

leXsolar-ThermalEnergy Professional

Order code: **5501.1306**



Cena bez DPH

2.686,00 Eur

Price with VAT

3.250,06 Eur

Parameters

Subject

Heat

Quantitative unit

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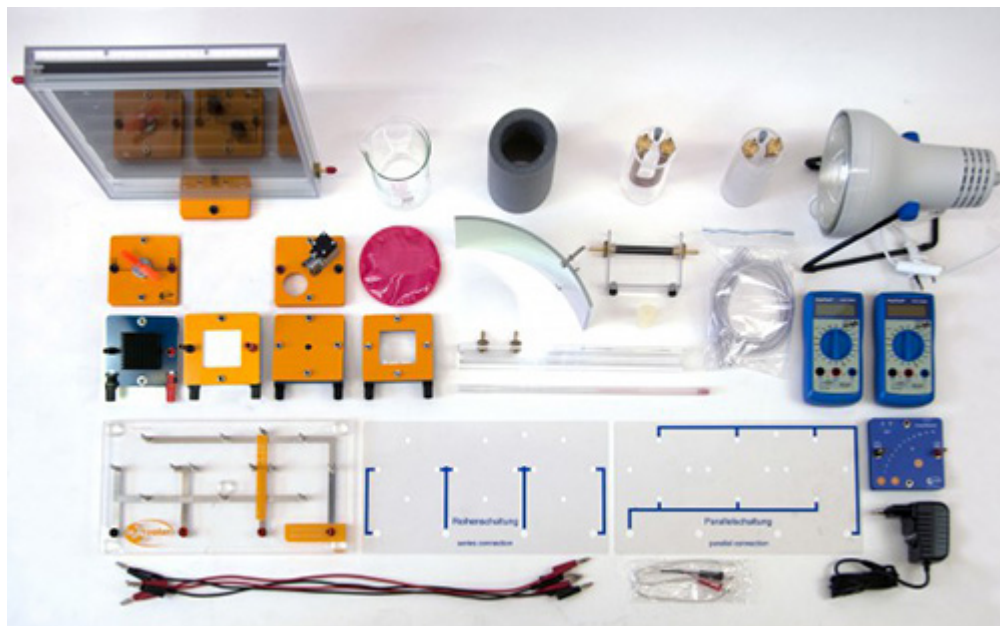
This experimentation system allows for the application of different technologies of solar thermal energy transformation in technical education. The product does not only contain various solar collector systems, which can be operated with or without pumps, but also CSP-

technology (Concentrated Solar Power) and a Peltier element for the direct transformation into electric energy. Another main feature are the experiments regarding the basics of thermodynamics, like absorption of heat radiation and the convective flow of heat, that provide a comprehensive understanding of the applied physical effects. Like the other products of the Professional line, the leXsolar-ThermalEnergy Professional amazes with its flexible and location-independent usability that doesn't require any additional equipment.

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 exchanger
- Collector circuit with paraffin heat reservoir
- Parabolic trough collector with pump cycle
- Defocussing
- Qualitative demonstration of the functional principle
- Investigating the thermoelectric generator
- Quantitative determination of the electrical power

List of components:



- 1 x 1100-19 leXsolar-Base unit Large
- 1 x 1100-27 Motor module without gear
- 1 x 1300-03 Solar collector
- 1 x 1300-04 Parabolic reflector
- 1 x 1300-05 Absorber tube
- 1 x 1300-06 Lens module
- 1 x 1300-07 Absorber module for lens
- 1 x 1300-08 Absorber B/W
- 1 x 1300-09 Pump module
- 1 x 1300-10 Peltier module
- 1 x 1300-11 Heat exchanger water
- 1 x 1300-12 Heat exchanger paraffin
- 1 x 1300-13 Hose-set
- 1 x 9100-05 PowerModul
- 2 x L2-02-007 Sorting rubber d=65, mark P
- 1 x L2-02-017 Propeller
- 2 x L2-04-059 Safety test lead, 50cm, red
- 2 x L2-04-060 Safety test lead, 50cm, black
- 1 x L2-04-080 Lamp housing

1 x L2-04-116 Illuminant 120W, 12°
1 x L2-04-138 Safety plug, black
1 x L2-04-139 Safety plug, red
7 x L2-05-035 safety socket adapter SA 4000 red
5 x L2-05-036 safety socket adapter SA 4000 black
2 x L2-06-011 Digital multimeter
1 x L2-06-016 Laboratory thermometer
1 x L2-06-082 Beaker 250 ml
1 x L2-06-123 Temperature measuring sensor
1 x L2-06-125 Cooling pad
1 x L3-03-081 leXsolar-DVD Professional
1 x L3-01-171 Aluminium case ThermalEnergy Professional 1306
1 x L3-03-190 Layout diagram 1306 ThermalEnergy Professional
1 x L3-01-109 Insert "ThermalEnergy Ready-to-go"