IR Reflectance Sensor - QRE1113

COM-09542 ROHS✔

DESCRIPTION | FEATURES

The QRE1113 is a small IR reflectance sensor. This sensor is often used in line following robots because, if it can sense if a surface is white or black.

There are four pins on the QRE1113 - two control the IR emitting LED while the other two are the collector and emitter of a phototransistor. The IR diode has a max forward current of 50mA and operates at 940nm.

Breakout boards with analog and digital outputs are also available.

Documents:

- Datasheet

IR Reflectance Sensor - QRE1113 Product Help and Resources

SKILLS NEEDED

Core Skill: Soldering

This skill defines how difficult the soldering is on a particular product. It might be a couple simple solder joints, or require special reflow tools.

Skill Level: Competent - You will encounter surface mount components and basic SMD soldering techniques are required.
See all skill levels

Core Skill: Programming

If a board needs code or communicates somehow, you're going to need to know how to program or interface with it. The programming skill is all about communication and code.

Skill Level: Noob - Programming will be limited to basic drag and drop interfaces like ModKit or Scratch. You won't be writing code, but you will still need to understand some basics of interfacing with hardware. If you?re just using a sensor, it's output is analog.
See all skill levels

Core Skill: Electrical Prototyping

If it requires power, you need to know how much, what all the pins do, and how to hook it up. You may need to reference datasheets, schematics, and know the ins and outs of electronics.

Skill Level: Competent - You will be required to reference a datasheet or schematic to know how to use a component. Your knowledge of a datasheet will only require basic features like power requirements, pinouts, or communications type. Also, you may need a power supply that?s greater than 12V or more than 1A worth of current.
See all skill levels

COMMENTS 12 | REVIEWS 0

Customer Comments

Log in or register to post comments.

Member #296874 / about 4 years ago / ★ 1
Hmm, I created a board to use some of these sensors for line sensor, but they can't see the difference at 1cm from the floor. Has any thing that I can do to see the line at 1cm, or it is things of the sensor. And if has any sensor better for it.

Thanks

Colecago / about 5 years ago / ★ 1
Anyone have any idea on eye safety of this? I want to use it as a blink sensor, but I am not too keen on shining invisible light into my eye at a close range :-/

> Colecago / about 5 years ago / ★ 1
> Well found some stuff on eye safety http://www.intersil.com/en/products/optoelectronics/ambient-light-sensors/eye-safety.html http://www.intersil.com/content/dam/Intersil/documents/an17/an1737.pdf
>
> Unfortunately this item doesn't give any emitted light power info

Member #411824 / about 5 years ago / ★ 1
The product ID is wrong "QRE1113" is the ID for the THT part, but I got a bag with the SMD version from a german reseller. The right part description should be "QRE1113GR" with "GR" at the end. This is the SMD version. Please have a look at the datasheet!

Is there also a THT version available from SparkFun?

baum / about 6 years ago / ★ 1
Take a look at http://www.sparkfun.com/products/246. almost the same device (this is the 1113, that is the 1114), and it is through hole.

baum / about 6 years ago / ★ 1
This + opamp = heartrate monitor!

bbotany / about 7 years ago / ★ 1
940 nm, just in case you don't want to have to dig through the datasheet. Also, slightly longer wavelength than the IrDA standard of 850nm to 900nm.

tfmacz / about 8 years ago / ★ 1
Does anyone have an eagle library with this part?

> DC177E / about 6 years ago / ★ 1
> It should be in the SFE lib. Just search for QRE1113 in eagle.

ThinkerT / about 8 years ago / ★ 1
Could this be used as a close range object sensor?
Thanks

> Bit9 / about 7 years ago / ★ 1
> Yes ! About 2 to 10mm.
>
> Pearce / about 8 years ago / ★ 1
> Yes, it would have to be very close range (<1 inch) but it will work.