

Light

Light intensity - from space to street lamps

(Ireland)

Background

LDRs are built into mobile phones, street lamps and space satellites. They all measure the light they are exposed to. A light dependent resistor (LDRs) has many uses from powering street lamps or readjusting the brightness on a mobile phone. Measuring light intensity is how we decode a light packet in modern day communication systems after it has been sent. Here we are going to look at other uses of measuring light intensity.

You will need:

- ✓ A mobile phone,
- ✓ Android app of choice – Sensors Multitool,
- ✓ Two or three differently sized balls to represent different planets,
- ✓ Light source.

Follow these steps:

1. Turn on light source.
2. Place phone in its direct path.
3. Turn on the app and interact with the sensor on the mobile phone by placing the different balls to represent planets in between the light and the phone.

So what happened?

The light intensity decreased and increased depending on how much light interacted with the light sensitivity meter on the phone.

What next?

Investigate how ESA and NASA use more sophisticated versions of these devices to study where planets are positioned and how large they might be in comparison to one another.

