



DL THERMO-L Thermal energy

This kit provides a basic understanding of solar thermal energy conversion. The most important component is the solar collector, which can be powered both by sunlight as well as by the infrared light source.

MAIN COMPONENTS

- base
- potentiometer module
- solar collector
- reflector collector
- absorber tube
- lens module
- absorber module for lens
- absorber B/W
- pump module
- Peltier module
- water heat exchanger
- paraffin heat exchanger
- hose-set
- power supply
- motor module
- lamp
- multimeters
- thermometer
- temperature sensor
- propeller
- Borosilicate beaker glass
- Illuminat infrared
- Cooling pad
- test leads
- CD with manuals



EXPERIMENTS

- Absorptivity and reflectivity of different materials
- Focusing of light by a Fresnel lens
- Thermal convection and layering
- Thermal conduction
- Thermal insulation
- Solar thermal collector with pump circulation
- Solar thermal collector with thermosiphon circulation
- Variation of the flow speed
- Collector circuit with heat exchange
- Collector circuit with paraffin heat reservoir
- Parabolic channel collector with pump cycle
- Defocussing
- Qualitative demonstration of the functional principle
- Investigating the thermoelectric generator
- Quantitative determination of the electrical power

