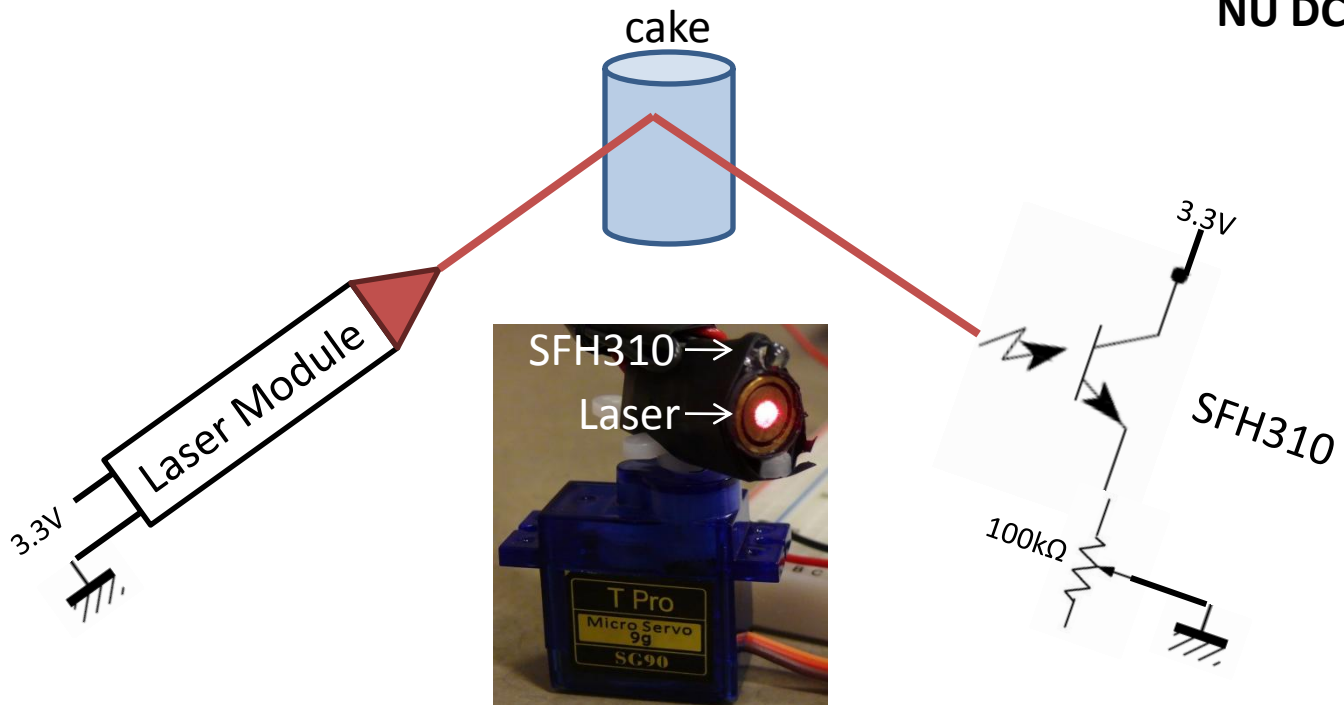
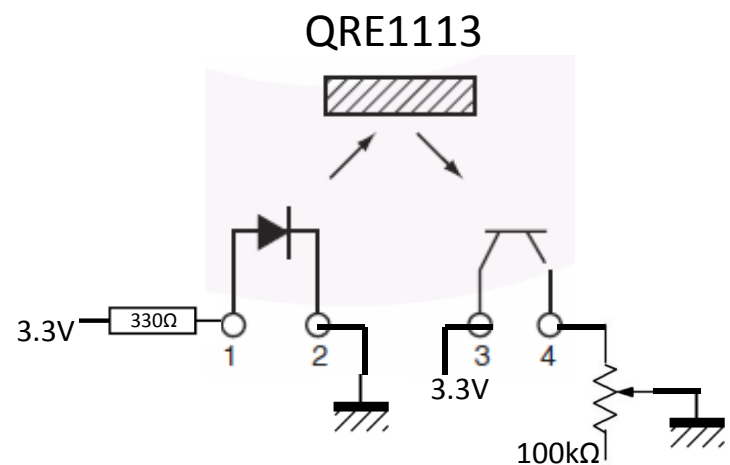
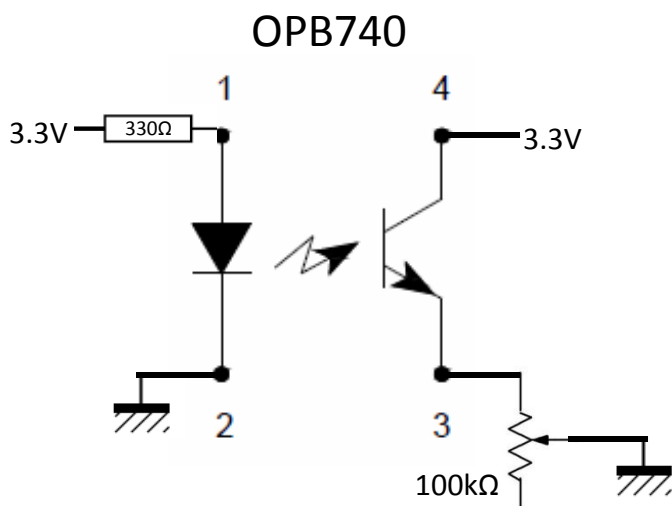


Using optical sensors to detect lines and reflective objects

NU DC2011



- You can tape the SFH310 phototransistor to the laser to measure the reflection of the laser
- Use the potentiometer as a variable resistor, and read the voltage across it
- Set the potentiometer so that the output voltage is small when there is no reflection, and large when there is, but don't make it too sensitive to changes in ambient light!
- Add a capacitor in parallel to the potentiometer to filter the signal (the cutoff frequency is $f = 1/(2 \cdot \pi \cdot R \cdot C)$)



- The OPB740 and QRE1113 combine an IR LED and phototransistor in one package
- Use them to detect how reflective a surface is, or how light or dark the surface is
- Great for line following!
- Read them the same way you read the SFH310 above