

innovative Solarsysteme für Schule und Ausbildung innovative solar- systems for school, college, technical education

- Solardidaktik
- Solarzellen
- Solarmodule
- Photovoltaik- Experimentiergeräte
- Photovoltaik- Gerätentwicklung
- Experimentieranleitungen didaktische Konzepte
- Solarberatung
- Solar- Workshops
- Solar- Fortbildung für Lehrkräfte
- solare Aus- und Weiterbildung
- Solarspielzeuge

- solardidactics
- solar cells
- solar modules
- photovoltaic -experiment devices
- solar- experiment- manuals
- solar- workshops
- solar consulting
- solar education
- solar training for teachers
- solar toys

## SUNdidactics Wolf-Rüdeger Schanz, Schaperbleek 15, D-31139 Hildesheim, Germany

Phone: +49(0)5121 86 07 30 Fax: +49(0)3222 370 66 89 Mail: wr.schanz@t-online.de Mobile: +49(0)175 766 06 07 Web: www.sundidactics.de Mail: info@sundidactics.de



## The solar module SUSE 5.22

Solar module with 2 identical solar cells in pluggable series connection for experiments on recording the characteristic curves V(S) and I(S), series and parallel connection

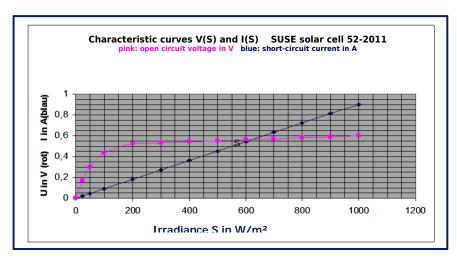
Especially suited for experimental classes in ISCED level 3

The photovoltaic experimentation device SUSE 5.22 consists of 2 identical solar cells (0.6 V / 0.90 A) with + and - connection jacks each. The cells can be used individually separated from each other or in series connection (with connecting plugs). SUSE 5.22 is especially suited for experiments with the optical bench SUSE 5.0alu or common stand systems in ISCED level 3.

With SUSE 5.22 the following experiments can be conducted outdoors in the sunlight or in the lab with illumination by light of a halogen lamp (e.g. SUSE 5.16):

- Physical measurements on one solar cell, determination of all relevant measurement data
- Determination of the **irradiance S of the light** from the short-circuit current of the calibrated solar cell
- Physical measurements on a series connection or a parallel connection of two solar cells
- Simultaneous measurement of open circuit voltage and shortcircuit current with varying irradiances (light intensity) to identify the interdependency in an experiment

With these experiments experimentally determined graphs on the dependency of solar cell voltage, short-circuit current, and solar cell power in dependence of the irradiance S of light can be developed.





## Photo at the top:

The solar module SUSE 5.22 with identical solar cells SUSEmod2. Each solar cell has its own jack pair red/black. Between the central jacks the connecting plug on the back is visible, that is used for the series connection. At the bottom there is the stand for fixing on an optical bench.

## Left-hand side:

The  $V_{oc}(S)$  and  $I_{sc}(S)$  characteristic curves of one solar cell SUSEmod2.

extensive experimentation manual with additional technical data goes with the device.