

## Product datasheet (en)

Version: 1230\_10.11.2015

Photo:

Name:

leXsolar-H2 Basic

Item number:

1230

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:

Understanding how a fuel cell works by playing and interacting with it  
Qualitative and quantitative experiments with a fuel cell  
High-quality instructions

List of components:

1 x 1100-26 Light bulb module  
1 x 1800-15 Distilled water (100 ml)

1 x 1230-01 Carton 1230  
1 x L2-06-067 Reversible Fuel cell  
1 x L3-01-179 Insert H2 Basic 1230  
1 x L3-03-208 Layout diagram H2 Basic 1230  
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:

What is a fuel cell and what does it do? What is an electrolyzer and, using this device, how can water be broken down to its component elements? What can be powered with a fuel cell? These questions and many others can be answered doing the experiments with the leXsolar-H2 Basic. All experiments are designed in a qualitative way for young students from Elementary and Junior High School. The product is equipped with a reversible PEM-fuel cell combining electrolyzer mode and PEM fuel cell mode in one handy and robust unit. 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:

Converting muscle power to electrical energy  
What is an electrolyzer?  
How water can be split?  
What is a fuel cell?  
Powering the motor with a fuel cell  
Powering the buzzer with a fuel cell  
IV-characteristics of an electrolyzer  
IV-characteristics of a fuel cell  
Faraday and energy efficiency of an electrolyzer  
Faraday and energy efficiency of a fuel cell

#### Specifications of components:

1100-26 Light bulb module:  
Plug-in module with micro bulb  
Initial voltage: 0.9 V  
Initial current: 25 mA  
Maximum voltage: 6 V

Equipped with automatic fuse protecting from overvoltage

Layout: plug-in module with 4 mm jacks

Grid-dimension of the jacks: 70 mm

Module size: 85 mm x 85 mm

1800-15 Distilled water (100 ml):

1230-01 Carton 1230:

L2-06-067 Reversible Fuel cell:

L3-01-179 Insert H2 Basic 1230:

L3-03-208 Layout diagram H2 Basic 1230:

L3-03-258 Info sheet initial startup:

#### 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.

#### Specifications extras available:

No extras available.