

The solar measurement module SUSE 5.24

Analogue measurement device for measuring the irradiance(intensity)
of the sunlight or the light of light sources in the unit W/m^2



Photo at the top:

The measurement module SUSE 5.24 seen from the front. The SUSE solar module SUSEmod2 is visible on the front and the 100 mA measuring element at the top.

Photo at the bottom:

Display on a sunny winter's day with light cirrostratus clouding:
 $S = 690 W/m^2$

The photovoltaics experimental solar radiation measurement device SUSE 5.24

is a special device for measuring the irradiance S of solar radiation or light radiation, directly displayed on an analog milliamperemeter (100 mA) in the international standard unit W/m^2 (Watts per m^2).
Max. display: 1000 W/m^2 1 scale mark = 50 W/m^2
Min. display: 1 scale mark = 50 W/m^2

SUSE 5.24 is the little brother of the digitally displaying measurement module SUSE 5.23.

The solar radiation shows a great fluctuation outdoors, from approx. 1000 W/m^2 with bright sunshine down to 30 W/m^2 with heavy clouding, indoors S is $< 10 W/m^2$. Shadowing by clouds strongly decreases the radiation. If the direct solar radiation is shadowed, the diffuse radiation of the bright sky can also be measured.

Function: The short-circuit current of the solar cell, that is proportional to S , is adjusted with an exactly fitting electric shunt, so that with 1000 W/m^2 a current of exactly 100.0 mA flows, which is displayed on the measurement device with the value "100" = 1000 W/m^2 .

The display "100" corresponds to $S = 1000 W/m^2$.

The device is constructed with a 8 mm stand for the operation on the optical bench **SUSE 5.0alu** or on any common optical bench or tripods/stand bases.

A battery is not necessary, the energy needed for measurements is extracted from the solar cell.