

Product datasheet (en)

Version: 1830_10.11.2015

Photo:

Name:

leXsolar-EMobility Basic

Item number:

1830

Youtube link:

Area of application:

Dimensions (cm x cm x cm):

Physics
Chemistry
Technology Training

Weight (kg):

User group:

Middle School / Junior High School

Key facts:

Experimental system on storage technology and electric mobility
Exciting experiments with the electric car
With solar module for building a solar car
Playful understanding of technical knowledge

List of components:

1 x 1100-31 Solar module 2.5 V, 420 mA
1 x 1118-11 Capacitor module Pro
1 x 1801-02 Electric model car
1 x 1830-01 Carton 1830
1 x L3-01-178 Insert EMobility basic 1830
1 x L3-03-206 Layout diagram EMobility Basic 1830
1 x L3-03-258 Info sheet initial startup

Extras needed:

1 x 2030 leXsolar-Minikit Basic
1 x 2031 leXsolar-Kit Basic

Extras available:

No extras available.

Description:

With leXsolar-EMobility Basic the students experience electric mobility close to the action. The electric model car can rush through the classroom with the supercapacitor or can be powered by the solar module directly from the sun. Thus, leXsolar-EMobility Basic combines storage technologies and an electric vehicle in one experimental kit. Based on illustrative experiments the kit imparts the basic knowledge about those topics. Combined with leXsolar-H2 Basic a fuel cell car can be built.

For using this product you additionally need the leXsolar-Minikit Basic in primary school and the leXsolar-Kit Basic in Junior High School, each of which contains all necessary accessories.

Experiments:

Storage of solar energy
Operation of a solar-powered electric car
The speed of the electric car depending on the sunlight conditions
Operating an electric car with the capacitor
Dependence of the power of the electric car on the charge state of the capacitor
The characteristics of a capacitor
The characteristics of a solar module

Specifications of components:

1100-31 Solar module 2.5 V, 420 mA:
Solar module with 5 high efficiency polycrystalline solar cells

2.5 V open circuit voltage
420 mA short circuit current
1 Wp peak power
Optimized low light behaviour
Solar cell size 5 pcs. 26 mm x 52 mm
Contacting via 4mm jacks
With connecting 4mm banana plugs the module can be set up with an angle of ca. 80°
Grid-dimension of the jacks: 70 mm
Module size: 85 mm x 151 mm

1118-11 Capacitor module Pro:
Capacitor module for simulating batteries in experiments
Extremely high capacity: 5 F
Voltage: 5,4 V
Equipped with automatic fuse protecting against short circuit
Layout: plug-in module with 4 mm jacks
3-terminal plug-in module for use in circuits with common ground
Grid-dimension of the jacks: 70 mm
Module size: 85 mm x 85 mm

1801-02 Electric model car:

1830-01 Carton 1830:

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Specifications extras needed:

2030 leXsolar-Minikit Basic:

For experimenting with the leXsolar basics in elementary school you need the leXsolar-Minikit Basic. It contains a small base unit, cables and short circuit plugs to connect the modules. With a hand crank generator the students produce electrical energy for the experiments themselves. Thus, no extra electrical connection or voltage source is needed.

2031 leXsolar-Kit Basic:

For quantitative experiments with the leXsolar-Basics in Junior High School you need the leXsolar-Kit Basic. With the enclosed Smart Control components, an innovative measuring and control system is available: The power module is the most compact power supply for experiments on the market and the AV module makes voltage and current measurements as simple as possible. A potentiometer, the basic unit and cables complete the product.



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Specifications extras available:

No extras available.