# Lab with solarcells

## Equipment

* Solarcell panel
* Voltmeter
* Amperemeter
* Bulb
* Cables
* Mirrors

Plus eventual additional equipment.

## Task

Connect the bulb with the solarcell panel, the amperemeter and the voltmeter. Create a connection diagram.

What is the output power of the solarpanel?

What happens when you give shadow to parts of the solarpanel? Try $\frac{1}{18}, \frac{1,}{12} \frac{1}{6}, \frac{1}{3} and \frac{1}{2}$.

How is the power affected if you change the angle towards the sun? Try at least 3 different angles: Direct towards the sun, horizontal and vertical.

Try to maximize the power using mirrors that reflect the sun. Describe what you discover.

What efficiency does the solarpanel have? Use “global irradiance” from some meteorology-source.

Wright a full report there you also describes how a solar cell works.