

## SOLARA M-SERIES

# Premium quality for professional use



**ADDITIONAL SOLAR CELLS FOR  
MAXIMUM YIELDS**

**5 YEARS PRODUCT WARRANTY**

### APPEARANCE AND DESIGN

- Stability and maximum heat dissipation due to aluminum-sandwich-plate
- Thanks to innovative cell-chaining technique semi-flexible (up 3 %) mountable
- Walkable
- Extremely resistant protective Nowoflon film on front and back
- Particularly flat and glued screwed cable outlet with strain relief
- Well known since 20 years
- Already prepared cable gland in the carrier plate

### MAXIMUM POWER AT HIGHEST QUALITY

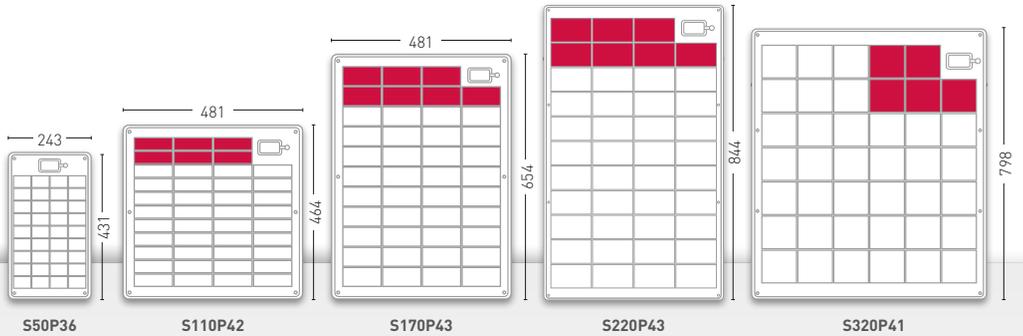
- Extremely high yields through the use of crystalline high performance cells
- Maximum daily yield by additional single cells
- Powerful low-light performance – High yields even under cloudy and partially shaded conditions
- External cell protector with bypass diodes offers protection against cell overheating (Hot-Spots) is included



### WE GUARANTEE

- 5 years product warranty\*
- Made in Germany
- Unchangeable serial number at the front side

\* Full terms of guarantee: [www.solara.de](http://www.solara.de)



UP TO 43 HIGH PERFORMANCE CELLS

## PERFORMANCE AT STC\*

Type	S50P36 Marine	S110P42 Marine	S170P43 Marine	S220P43 Marine	S320P41 Marine
Daily output in summer in Germany (Ø) Wh/d	50	110	170	220	320
Rated output (P <sub>mpp</sub> ) Wp	12	27	41	55	80
Short-circuit current (I <sub>sc</sub> ) A	0.65	1.29	1.92	2.54	3.84
Open-circuit voltage (U <sub>oc</sub> ) V	22.72	26.50	27.13	27.13	25.87
Voltage (U <sub>mpp</sub> ) V	19.15	22.34	22.88	22.88	21.81
Current (I <sub>mpp</sub> ) A	0.61	1.22	1.81	2.40	3.62
Module efficiency $\eta$ %	11.5	12.1	13.0	13.5	14.4

## Dimensions and weight

Dimensions (L x B x H) mm	431 x 243 x 3	464 x 481 x 3	654 x 481 x 3	844 x 481 x 3	798 x 695 x 3
Weight kg	0.9	1.7	2.2	2.8	3.7
Cell dimensions mm	52 x 35	104 x 35	104 x 52	104 x 69	104 x 104

## Thermal properties

TK P <sub>mpp</sub> %/K	-0.45
TK U <sub>oc</sub> %/K	-0.36
TK I <sub>sc</sub> %/K	0.03
NOCT °C	46 ± 2

## Other technical data

System voltage	24 V
Reverse current carrying capacity IR	12 A
Measuring accuracy P <sub>mpp</sub> at STC	± 5 %
Module thickness	3 mm

## Material used

Cell technology	mono and poly crystalline
Front side/back side	extremely resistant protective Nowoflon film on front and back, sealed all along the edge
Cable outlet	Small, flat, robust, sealed, screwed seawaterproof cable outlet
Hotspot protector (external)	attached to the modules S170P43, S220P43, S320P41

Date 01/2016. Errors and omissions excepted. Technical changes reserved.



\*Performance at STC, Standard Testing Conditions: 1000W/m<sup>2</sup>, AM 1.5, cell temperature 25° C