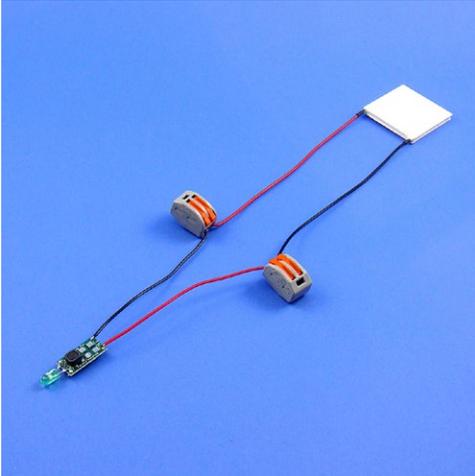


## Hand Heat - Thermoelectric Generator (TEG) Demonstrator

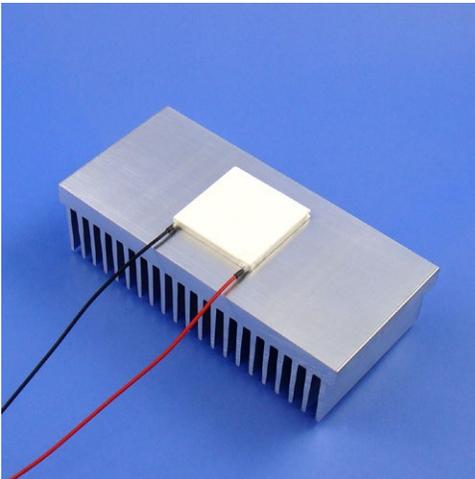


Included in this Hand Heat demonstration kit is;

- 1x TEG
- 2x Re-usable wire connectors
- Boost converter circuit with an LED attached.
- Instructions

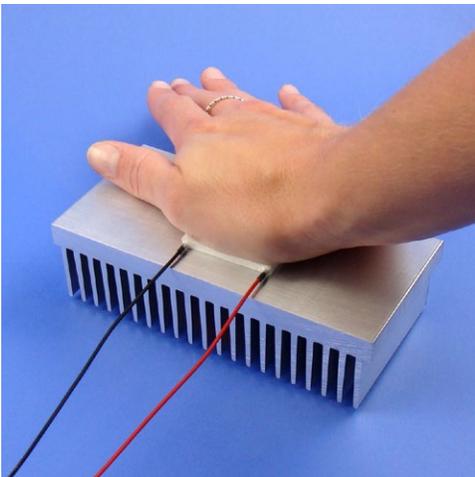
Everything comes assembled ready to use.

The TEG is our part number 19911-9Q31-02CQ and able to withstand temperatures up to 200C. The Boost Converter circuit is our ELC-W0422-1 with the LED attached. Also, we have included two re-usable wire connectors that join the Boost circuit and the TEG together. Instructions for the Lever Nuts wire connectors are included.



### Step 1.

Place the TEG on a substantial piece of metal such as a heat sink or metal table. [The metal should be cooler than your hand.] Make sure to orient the TEG as shown in the picture with the red wire on the right.



### Step 2.

Place the palm of your hand on the TEG, but try not to touch the heat sink. The LED should light up within a second or two. If the LED does not light up, check to make sure you have oriented the TEG properly. Try flipping the TEG over.

Whats happening:

The TEG is producing a very small amount of electrical power simply from the warmth of your hand and the coolness supplied by the heat sink. The electrical boost converter circuit converts this very low voltage into a higher voltage so that the LED will light.

### Experiments.

- Try pre-cooling the heat sink by placing it in the freezer first.
- Instead of your hand, use a warmer object such as a mug with hot coffee (make sure it has a flat bottom)

By lowering the heat sink temperature or raising the hot temperature, you are increasing the temperature difference given to the TEG. This increases the amount of power it generates. The greater the temperature difference, the greater the power generated. Some of our TEGs are capable of withstanding temperatures up to 320C (608F).