

A02-425E-Y01 Seebeck and Peltier Effect/Electrocaloric Effect (Semiconductor) Two Thermoelectric Effects Experiments

1. The thermoelectric generator uses the thermoelectric effect of the semiconductor (if the temperature of the two ends of the semiconductor is different, a thermoelectric force will be generated, also known as the Seebeck effect) to convert thermal energy into electrical energy.
2. The thermoelectric cooler uses the Peltier effect (when two different metals are connected and a current is passed, one joint absorbs heat and the other joint releases heat) to achieve cooling



1. Aluminum cooling plate, two pieces, L175mm×W42mm×T35mm.
2. Light plastic fan and 3DCV motor.
3. Equipped with a motor holder, with an external socket and a switch.
4. Refrigeration wafer 40×40mm.
5. Two, electronic digital thermometers, temperature measurement range: $-10^{\circ}\text{C} \sim +200^{\circ}\text{C}$, accuracy 0.1°C . 1 second fast sampling, LCD display, easy to operate, • Stainless steel probe ϕ 3.5mm×108mm, $^{\circ}\text{C}$ and $^{\circ}\text{F}$ switching function, minimum temperature / maximum temperature memory function.

6. Two sets, A02-425R-Y01 multi-layer thermos cup with handle (400ml)

- A. Multi-layer heat insulation design, with stainless steel cup attached, it is convenient to extract and pour water. The maximum volume is 450ml. It is recommended to be 80% full. The cup body cover is made of acrylic and foam cotton material as heat insulation layer.
- B. The cup cover ϕ 100 is more than 13mm thick. It is a plate that is resistant to acid and alkali and easy to clean. It is equipped with a thermometer socket and a rubber stopper, and an L45×W4mm slot.
- C. The outer insulation cup is ϕ 100×H120mm, and foam material is added at the bottom as insulation layer.