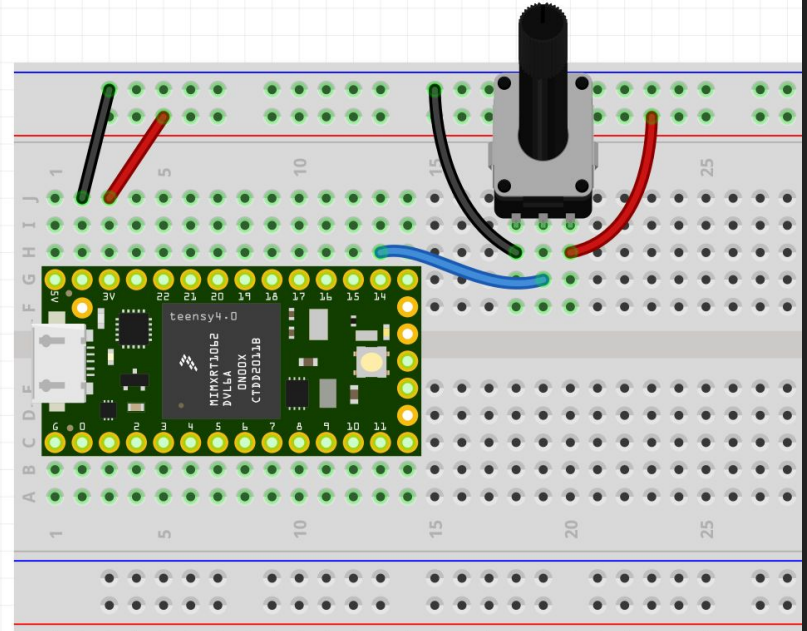
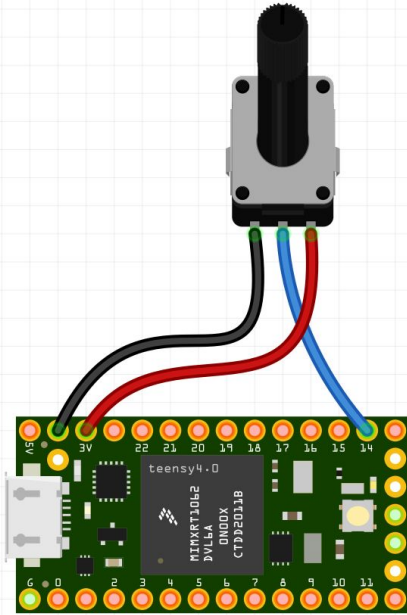


On/Off
Program
GND
3.3V
VBat



All digital pins have interrupt capability.

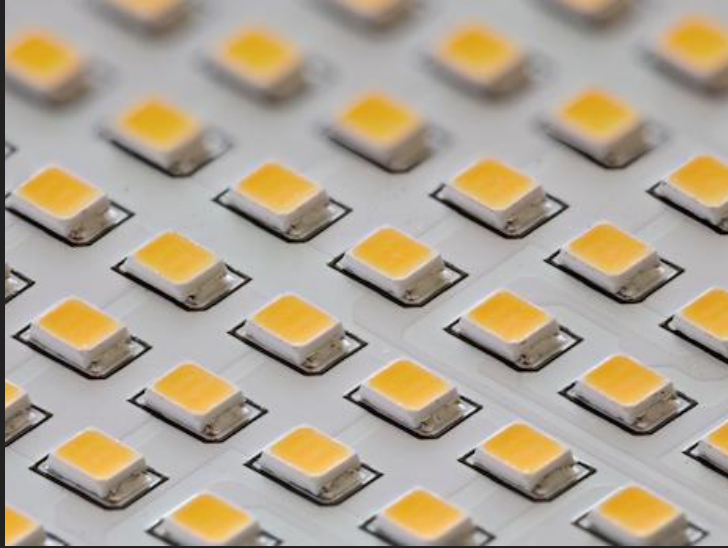
Potmeter aan de Teensy



Code

Teensy

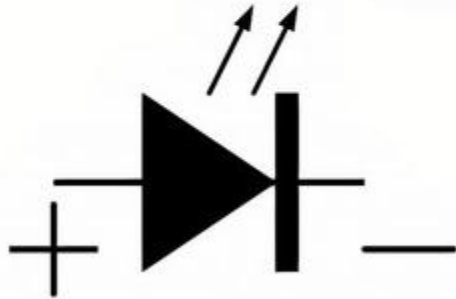
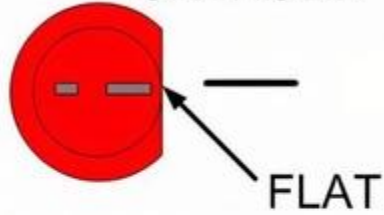
LEDs



ANODE



CATHODE



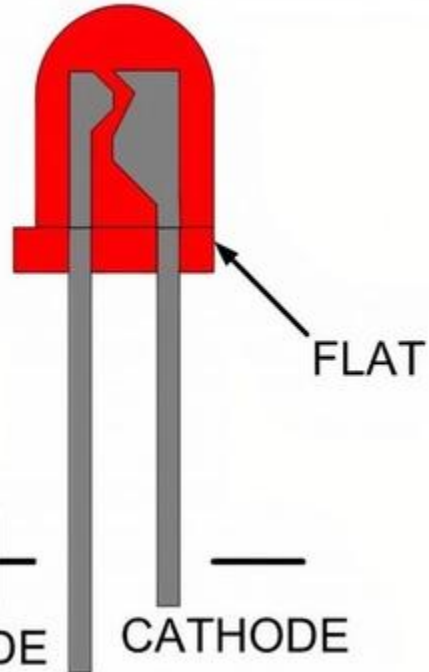
ANODE

CATHODE

ANODE



CATHODE

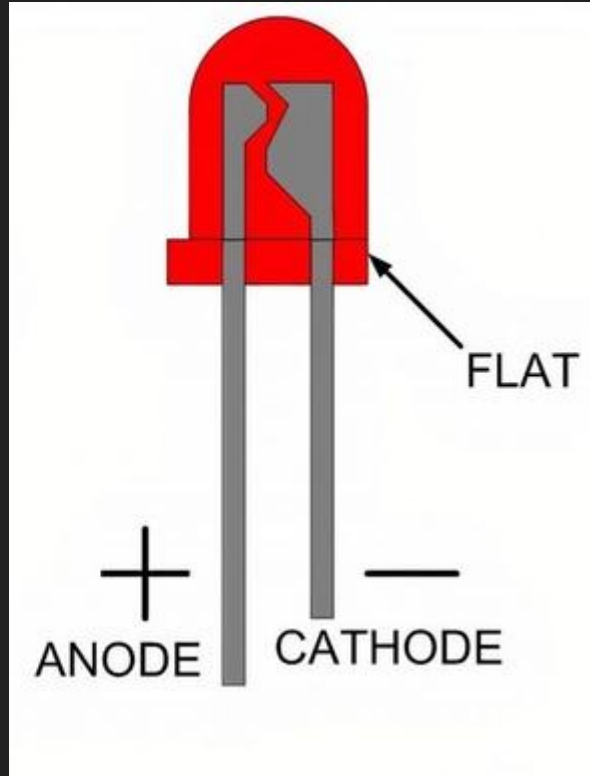


Ezelsbruggetje!

aaaaa-node

anode (+) heeft een
lang pootje

de nood is hoog (in
voltage)



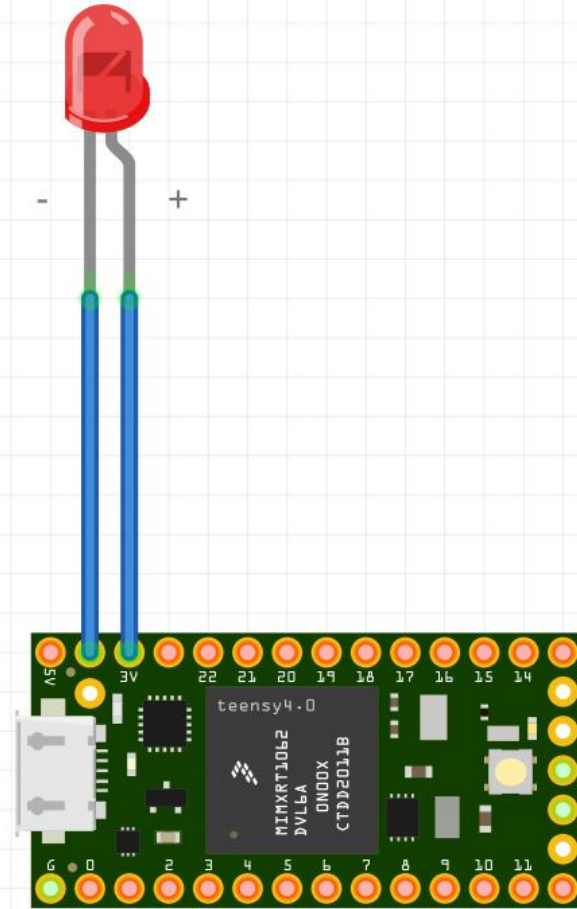
cat-flat

cathode (-) heeft
een vlakke zijde

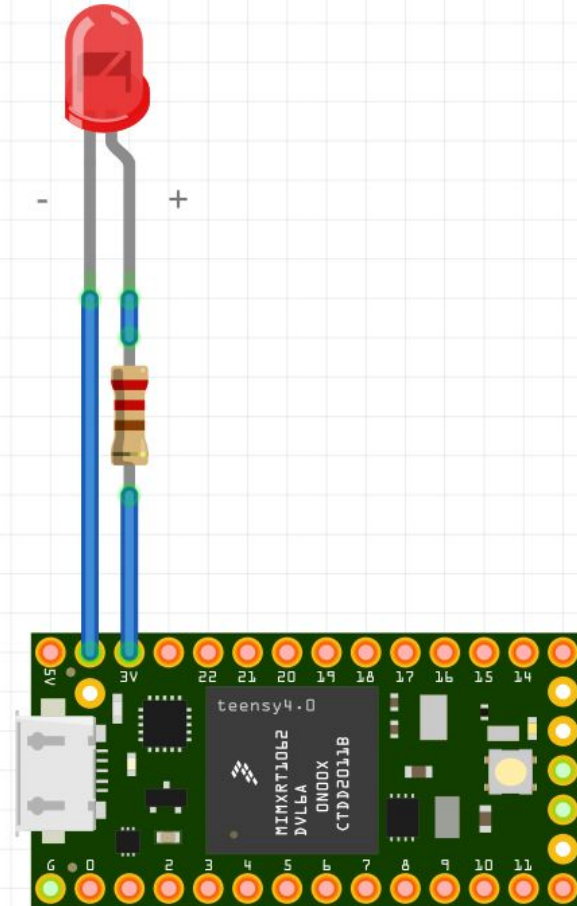
Anode (+) naar 3.3V

Cathode (-) naar GND

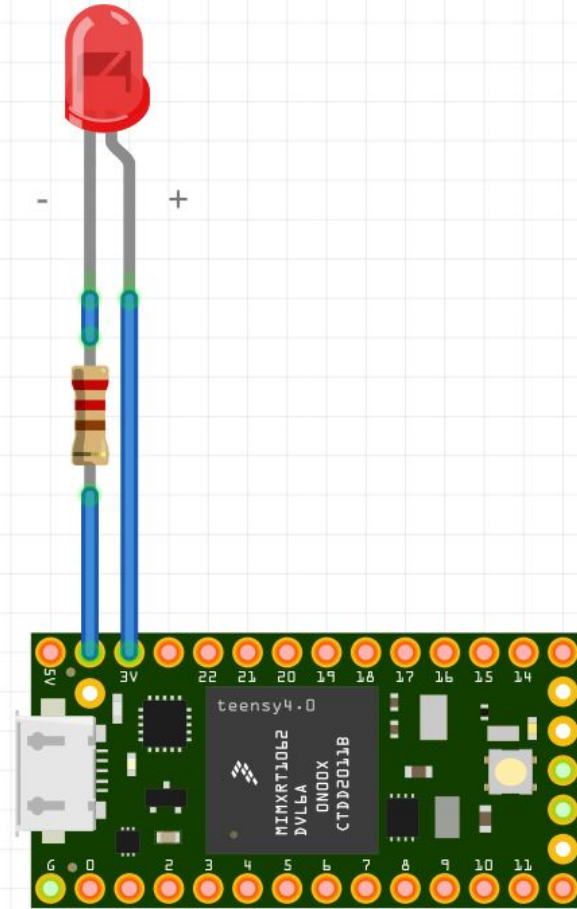
LED gaat aan...



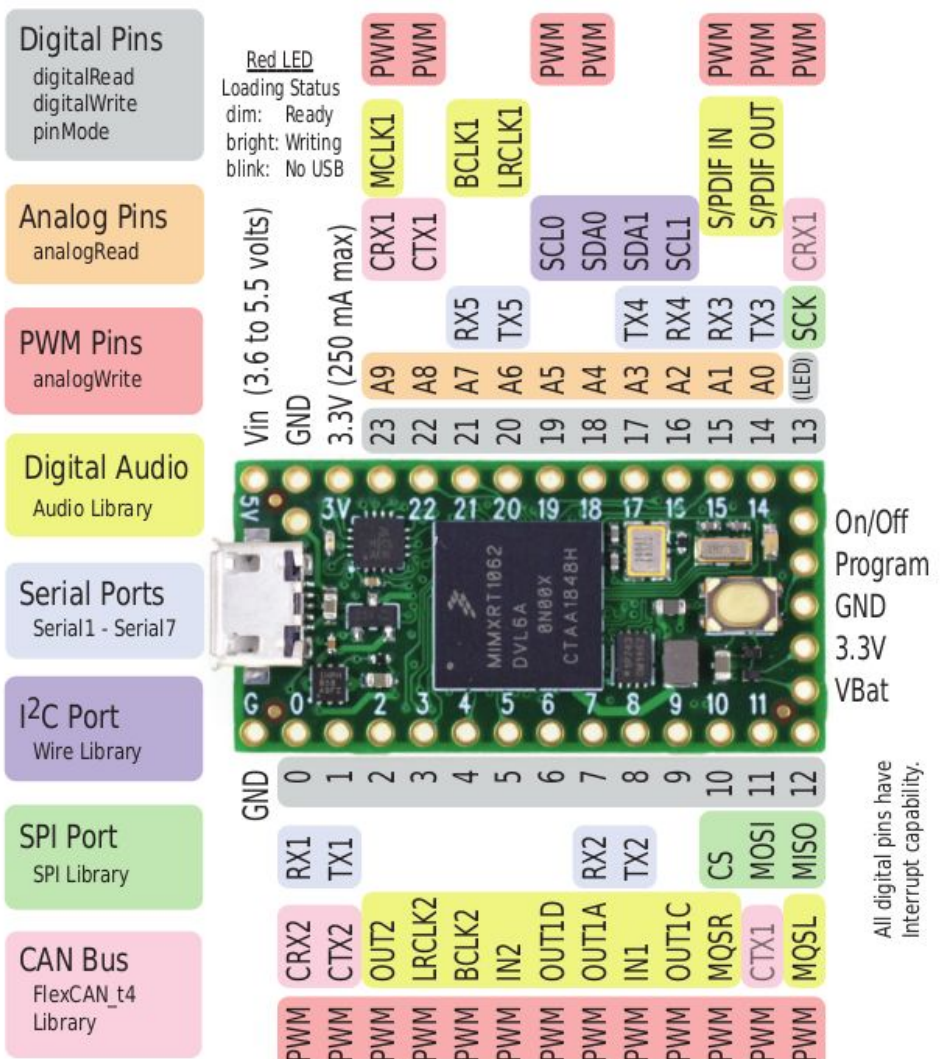
Stroom beperken: weerstand van 220Ω ertussen



Kan ook tussen cathode (-) en GND
Weerstand vaak tussen 100Ω - 400Ω



LED zit direct aan 3.3V,
dus is niet aanstuurbaar

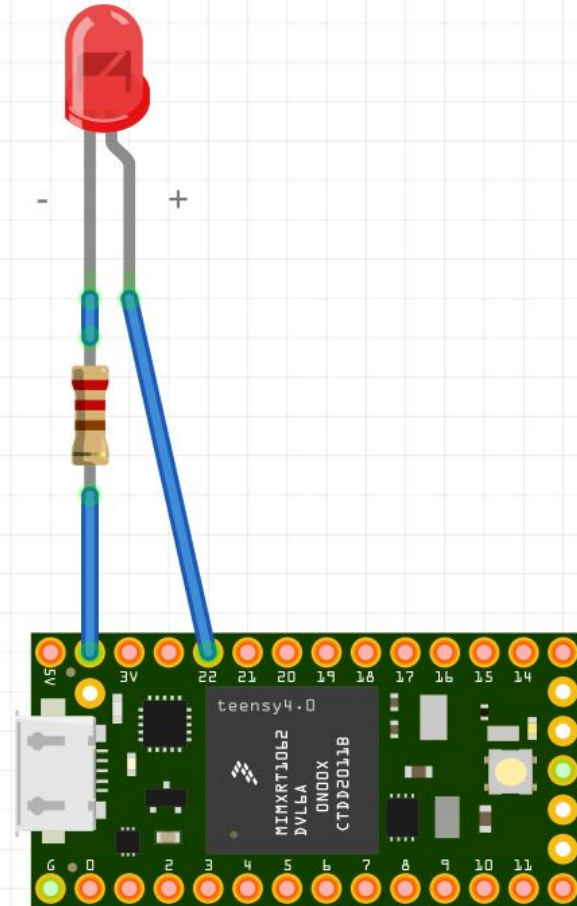


Pin 22 kan gebruikt worden als digitale pin

pin 22 --> anode (+)

cathode --> 220 Ω

220 Ω --> GND

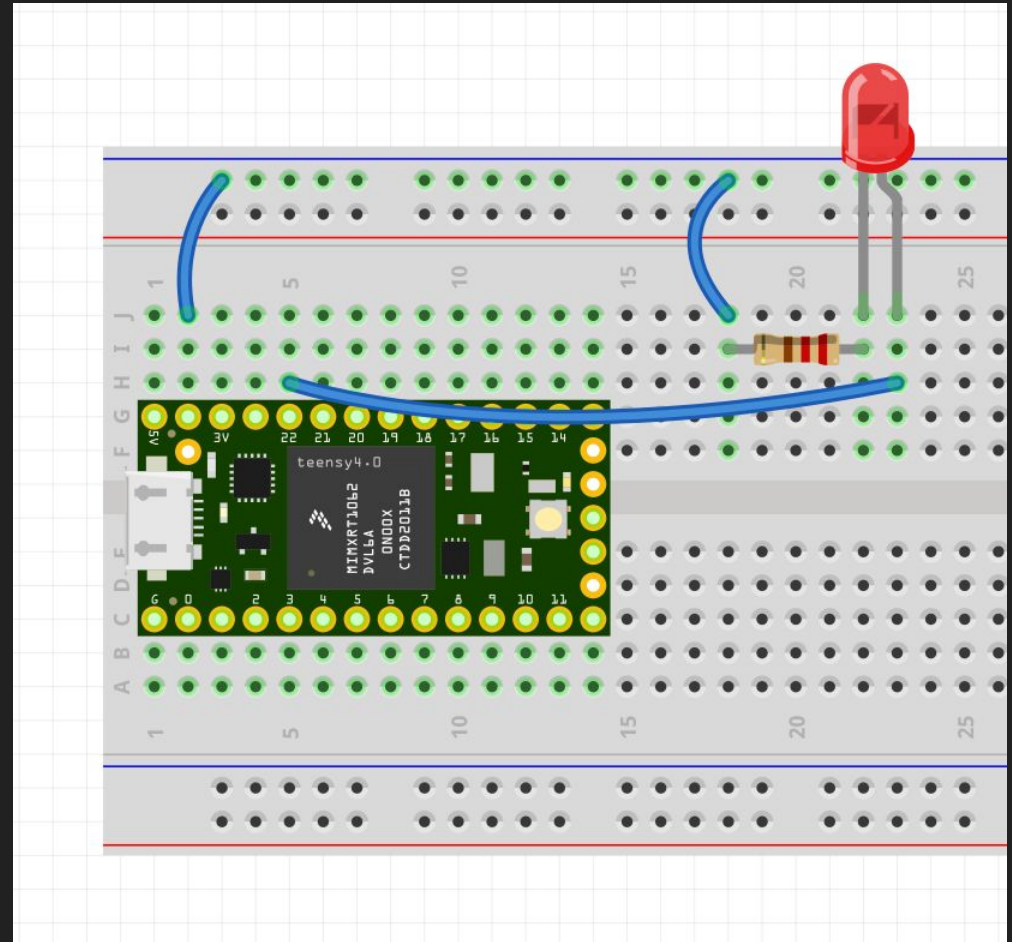


Op een breadboard is wat handiger

pin 22 --> anode (+)

cathode --> 220 Ω

220 Ω --> GND



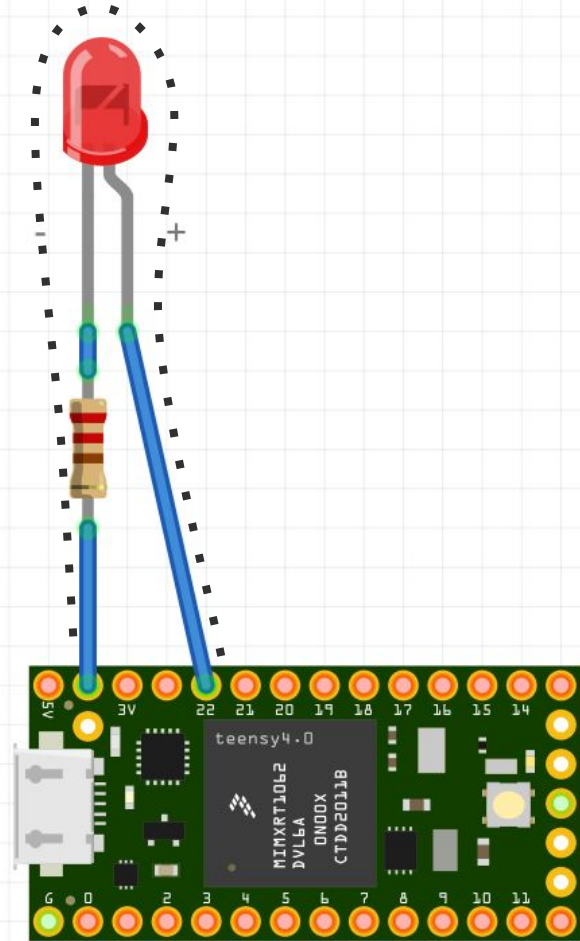
Tijd om te knippen!

```
digitalWrite(22, LOW);
```

```
pin 22 = 0.0V
```

```
GND      = 0.0V
```

pin 22 en GND zijn dezelfde
voltage: de LED blijft uit

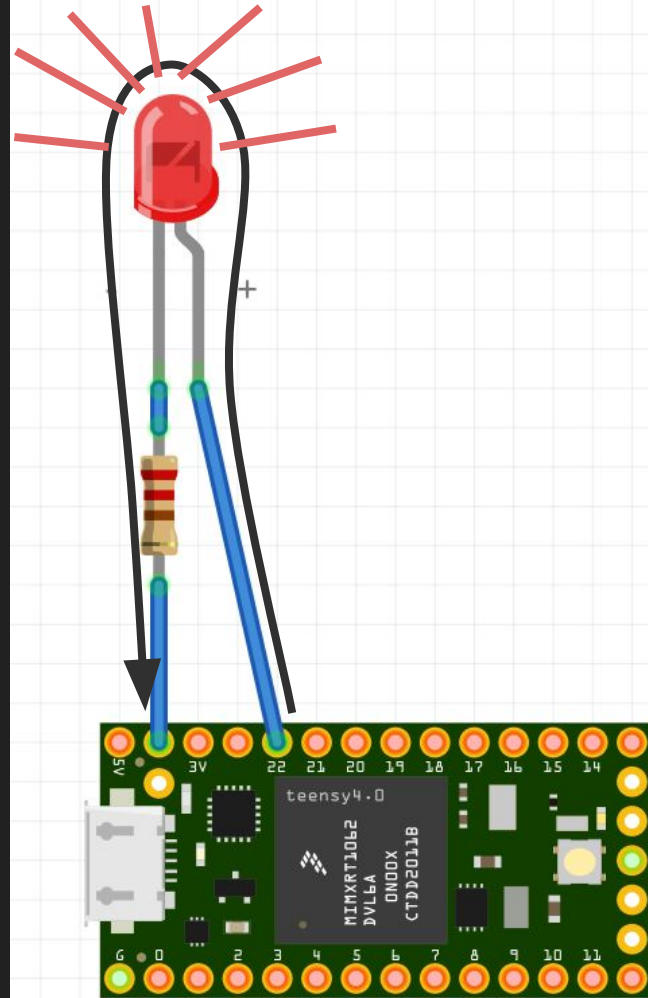


```
digitalWrite(22, HIGH);
```

```
pin 22 = 3.3V
```

```
GND = 0.0V
```

er loopt stroom van pin 22 naar
GND: de LED gaat aan



Nu zonder delay()