# Let's start - SOLARC!

First class solar technology!

**SOLARC**

Your industrial partner for the development and production of high efficiency solar systems and charge regulators.

Start the future of independent mobile energy with us!

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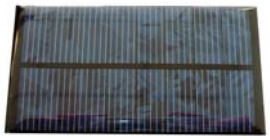
## Solar module CSM8.055 credit card-size

SOLARCs **CSM8.055** is based on a small solar module equipped with high-efficiencycrystalline solar cells. The credit card sized solar module offers the following characteristics:



- Output power 0.55 ± 0.05 $W_p$
- Voltage at operating point 3.9 ± 0.1 V
- Current at operating point 143 ± 10 mA
- Ambient temperature - 30…+ 40 °C
- Dimensions 88 x 55 x 2.5 mm
- Weight 16 g

At standard test conditions (sunlight with 1000 W/m² at 25°C )

Unlike other small modules which are produced with left over or low-grade solar cells, **CSM8.055** features a maximum power yield even at low light intensities. Directly behind an illuminated window, inside a building, for example, the light intensity is up to 10 times lower than outside. Under such conditions, the **CSM8.055** produces sufficient power, e.g. for charging two batteries with 600 mA in series. Outside it would take one sunny day to charge these batteries, indoors, behind a well-lit window without shading, it would take two to three sunny days.

In the standard make, the surface of the **CSM8.055** is coated with a scratch-resistant film. However, it should not be brought into contact with hard or sharp objects, nor exposed to pressure or torsion.
Special shock-resistant models can be delivered on demand.

The basic version is intended mainly for the integration in mobile appliances or small electronic devices in well-lit locations, e.g. measuring devices, sensors, audio equipment, handheld PCs, organizers, etc… Power is supplied either directly or by the buffer batteries. All standard accumulator types (Li-ion, NiMH, NiCd, lead) and rechargeable batteries can be charged with **CSM8.055**.
The CSM8.055 modules can be connected in series or parallel in any order.

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**Electronic types**

Based on the solar module **CSM8.055** different types are available with additional electronics:

- Electronic solar module **CSM8.055A2** with battery buffer. Integration in 3-Volt appliances based on RAM, NiMH or NiCd round cells.
- Electronic solar module **CSM8.055T** with integrated voltage converter. High-efficiency conversion of voltage supplied by solar module into stable output voltage up to 14 Volt, largely independent of incident light radiation.
- Electronic solar module **CSM8.055A2T** with battery buffer and integrated voltage converter. Stable output voltages of 3 to 14V, even without incident light radiation; deep discharge protection with automatic cut-off switch.

With these electronic extras, CSM8.055 is converted to a universal self-sufficient power supplying component, suitable especially for the integration into small electronic devices located on well-lit sites, or mobile appliances, e.g. measuring devices, sensors, audio and radio modules, etc…

If the module is placed outside with a southern orientation, an average annual power yield of 25 – 35mW can be expected in Germany. In order to multiply the output current or voltage, all types can be connected in series or parallel in any order, with the addition connector.

| | CSM8.055A2 | CSM8.055T | CSM8.055A2T |
|---|---|---|---|
| **Output voltage without load** | 2.5 ± 0.6 V | 3…14V ± 3% (customer-specific adjustment) | 3…14V ± 3 % (customer-specific adjustment) |
| **Max. Output current** | 2A (NiMH) | 20...30mA | 400...100mA |
| **Ambient temperature** | -20 ... +40°C | -30 ... +50°C | -20 ... +40°C |
| **Size** | 88 x 55 x 16mm | 88 x 55 x 10mm | 88 x 55 x 16mm |
| **Weight** | 75g | 30g | 80g |

10/2007, Subject to change without notice

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