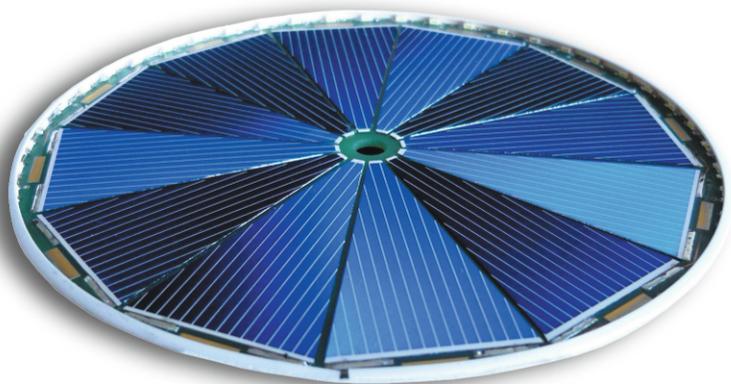


# SOLARC

Innovative Solarprodukte GmbH



Catalogue 2023/2024 

# COMPANY PROFILE

## SOLARC - First Class Solar Technology!

SOLARC develops, produces and distributes high-quality, high-technology and innovative low-power photovoltaic devices. Our products and services range from simple solar components to complete industrial or consumer products.

**Apart from our own standard products (solar modules, solar charge regulators, DC/DC converters) we also offer custom designed developments and are doing this reliably for more than 25 years.** SOLARC has gained very fast recognition as a key player in very specific fields of the PV-solar market: solar autarkic and mobile solutions.

We are the right address for those companies seeking an experienced partner to develop and manufacture components for a solar power supply to their product or even a complete new solar-powered solution. SOLARC provides complete support, from the first design steps, to the prototype, to the final serial run.

SOLARC concentrates on **5 major product categories**



Customised solar modules



Solar charge controllers and DC/DC converters



Solar measuring instruments



Customised new product development

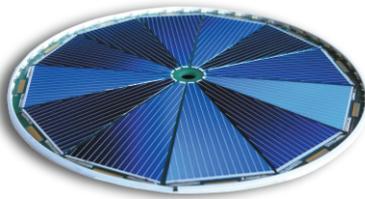


PV Plant Power Optimization

# SOLAR MODULES

## Customised solar modules

SOLARC is a supplier of high-quality customised solar modules in diverse shapes and setups (cell technology, sealing, outdoor specifications, etc.).



- We offer high-quality customised solar modules in various shapes
- Flexible or rigid, indoor and outdoor, mono-Si, multi-Si, a-Si or CIGS (cells from different manufacturers)
- Glass or ETFE laminated
- For BIPV/EIPV applications (shutters, parking meters, sensors, wearable electronics etc.)
- With and without frame
- Our diverse standard and customised solar modules vary from 40mW to 200W



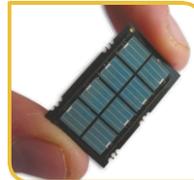
**BIPV applications  
(shutters)**



**Customised form**



**Housing  
integrated**



**Micro modules**

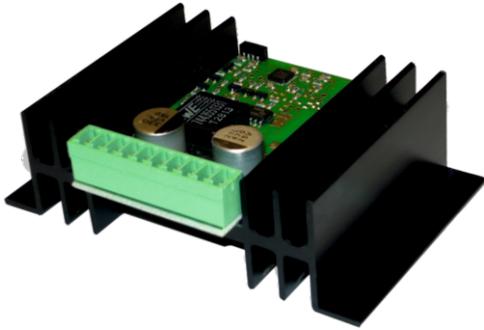


**Wearable  
electronics**

# ELECTRONICS

## Specific for low-power solar off-grid systems

SOLARC develops and manufactures hi-tech, hi-efficiency innovative electronics and energy management systems, especially designed for low-power solar off-grid systems.



- DC/DC converters
- Solar charge controllers
  - Featuring a MPP tracker
  - Adjustable output parameters
  - Very low stand-by consumption
  - Optional with LED driver
- Programmable lighting-control units
- Programmable motor control units
- Open assembly or in a housing
- We offer customised solar charge controllers and complete new electronics development from prototype to final serial run as well as offering different types of LiFePO4 batteries



Open assembly  
MPPT controller



DCC LED charge  
controller



Integrated  
DC/DC converter



Solar charge  
controller in a  
housing



Different types of  
LiFePO4 batteries

# NEW DEVELOPMENT

## Customised new product development

SOLARC is specialised in the complete development of low-power solar products for other companies, from the prototype to the serial run. SOLARC falls back thereby on long-lasting cooperation with renowned partners in other industrial fields (plastic and metall processing, software, etc.).

Some **examples** of recent developments are:



### GPS-SOLAR®

- Tracking system for mobile objects implementing GPS/GSM-UMTS technology
- GPS navigation for sprinkle irrigation
  - Intelligent charging control (100% self-sufficient)
  - Tracking App (web interface)
  - Modular architecture

### CarSolar

- Solar charger for a vehicle's starter battery

### Charge regulator with

### Motor control units

Solar charger for Li-ion batteries



GPS-SOLAR®



Raindancer®



Charge regulator with motor control unit



Wearable electronics



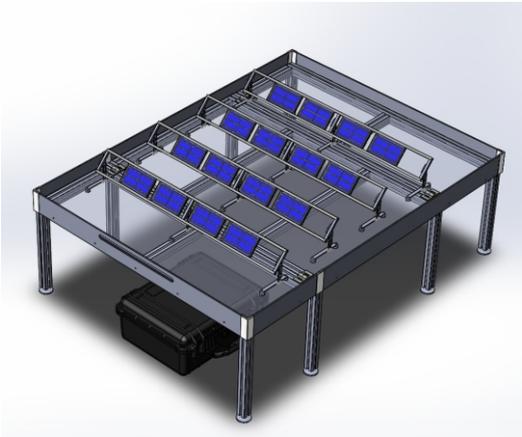
Rapid prototyping

# NEW DEVELOPMENT

## Customised new product development

**PVPO: PV Plant Power Optimizer and test rig for long term studies of R&D mini-modules:**

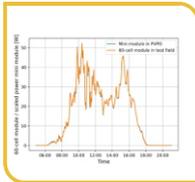
PVPO is a test rig with miniaturized PV modules offering a complete replication of real PV systems in the field, thus offering the possibilities to optimise the real PV Plant and getting more energy yield.



- Easy to configure miniaturized PV plant for comparative energy yield measurements and long-term studies of test modules.
- Optimizing the layout of PV power plants by design tuning.
- Comparison of energy yields of PV power plants by a highly flexible test rig including variation of tilt angle, azimuth, ground cover ratio, underground, fixed/HSAT, bifacial/monofacial
- On-site energy yield measurements
- Comparative long-term studies of small sized test modules using a test rig with high precision loads, enabling statements about degradation or specific sensitivity effects.



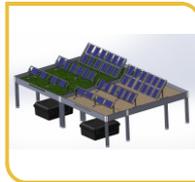
**Bifacial Array**



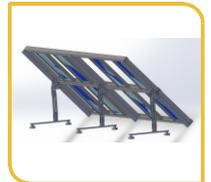
**Comparison:  
Module vs PVPO**



**Bifacial array with  
HSAT**



**Different settings  
and  
undergrounds**



**Different setups**

# ROME G M 20 G

## Laser based measurement of the rotor geometry

Dynamic Geometry Measurement (DGM) is a method for the verification of the aerodynamic condition and the aero-elastic behaviour of a wind turbine rotor and the turbine itself.

DGM is a laser-based simultaneous distance measuring method at two profile-sections of the blades. Measurements are taken during turbine operation in order to be able to assess the asymmetries of the rotor and their negative impact on system loads by evaluating the axial movement of the tower.



The measuring process is carried out on turbine in operation:

- No yield losses during measurement
- Measurement takes place under real conditions
- Fast measuring process
- Results are immediately available

A well balanced rotor results in:

- Better performance
- Higher availability
- Longer service-life of all components



**Angular differences at root section**



**Angular differences at tip section**



**Axial tower oscillation**



**Tower clearance**



**Twist angle**

# SOLARC

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