

10 W solar module SUSE 4.41

Professional multicrystalline solar module with 36 solar cells in intern series connection
Especially suited for experiments on solar modules or as off-grid system
in combination with 12 V rechargeable battery and solar charge controller

With DC-DC converter SUSE 4.17 optimally suited to charge smartphones/tablet PCs/notebooks

The professional 10 W solar module SUSE 4.41 is well suited for photovoltaics experiments in ISCED levels 2 and 3.

With the solar module **SUSE 4.41** all relevant measurements of a solar module can be conducted in the sunlight or in the light of a halogen spot light. Furthermore a small photovoltaic off-grid system can be established with an additional charge controller and a 12 V rechargeable battery. The module contains 36 solar cells in intern series connection. With the DC-DC converter **SUSE 4.44** a stable output voltage of 9 V / 12 V / 15 V (depending on the model of 4.44) with varying module voltages results and can directly be used for electric devices (without rechargeable battery and charge controller). With the back side ground/table positioner the module can be placed on the ground or on a desk with an adjustable inclination angle. With the DC-DC converter **SUSE 4.17** the module can be used optimally for charging and operating smartphones/tablet PCs/notebooks or Powerbank rechargeable batteries. The solar module contains the same solar cells as the 5 W module **SUSE 4.51**, but 36 cells in series connection as opposed to 18 cells in **SUSE 4.51**.

For experiments with **SUSE 4.41** an extensive and detailed manual is available.



Photo of the solar module SUSE 4.41

Visual appearance and cell shape can differ. The junction box is located on the back side of the module and is not visible here. The **voltmeter** shows the open circuit voltage of 22.2 V.

The technical data of the solar module SUSE 4.41

With a solar irradiation of 1000 W/m² and T = 25°C AM 1.5

Electrical power	10.0 W
Dimensions	435 x 185 x 25 mm (may vary)
Frame	Stable aluminum frame (anodized) with mounting holes and positioner
Solar cells	36 multicrystalline solar cells in intern series connection
Embedding	In EVA lamination under hail-proof security glass, specially hardened
Open circuit voltage V _{oc}	21.9 V
Short-circuit current I _{sc}	0.61 A
Electrical connectivity	Back side junction box with 2 feeder clips, dust- and water-proof
Bypass diode	1 bypass diode in junction box
Connection cable	2-core cable 1.5 m long with one 4mm lab plug red (+) and black (-) each
Positioner	Continuously adjustable desk/ground positioner



Left: Indicator LED showing operational readiness
Above the junction box the holding of the desk/ground positioner is visible.



The **ammeter** shows the short-circuit current of 0.65 A.

The short-circuit current is proportional to the light's irradiation (irradiance) in W/m².

Additional technical data and V(S) and I(S) characteristic curves can be found in the experimentation manual for the solar module SUSE 4.41