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Product Name: GP2Y1010AU0F dust sensor module

<https://www.instructables.com/id/How-to-Interface-With-Optical-Dust-Sensor/>

Too cheap to be useful?

<https://techblog.calvinboey.com/review-of-the-sharp-dust-sensor-gp2y1010au0f/>

<https://d.lj.uno/misc-dust-detector-with-arduino-serial-comm.html>

Technical parameters

Power supply voltage: DC5 \pm 1/2 2V

Operating Current: 20mA (peak)

Sensitivity: 0.5V / (0.1mg / m³)

The minimum detection level of particles: 0.8 μ m

Clean air voltage: 0.9V typ.

Working temperature: -10 ~ 65

Storage temperature: -20 ~ 80

Size: 46mm \times 30mm \times 17.6mm

Size Weight: 15g

arduino

<https://github.com/mickey9801/GP2Y1010AU0F>

```
calcVoltage = voMeasured * (this->_VCC / 1024.0);  
// linear equation taken from http://www.howmuchsnow.com/arduino/airquality/  
dustDensity = (0.17 * calcVoltage - 0.1) * 1000.0;
```

Source code here works much better if you do 10 readings and average them before sending result

tasmota

<https://github.com/arendst/Tasmota/pull/7118>