

**leXsolar-PV Ready-to-go**  
Order code: **5501.1105**



Cena bez DPH  
Price with VAT

1.372,00 Eur  
1.660,12 Eur

Parameters

Subject

Photovoltaics

Quantitative unit

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The name says it all: this fully equipped experiment system can be used wherever you are without further components. This kit already includes all necessary ancillary equipment, like measuring equipment, and is delivered in an aluminium case with heavy-duty foam inserts.

The scope of experiments ranges from simple trials that show the basic characteristics of the solar energy, to more challenging experiments dealing with topics like IV characteristics or temperature dependency of solar cells.

Because of the large range of potential experiments, the product is also suitable for internal workshops in companies as well as a demonstration kit for sales representatives.

### **Experiments:**

Solar energy + electricity lesson

- Series and parallel connection of solar cells
- Dependence of the power on area of the solar cell
- Dependence of the power on the angle of incidence
- Dependence of power on level of illumination
- Power dependence ratio of energy conversion
- Internal resistance of solar cell
- Dark characteristic curve of solar cell
- Inhibiting and conducting direction in illumination and darkness
- IV characteristic and fill factor of the solar cell
- IV characteristic of the solar cell in dependence on the level of illumination
- Dependence of the solar cell power on temperature
- Shading effect of solar cells in series connection
- Shading effect of solar cells in parallel connection
- Solar cell as transmission measure
- Dependence of solar cell power on the frequency of the incident light

Optics:

- Differences in brightness
- Tilt of the solar cells
- Diffused radiation
- Direct radiation
- Albedo radiation
- Colour characteristics
- Colour mixtures
- Optical illusions

### **Components:**

- 3× 1100-01 Solar panel 0,5 V, 420 mA
- 1× 1100-02 Solar panel 0,5 V, 840 mA
- 1× 1100-08 Circuit diagram
- 1× 1100-19 Base unit
- 1× 1100-20 Lighting module
- 1× 1100-21 Diode module
- 1× 1100-22 Resistance module
- 1× 1100-23 Potentiometer module
- 1× 1100-24 Gear motor module
- 1× 1100-25 Buzzer module
- 1× 1100-26 Light bulb module
- 1× 1100-27 Motor module without gear
- 1× 1100-28 Colour discs including mount
- 1× 1100-29 Solar cell cover set (4 pieces)
- 1× 1100-30 Color filter
- 2× 2102 Digital multimeter
- 1× 2105 Power supply
- 2× 2107 Test lead - black, 25 cm
- 2× 2108 Test lead - red, 25 cm
- 1× 2109 Test lead - black, 50 cm
- 1× 2110 Test lead - red, 50 cm
- 1× 2111 Thermometer

- 1× 3101 CD with instructions
- 1× Carrying case incl. inserts

**Extra available:**

- 3127 Instructions manual PV Ready-to-go
- 3110 Teacher's Manual Photovoltaics

Age: from 12 years