

SOLARA®
module. komponenten. systeme



**SOLAR POWER
WHERE I NEED IT**



For travellers and
stand alone systems





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YOUR WAY TO US

- Phone: +49 (0)40 - 300 66 82-0
- e-mail: info@solara.de
- Web: www.solara.eu

Quality Made in Germany

Each SOLARA panel has an unchangeable serial number protected behind the front glass.



The standardized label on the backside informs about the panel type, the power and additional technical data.

SOLARA®		S 360M36 Ultra (SM)
system voltage	U _s 12 V	Systemspannung
nominal power STC	P _{max} 90 Wp	Nennleistung
power tolerance	± P ±1,5%	Lastausgang
nominal voltage	U _m 18,00 V	Spannung bei Nennleistung
open circuit voltage	U _{oc} 21,90 V	Leerlaufspannung
nominal current	I _m 5,00 A	Strom bei Nennleistung
short circuit current	I _{sc} 5,45 A	Kurzschlussstrom
daily performance up to order number	E _h 360 WWh	Ertrag
	611090101	Artikel
CE		CE
SOLARA®		2141800

The extremely stable, untwist able hollow profile frame is made of seawater resistant aluminum. The edges are stabilized by solid aluminum angles.



The modern water protected junction box (IP65) is not higher than the frame and is pre-wired with 90cm 4qmm MC4 compatible solar cable.



NOT ALL SOLAR PANELS ARE THE SAME

Solara – always a good choice

SOLARA – QUALITY SINCE TWO DECADES

SOLARA complete photovoltaic systems, components and solar modules are primarily being used in places with is no reliable electricity grid: in remote geographical locations; at sea; in technological equipment; in traffic control and telecommunications systems.

SOLARA stand-alone solutions are also used in caravans, motor homes, boats and yachts to generate off-grid electricity.

SOLARA stand-alone-systems are designed to work flawlessly in a wide range of climate conditions. They are extremely robust, can be used flexibly and generate maximum electricity yields even in unfavorable light conditions.

To ensure the quality and performance capabilities of the SOLARA product range, all panels and mounting systems are manufactured in Germany. Every solar panel is tested and certified according to stringent quality standards and ISO requirements. Every completed solar panel is measured according to the international STC protocol and registered with an unchangeable serial number.

WE SUPPLY SOLUTIONS

- High quality of service before and after sale
- Best quality of material and workmanship
- High electric efficiency and long-lasting warranty
- High-value additional components from premium manufacturers



CERTIFICATION AND TESTS

- Mechanical load tests
- Weather-proofness of the cell embedding
- Climate test of the whole solar panel
- Salt water resistance tests
- Degradation tests
- Testing the cells for micro cracks
- Stability of the soldered connections
- Inhouse tests



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Heavy Snow Load tested
- Ammonia resistance tested
- Salt corrosion resistance tested

TIPPS FOR SYSTEM LAYOUT

Independent power supply

SYSTEMS FOR EVERY NEED

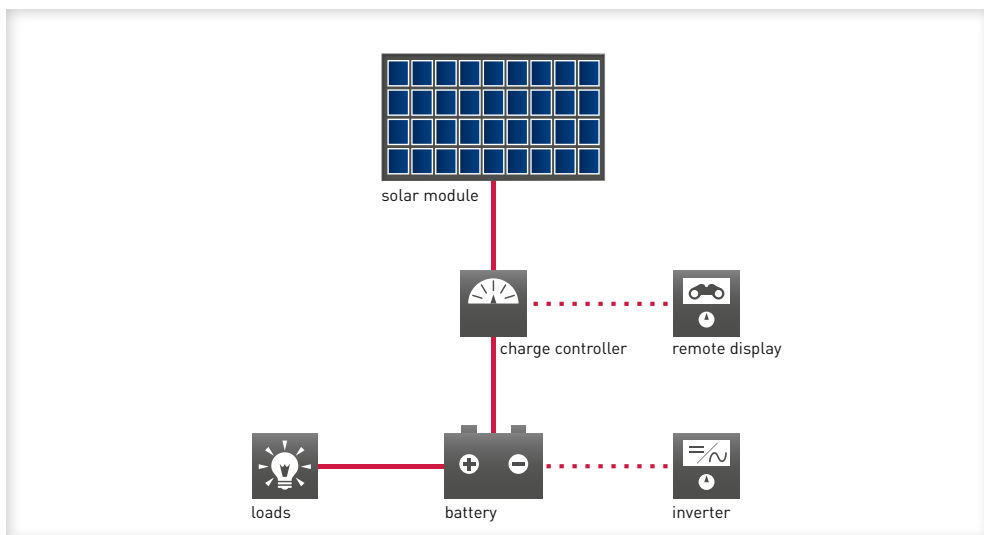
A reliable power supply, aligned to the needs, is the most important criteria. Doesn't matter if it is a RV, Caravan or boat, alpine hut or measurement station, in many cases a small solar system can secure an independent power supply – even without complicated inverter technology.

On the following pages you will find various complete solutions, for nearly all kind of demand. Advantage SOLARA is here that all sets can be assembled quickly, due to well-matched components.

MAXIMUM FLEXIBILITY

Such a system is a solid basis for more complex systems in the future. The modular layout ensures flexibility. Additional components can be added step by step to adopt the system to an increasing energy demand.

THE PRINCIPLE



HOW TO FIND THE RIGHT SYSTEM SIZE

To find out how much solar power is needed, take a closer look to the appliances and the energy consumption you have. The total energy consumption is calculated from the number of appliances, the nominal power and the daily usages duration. Additionally the number of occupants and the period of the year you are traveling influences the energy consumption.

Device	Nominal power	Usage duration	Consumption
Radio	15 W	4 Hours	60 Wh/Day
Color TV	40 W	3 Hours	120 Wh/Day
Sat-receiver	40 W	3 Hours	120 Wh/Day
Lamps	5 W	5 Hours	50 Wh/Day
Freezer	50 W	6 Hours	300Wh/Day
Mobile phone	5W	2 Hours	10Wh/Day
Tablett computer	15W	2 Hours	30Wh/Day
Chartplotter	15W	6 Hours	90Wh/Day
Autopilot	40W	6 Hours	240Wh/Day
Watermaker	110W	4 Hours	440Wh/Day
Instrument display	10W	6 Hours	60Wh/Day

Do the above calculation for your own and add the consumption of each appliance you have. The result is your daily needed amount of energy. According to your travel behaviors you should compensate more or less this amount of energy with your solar system.

SPECIAL NEEDS – NO PROBLEM, CONTACT YOUR LOCAL SOLARA SPECIALIST.

HOW TO FIND THE RIGHT SYSTEM SIZE

To find out which of our systems is the best, take a closer look at your usage conditions first. The total energy consumption is influenced by the number of users, travel behaviors, travel time and the vehicle size.

- Just to extend the capacity of your battery for a little bit longer stay, it is enough to compensate parts of the consumption with a solar system.
- If you travel mainly during summer your solar systems will generate very good yields and can be sized smaller.
- In smaller vehicles with just one or two persons the consumption is mostly lower and can be compensated with a smaller solar system.



Solar system up to 100W

- Ideal for Camper vans and small RVs
- Mainly weekend traveling during summer time
- Loads: Lights, pump, radio, small compressor fridge
- Recommended products: Power Mobil, Power Mobil Plus, modules from the S-Series or M-Series

Solar system with 100 Wp (400 Wh/d)

- Ideal for small and medium-size RVs
- Usage period is mainly April to September
- Loads: lights, pump, radio, TV/SAT
- Recommended products: SOLARA Packs, modules from the S-Series

Solar system with 100 - 200 Wp (400 - 800 Wh/d)

- Ideal for medium and large-sized RVs
- Usage period can be all around the year
- Loads: lights, pump, radio, TV/SAT, compressor fridge
- Recommended products: SOLARA Packs, modules from the S-Series

Solar system larger 200 Wp (→800 Wh/d)

- Ideal for medium and large-sized RVs
- Usage period can be all around the year
- Loads: lights, pump, radio, TV/SAT, compressor fridge
- Recommended products: SOLARA Packs, modules from the S-Series



Solar system smaller 25W

- All kind of boats
- Trickle charging to keep the battery alive
- Usage period can be all year long
- Recommended products: SOLARA M-Series

Solar system with 30-80W

- Small Sailing boats, Power boats
- Increasing the battery capacity
- Loads: Compressor fridge, Radio, navigation, lights
- Usage period: Summer time, weekend trips, 2-3 days in a bay
- Recommended products: SOLARA M-Series, Power Mobil

Solar system with 80-150W

- Sailing boats, Catamarans, Charter boats
- Close to full energy compensation
- Loads: Compressor fridge, Radio, navigation, lights, communication, tablet computer
- Used for long distance trips and trips with short/no harbor time
- Recommended products: SOLARA M-Series, Power M-Series, Power Mobil

Solar system with 150W and more

- Large Sailing boats, Catamarans, Charter boats
- Full energy compensation possible
- Loads: Compressor fridge, Radio, navigation, lights, communication, tablet computer
- Used for Long distance trips, Bluewater sailing and trips with short/no harbor time
- Recommended products: SOLARA M-Series, Power M-Series, S-Series

SOLARA COMPLETE-SET POWER PACK

Maximum power on smallest area



ALL IN BLACK - HIGHEST POWER IN ELEGANT AND ESTETIC DESIGN

SCOPE OF DELIVERY

- SOLARA panels from the Power-S-Series with black-colored frame
 - MPPT charge controller, Victron 15 A/30 A or Solara 16A
 - ABS spoiler in black, specially coated, UV-resistant, screws included
 - Roof grommet DD1 in white for completely watertight cable feedthrough
 - Special glue set SOLARA FIX PACK for gluing the ABS spoilers
 - Module connection cable, UV-resistant with MC4 compatible plugs
-
- Detailed mounting instruction
 - 5 years product warranty on all components
 - Remote display or Bluetooth connection optional available (only with Victron chargers)
 - Everything in one box

SOLARA POWER PACKS

Type	POP01	POP02	POP03	POP04
Power (W)	120	150	240	300
Daily yield (Wh)	480	625	960	1250
Solar panels (Type)	S480M36 Ultra	S625M44 Ultra	S480M36 Ultra	S625M44 Ultra
No. of cells (pc)	36	44	36	44
No. of solar panels (pc)	1	1	2	2
Solar panel size (mm)	1237 x 557 x 40	1500 x 557 x 40	1237 x 557 x 40	1500 x 557 x 40
Total length incl. spoiler (mm)	1387	1650	2 x 1387	2 x 1650
Charger	Victron 15 A	Victron 15 A	Solara SR280E MPPT	Victron 30 A

5 YEARS PRODUCT WARRANTY

SOLARA COMPLETE-SET PREMIUM PACK

Perfectly charged under all conditions



**BEST PRICE-
PERFORMANCE RATIO**

LOAD AND ENGINE BATTERY CHARGED AT THE SAME TIME

SCOPE OF DELIVERY

- SOLARA panels from the S-Series with silver-colored frame
- MorningStar 2-battery-circuit charger with 25A
- ABS spoiler in white, specially coated, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Detailed mounting instruction
- 5 years product warranty on all components
- Remote display optional available
- Everything in one box

SOLARA PREMIUM PACKS

Type	PRP01	PRP02	PRP03	PRP04
Power (W)	110	160	220	320
Daily yield (Wh)	440	640	880	1280
Solar panel (Type)	S445M36 Ultra	S640P36 Ultra	S445M36 Ultra	S640P36 Ultra
No. of cells (pc)	36	36	36	36
No. of solar panels (pc)	1	1	2	2
Solar panel size (mm)	1237 x 557 x 40	1500 x 680 x 40	1237 x 557 x 40	1500 x 1237 x 40
Total length incl. spoiler (mm)	1387	1650	2 x 1387	2 x 1650
Charger	MorningStar Duo, 25 A	MorningStar Duo, 25 A	MorningStar Duo, 25 A	MorningStar Duo, 25 A

5 YEARS PRODUCT WARRANTY

WE GUARANTEE

- Premium quality "Made in Germany"
- 5 years product warranty for all components
- Security by TÜV testings
- Adapted charging technology
- Fair price calculation
- Product diversity with solar panels and controllers





SOLARA COMPLETE-SET PROFI PACK

For vehicles with Schaudt-EBL

IDEAL FOR RVs WITH
SCHAUDT EBL-BLOC



MATCHES PERFECTLY WITH SCHAUDT ELECTRICAL SYSTEM

SCOPE OF DELIVERY

- SOLARA panels, S-Series with silver-colored frame
- Schaudt EBL charge controllers, 18A, incl. all connection cables
- ABS spoiler in white, specially coated, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Detailed mounting instruction
- 5 years product warranty on all components
- Everything in one box

SOLARA PROFI PACKS

Type	PP01	PP02	PP03
Power (W)	110	160	220
Daily yield (Wh)	440	640	880
Solar panel (Type)	S445M36 Ultra	S640P36 Ultra	S445M36 Ultra
No. of cells (pc)	36	36	36
No. of solar panels (pc)	1	1	2
Solar panel size (mm)	1237 x 557 x 40	1500 x 680 x 40	1237 x 557 x 40
Total length incl. spoiler (mm)	1387	1650	2 x 1387
Charger	Schaudt LR12/18	Schaudt LR12/18	Schaudt LR12/18

5 YEARS PRODUCT WARRANTY

SOLARA COMPLETE-SET STARTER PACK

Starter set with 16A charge controller

**BESTSELLER!**

YOUR START WITH PERFORMANCE BY SOLARA

SCOPE OF DELIVERY

- SOLARA panel, S-Series with silver-colored frame
- SOLARA charge controller, 16A, with LED display for displaying the battery charge condition
- ABS spoiler in white, specially coated, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Detailed mounting instruction
- 5 years product warranty on all components
- Remote display optional available
- Everything in one box

SOLARA STARTER PACKS

Type	SP01	SP02
Power (W)	110	160
Daily yield (Wh)	440	640
Solar panel (Type)	S445M36 Ultra	S640M36 Ultra
No. of cells (pc)	36	36
No. of solar panel (pc)	1	1
Solar panel size (mm)	1237 x 557 x 40	1500 x 680 x 40
Total length incl. spoiler (mm)	1387	1650
Charger	Solara SR280E	Solara SR280E

5 YEARS PRODUCT WARRANTY

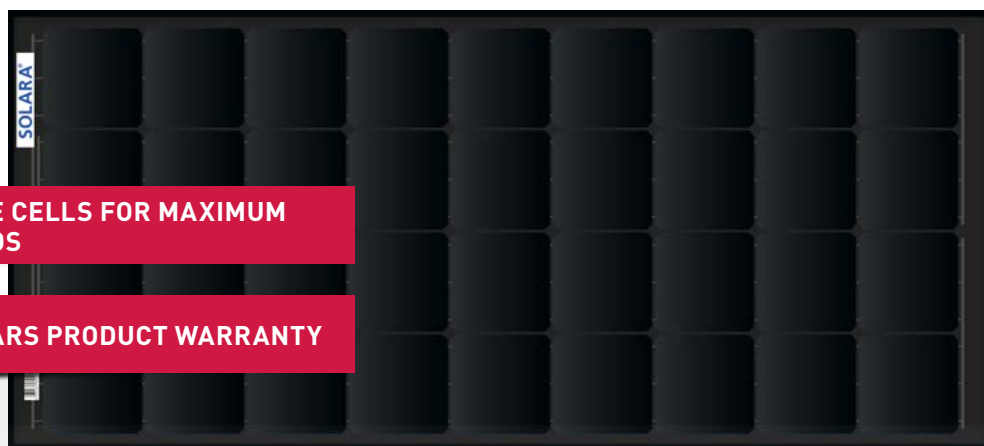
WE GUARANTEE

- Premium quality "Made in Germany"
- 5 years product warranty for all components
- Security by TÜV testings
- Adapted charging technology
- Fair price calculation
- Product diversity with solar panels and controllers



SOLARA POWER S-SERIES

Highest yields guaranteed



MORE CELLS FOR MAXIMUM YIELDS

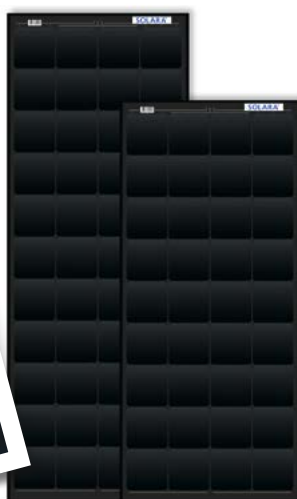
5 YEARS PRODUCT WARRANTY

MAXIMUM POWER WITH PERFECT DESIGN

- Elegant and attractive design with black finishing
- Slim shape – for a wide range of applications
- Increased number of cells for best performance
- Latest back-contact cell technology with 22% of cell efficiency

HIGHEST LIFE EXPECTANCY EVEN UNDER EXTREME CLIMATIC CONDITIONS

- 3.2 mm, scratch-resistant thermally hardened thin glass
- Excellent mechanical load resistance thanks to its torsion-resistant module frame
- Especially developed for permanent operation at extreme heat as well as high humidity



WE GUARANTEE

- Highest yields due to mono crystalline Back-Contact solara cells with over 22 % back-contact cell efficiency
- Best low-light behaviour
- 5 years product warranty*
- Made in Germany

* Full terms of guarantee: www.solara.eu



S-Serie S480M36

S-Serie S625M44

120 W · 150 W

PERFORMANCE AT STC*

Type	S480M36 Ultra	S625M44 Ultra
Daily output in summer in Germany (Ø) Wh/d	480	625
Rated output (Pmpp) Wp	120	150
Short-circuit current (Isc) A	6.87	6.40
Open-circuit voltage (Uoc) V	24.68	30.36
Voltage (Umpp) V	19.08	25.96
Current (Impp) A	6.56	6.00

Dimensions and weight

Dimensions (L x B x H) mm	1237 x 557 x 40	1500 x 557 x 40
Weight kg	7.9	9.9
Cell dimensions mm	125 x 125	125 x 125

Thermal properties

TK Pmpp %/K	-0.38
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Glass thickness	3.2 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono crystalline
Number of cells	36/44 pc
Front	tempered solar glass
Frame	anodized aluminum hollow profile, silver
Junction box	IP65 with MC4 compatible connector

Date 03/2017. Errors and omissions excepted. Technical changes reserved.

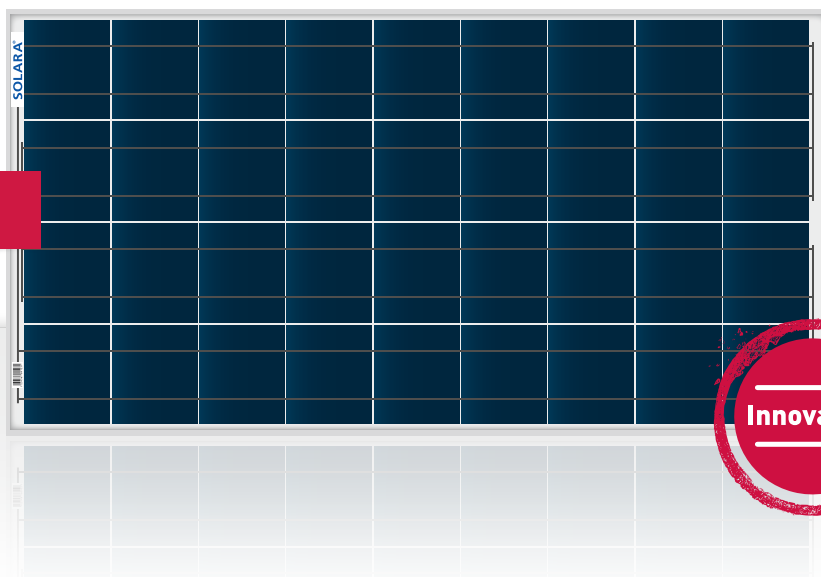


*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA S-SERIES VISION

Unbreakable with glass/glass technology

WALKABLE



Innovation

TOP QUALITY FOR PROFESSIONAL MOBILE APPLICATIONS

- Solar modules with 36 high-performance solar cells
- Sturdy, seawater-resistant aluminium frame
- Glass/glass technology
- Very robust and walkable, carries up to 18.000 Pa

SECURE

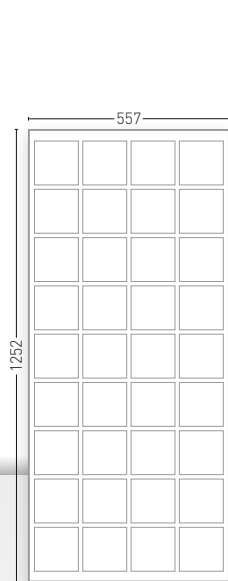
- Frame with dewatering holes to avoid frost damage
- Large, waterproof junction box with connection cable and MC4 compatible plugs
- Ammonia resistant
- Saltwater resistant
- Hail resistant



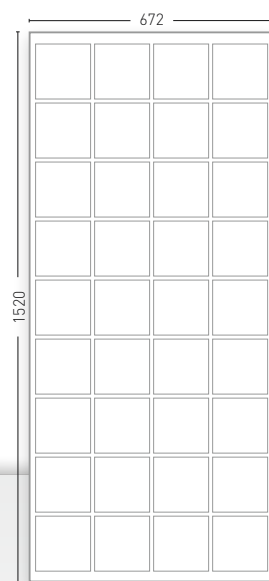
WE GUARANTEE

- High performance also during low irradiation and months with diminished light
- Highest life expectancy even under extreme climatic conditions
- 5 years product warranty*
- Made in Germany

* Full terms of guarantee: www.solara.eu



S450M36 Vision



S600P36 Vision

110 W · 150 W

PERFORMANCE AT STC*

Type	S450M36 Vision	S600P36 Vision
Daily output in summer in Germany (Ø) Wh/d	440	600
Rated output (Pmpp) Wp	110	150
Short-circuit current (Isc) A	6.50	8.83
Open-circuit voltage (Uoc) V	21.70	22.40
Voltage (Umpp) V	17.70	17.90
Current (Impp) A	6.20	8.39

Dimensions and weight

Dimensions (L x B x H) mm	1252 x 557 x 40	1520 x 672 x 40
Weight kg	9.4	15.0
Cell dimensions mm	125 x 125	156 x 156

Thermal properties

TK Pmpp %/K	-0.45
TK Uoc %/K	-0.36
TK Isc %/K	0.03
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Glass thickness (Vision)	2 x 2 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono or poly crystalline
Number of cells	36 pc
Front	tempered solar glass
Frame	anodized aluminum hollow profile, silver
Junction box	IP65 with MC4 compatible connector

Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA S-SERIES

Robust and reliable

5 YEARS PRODUCT WARRANTY

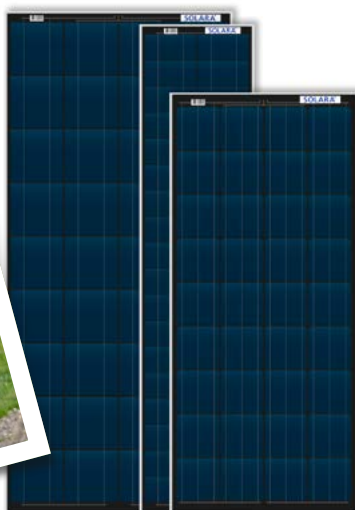


TOP QUALITY FOR PROFESSIONAL MOBILE APPLICATIONS

- Solar modules with 36 high-performance solar cells
- Sturdy, seawater-resistant aluminium frame

SECURE

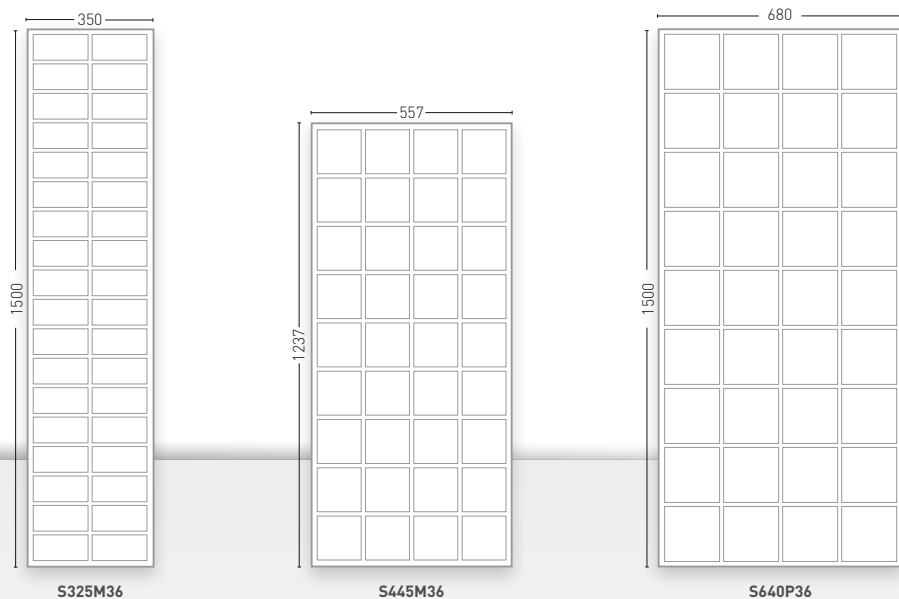
- Frame with dewatering holes to avoid frost damage
- Large, waterproof junction box with connection cable and MC4 compatible plugs
- Weather and water proof foil provides highest life expectancy even under extreme climatic conditions
- Ammonia resistant
- Saltwater resistant
- Hail resistant



WE GUARANTEE

- High performance also during low irradiation and months with diminished light
- Highest life expectancy even under extreme climatic conditions
- 5 years product warranty*
- Made in Germany

* Full terms of guarantee: www.solara.eu

**80 W · 110 W · 160 W****PERFORMANCE AT STC***

Type	S325M36	S445M36	S640P36
Daily output in summer in Germany (Ø) Wh/d	325	445	640
Rated output (Pmpp) Wp	80	110	160
Short-circuit current (Isc) A	4.40	6.50	8.93
Open-circuit voltage (Uoc) V	22.70	21.70	22.97
Voltage (Umpp) V	19.20	17.70	19.30
Current (Impp) A	4.20	6.30	8.29

Dimensions and weight

Dimensions (L x B x H) mm	1500 x 350 x 40	1237 x 557 x 40	1500 x 680 x 40
Weight kg	7.5	7.9	12.1
Cell dimensions mm	156 x 78	125 x 125	156 x 156

Thermal properties

TK Pmpp %/K	-0.45
TK Uoc %/K	-0.36
TK Isc %/K	0.03
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Glass thickness	3.2 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono or poly crystalline
Number of cells	36 pc
Front	tempered solar glass
Frame	anodized aluminum hollow profile, silver
Junction box	IP65 with MC4 compatible connector

Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA POWER M-SERIES

Highest performance with top quality



HIGH EFFICIENT SOLAR CELLS

5 YEARS PRODUCT WARRANTY

APPEARANCE AND DESIGN

- Elegant and attractive black design
- Extremely flat shape with aluminum sandwich plate
- Innovative cell connectors allow various installations such as bimini-top
- High stability even to walk on
- Already prepared cable gland in the carrier plate
- Cable gland position ideally positioned for elevating-roofs

MAXIMUM POWER EVEN UNDER EXTREME CONDITIONS

- Highest efficiency ensured by the use of monocrystalline back-contact cells with 22 % efficiency
- Increased tension thanks to additional single cells
- High output voltage due to additional solar cells
- Best low-light behavior – high yields even under diffuse irradiation
- Especially developed for permanent operation at extreme heat as well as high humidity
- Equipped with an UV resistant solar cable, seawater proof cable outlet and mounting holes
- External cell protector with bypass diodes offers protection against cell overheating



WE GUARANTEE

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

* Full terms of guarantee: www.solara.eu



**MORE CELLS FOR
MAXIMUM OUTPUT**

PERFORMANCE AT STC*

Type	S440M34 Marine	S460M35 Marine	S560M43 Marine
Daily output in summer in Germany (Ø) Wh/d	440	460	560
Rated output (Pmpp) Wp	110	115	140
Short-circuit current (Isc) A	6.30	6.30	6.30
Open-circuit voltage (Uoc) V	23.30	24.00	29.50
Voltage (Ump) V	18.90	20.30	24.30
Current (Impp) A	5.80	5.80	5.80

Dimensions and weight

Dimensions (L x B x H) mm	990 x 660 x 4	1250 x 545 x 4	1510 x 545 x 4
Weight kg	4.2	4.4	5.2
Cell dimensions mm	125 x 125	125 x 125	125 x 125

Thermal properties

TK Pmpp %/K	-0.38
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Module thickness	3 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono crystalline with backcontact
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 all modules

Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA M-SERIES

Premium quality for professional use

**ADDITIONAL SOLAR CELLS FOR
BEST PERFORMANCE**

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

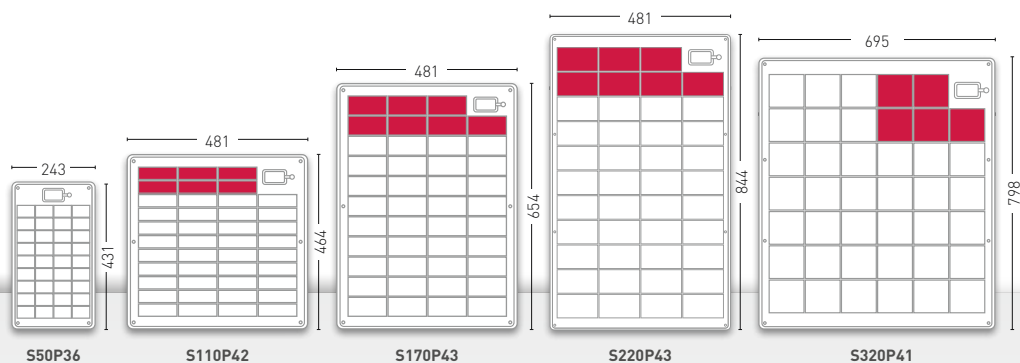
- Extremely high yields through the use of crystalline high performance cells
- Maximum daily yield by additional single cells
- Powerful low-light performance – High yields even under cloudy and partially shaded conditions
- External cell protector with bypass diodes offers protection against cell overheating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

**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 (Pmpp) Wp	12	27	41	55	80
Short-circuit current (Isc) A	0.65	1.29	1.92	2.54	3.84
Open-circuit voltage (Uoc) V	22.72	26.50	27.13	27.13	25.87
Voltage (Umpp) V	19.15	22.34	22.88	22.88	21.81
Current (Impp) A	0.61	1.22	1.81	2.40	3.62

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 Pmpp %/K	-0.45
TK Uoc %/K	-0.36
TK Isc %/K	0.03
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Module thickness	3 mm
Operating temperature range	-40°C to +85°C

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

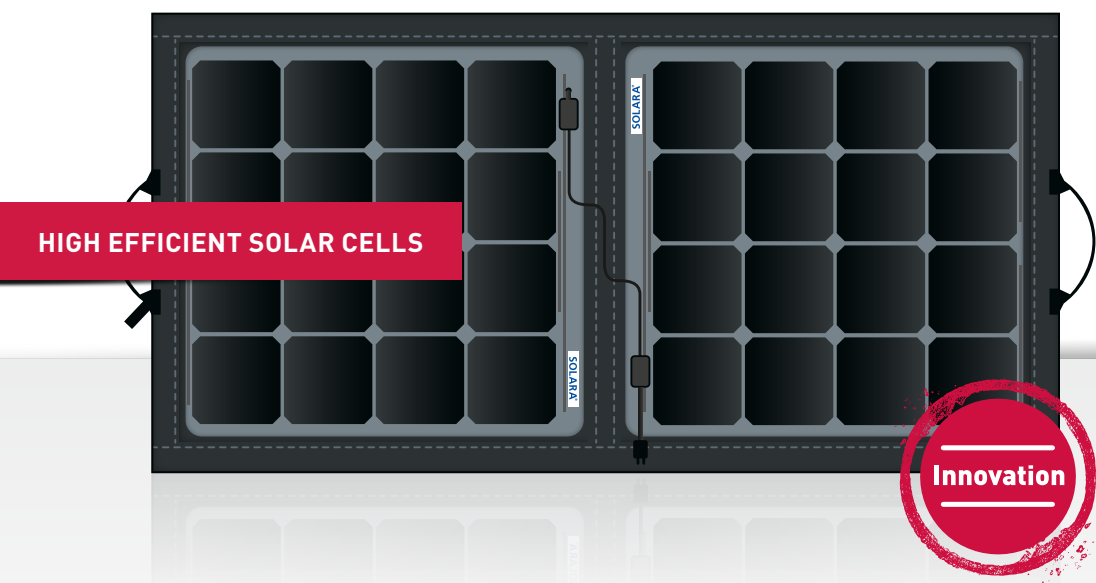
Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA POWER MOBILE

Mobile and flexible – everywhere



APPEARANCE AND DESIGN

- Flexible in use due to textile bordure
- Zipper-, Velcro or Eyelets can be added afterwards for Bimini/Sprayhood installation
- Foldable and space saving
- Efficient battery charging even when RV stands shaded
- No costs for mounting material, fully mobile use

MAXIMUM POWER AT HIGHEST QUALITY

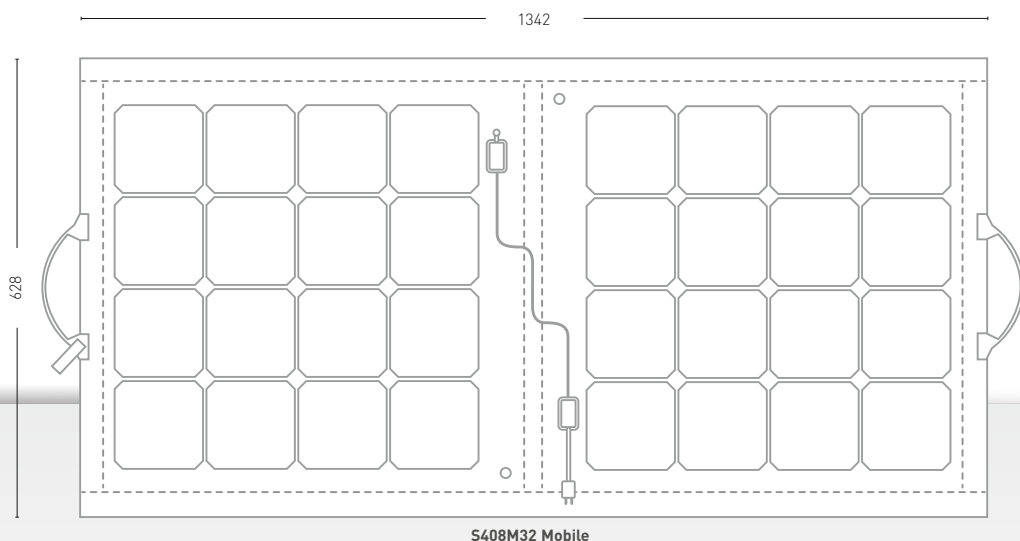
- Outstanding cell-efficiency of 22% by the used back-contact-cells
- Best low-light behaviour – high yield in all seasons
- UV-resistant cable outlet and connection wire



WE GUARANTEE

- High yields even under diffuse irradiation
- Durable even under tough conditions
- 5 years product warranty*
- Made in Germany

* Full terms of guarantee: www.solara.de



102 W

PERFORMANCE AT STC*

Type	S408M32 Mobile
Daily output in summer in Germany (Ø) Wh/d	408
Rated output (Pmpp) Wp	102
Short-circuit current (Isc) A	6.30
Open-circuit voltage (Uoc) V	21.90
Voltage (Ump) V	17.80
Current (Impp) A	5.80

Dimensions and weight

Dimensions open (L x B x H) mm	1342 x 628 x 6
Dimensions closed (L x B x H) mm	685 x 628 x 25
Weight kg	4.9
Cell dimensions mm	125 x 125

Thermal properties

TK Pmpp %/K	-0.38
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Module thickness	6 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono crystalline with backcontact
Front side/back side	Nowoflon film on front and back, sealed all along the edge
Cable outlet	Small, flat, robust, sealed, screwed seawaterproof cable outlet

Date 03/2017. Errors and omissions excepted. Technical changes reserved.

Products included

Cable 5 m pre-mounted with Sure Seal plug (for connection with cable charger FOX)
--

Optionally available

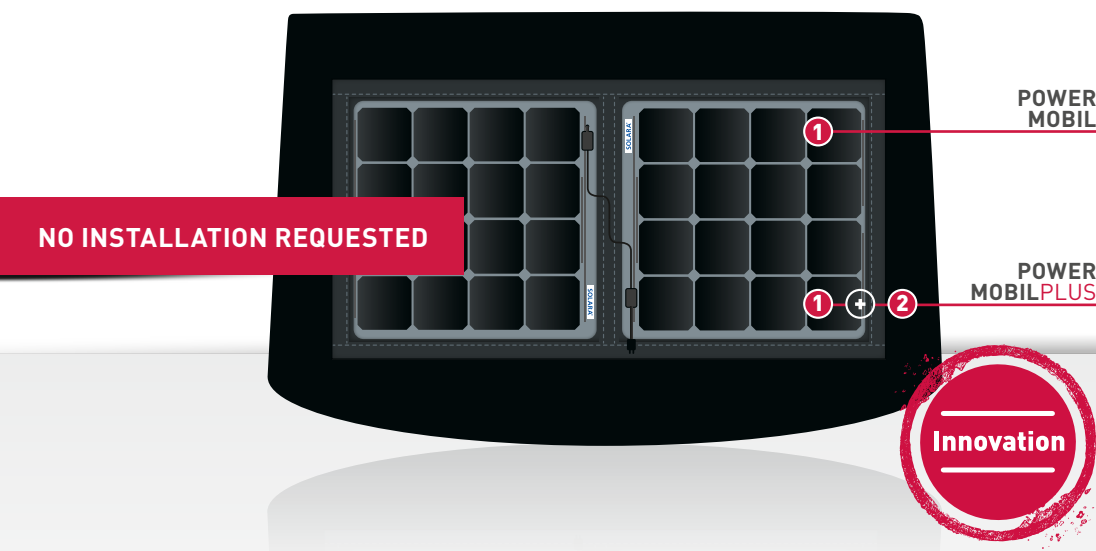
Cable charger Fox 062, 6 A
Extension cable with Sure Seal plugs, 10 m
Eyelets set



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA POWER MOBILEPLUS

Innovative charging



APPEARANCE AND DESIGN

Windscreen blinds

- High resistant textile with integrated waterstop and UV-protection
- Fully opaque and darkening
- Extremely high isolating behaviour due to integrated isolation foam
- Very quick installation due to innovative magnetic fixation
- Easy to clean and to store, foldable
- Available for VW T5/T6, MB Vito, & Sprinter, Fiat Ducato

Solar panel

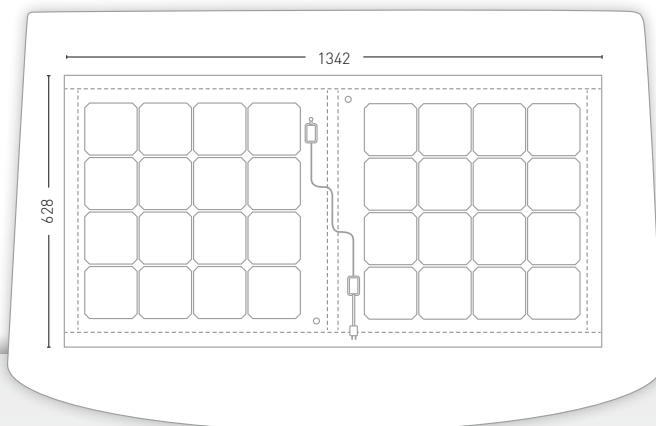
- Integrated into the windscreen blinds, but also separately useable
- Best low-light behaviour with 22% cell efficiency
- UV-resistant cable outlet and connection wire
- Integrated theft protection



Charger FOX-062

WE GUARANTEE

- 5 year product warranty
- Made in Germany
- Unchangeable serial number



S409M32 Mobile plus

FOR MANY DIFFERENT RVs AVAILABLE

PERFORMANCE AT STC*

Type	S409M32 Mobile plus
Daily output in summer in Germany (Ø) Wh/d	408
Rated output (Pmpp) Wp	102
Short-circuit current (Isc) A	6.30
Open-circuit voltage (Uoc) V	21.90
Voltage (Umpp) V	17.80
Current (Impp) A	5.80

Dimensions and weight

Dimensions module open (L x B x H) mm	1342 x 628 x 6
Dimensions module closed (L x B x H) mm	685 x 628 x 25
Dimensions front module (L x B x H) mm	1775 x 1020 x 16
Weight kg	4,9/6,4
Cell dimensions mm	125 x 125

Thermal properties

TK Pmpp %/K	-0.38
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2

Other technical data

Reverse current carrying capacity IR	12 A
Measuring accuracy Pmpp at STC	± 5 %
Module thickness	6 mm
Operating temperature range	-40°C to +85°C

Material used

Cell technology	mono crystalline with backcontact
Front side/back side	Nowoflon film on front and back, sealed all along the edge
Cable outlet	Small, flat, robust, sealed, screwed seawaterproof cable outlet

Date 03/2017. Errors and omissions excepted. Technical changes reserved.

Scope of supply

Cable 5 m pre-mounted with Sure Seal plug (for connection with cable charger Fox)
--

Optionally available

Cable charger Fox 062, 6 A
Cable charger with Sure Seal plugs, 10 m
Eyelets set



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA CONTROLLER

The smart way of charging

SOLARA charge controller for all types of batteries.

We guarantee high reliability, latest technologies and easy handling at competitive pricing. The PWM charging characteristic guarantees efficient charging. All Solara charge controllers are high efficient serial controllers (no shunt). The LVD terminal can help to protect the battery from deep discharging. A large LCD Display shows the current system status and values from the data logger. The SR350DOU additionally offer the possibility to charge two independent battery circuits.



- Features
- Automatic 12/24V detection
 - Solar power <90 up to 350W
 - Electronic protection against overcharging, reverse polarity, overvoltage
 - Low voltage disconnect
 - Battery type selector
 - Ready for Lithium-batteries (in accordance with manufacturer)
 - LED indicators for state of charge
 - Temperature compensated charging
 - Low self-consumption <4mA
 - USB port for charging (at SR180/SR350LCD)
 - Charging two battery circuits (SR350DUO)
 - IP65 metal housing (SR280E)

5 YEARS PRODUCT WARRANTY

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
SR85TL	90/180	5	12 / 24	LED
SR135TL	140/280	8	12 / 24	LED
SR175TL	180/360	10	12 / 24	LED
SR345TL	350/700	20	12 / 24	LED
Remote Meter for SR85/135/175/345TL für Voltage, Current				
SR280E	280	16	12	LED
SR180LCD	180/360	10	12 / 24	LCD
SR350LCD	350/700	20	12 / 24	LCD
SR350DUO	350/700	20	12 / 24	LCD

SOLARA MPPT-CONTROLLER

Charge controllers with MPPT technology extend the range of useable solar modules enormous. Due to the possibility to work with high input voltages enables this controller to be very efficient and create high yields. Even under frequent changing irradiation conditions MPPT technology generates more energy.



- Features
- Ultra fast Maximum Power Point Tracking (MPPT)
 - 12/24V automatic detection
 - Solar-Input voltage up to 85V
 - Maximum charging current 16A
 - Robust metal housing in IP68
 - Fully electronic protection
 - Low self-consumption

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
SR280E MPPT	250/500	16	12 / 24	LED

MORNINGSTAR CONTROLLER

The professional way of charging

Top quality made by MorningStar with 5 years warranty.

Highest efficiency, robust design, a wide power range – that is what MorningStar stands for.

Features

- Epoxy-sealed printed circuit board
- Charges sealed and liquid batteries
- Temperature sensor and LVD
- Controlled charging characteristic with PWM
- Serial design, no shunt
- All fuses are electronic
- Low self consumption <8mA
- Top quality with 5 years warranty



SunGuard



Sun Saver 20

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
SunGuard	75	4.5	12	--
SunSaver 6	110	6	12	LED
SunSaver 10	165	10	12	LED
SunSaver 20	330	20	12	LED

MORNINGSTAR TRISTAR

HIGH QUALITY WITH
5 YEARS PRODUCT WARRANTY

For high power systems

In larger installations up to 60A solar current and 48V systems voltage the TriStar is best possible choice. Robust design, no fans for cooling and several communication option are key facts for professional use.

The features

- automatic voltage detection
- Adjustable for all types of batteries
- PWM charging characteristic
- Ready for Lithium-batteries (in accordance with manufacturer)
- Full electronic protection
- Solid design and no fans
- Integrated datalogger for 256 days
- Low self consumption <20mA
- Top Quality with 5 years warranty
- Programmable for customs settings
- Multi-lingual display



TriStar 60

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
TriStar 45	740/1480/2960	45	12/24/48	optional
TriStar 60	990/1980/3960	60	12/24/48	optional
ProStar 15	250/500	15	12/24	*
ProStar 15M	250/500	15	12/24	integrated
ProStar 30	500/1000	30	12/24	*
ProStar 30M	500/1000	30	12/24	integrated

More accessories, displays, communication options, sensors available on request

MORNINGSTAR DUAL-BATTERY CONTROLLER

Charging two batteries

The latest generation of MorningStar controllers for charging two circuits at the same time.



SunSaverDuo

- Features**
- Flexible charging of two circuits (90% : 10% or 50% : 50%)
 - Module power up to 425 Watt
 - Max. charging current 25 A
 - Top quality with 5 year warranty
 - Optional remote LCD display RM-1. RM1 shows battery voltage, charging current, Ampere hours
 - Optional temperature sensor
 - Ready for Lithium-batteries (in accordance with manufacturer)
 - Low self consumption <10mA

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
SunSaverDuo	425	25	12	LCD remote meter
SunSaverDuo Basic	425	25	12	--

LITHIUM-READY

MORNINGSTAR MPPT CONTROLLER

Power-charging with MPPT

Extra yields of 10 - 15% per day by MPPT technology. Best results in systems with higher number of cells in the solar module.



ProStar MPPT

- Features**
- 12/24/48V automatic detection
 - Max. PV open circuit voltage 75/150V
 - Full electronic protection
 - several communication ports
 - 30/200 day data logger
 - Solid design and no fans
 - Programmable via MS-View software
 - Ethernet connection
 - MODBUS protocol (ProStar & TriStar)
 - Build-in or remote meter
 - Lithium Ready (in accordance with manufacturer)
 - Low self consumption 30mA

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
SunSaver MPPT	200/400	15	12/24	--
Remote meter RM-1	Remote meter for SunSaver MPPT			LCD
ProStar 25 MPPT	350/700	25	12/24	--
ProStar 25M MPPT	350/700	25	12/24	LCD
ProStar 40 MPPT	550/1100	40	12/24	--
ProStar 40M MPPT	550/1100	40	12/24	LCD
TriStar 30 MPPT	400/800/1600	30	12/24/48	optional
TriStar 45 MPPT	600/1200/2400	45	12/24/48	optional
TriStar 60 MPPT	800/1600/ 3200	60	12/24/48	optional

* Accessories: LCD display, remote display and battery sensor on request

VICTRON MPPT CONTROLLER

Efficient MPPT charging

Features

- 12/24V automatic detection
- Fast MPPT regulation
- Robust design, metal housing and epoxy covered electronic board
- Low self consumption 10mA
- Ready for Lithium-batteries (Victron LiFePo4 batteries)



MPPT 75/15



BMV702

Type	Solar panel power (W)	Current (A)	Voltage (V)	Meter
MPPT 75/15	200/400	15	12/24	optional
MPPT 100/30	440/880	30	12/24	optional
Remote meter BMV700 for all Victron MPPT Controller incl. Shunt 500 A				
Remote meter BMV702 for all Victron MPPT Controller incl. Shunt 500 A, shows additional battery voltage				
Bluetooth dongle for connecting MPPT controller with Smartphone via Victron App				
More Victron items on request				

SOLARA Accessories

Use our accessories to make the installation as easy as possible. High grade solar connectors, durable cable, ready-made connection wires, Schaudt charge controller – only professional equipment for a fast and trouble-free installation. All cables are rated for outside use.

Typ	Zubehör
DC-Connect-C	Connection cable module - controller with MC4 connectors. Fits to all Solara and DcSolar modules. Length 5m, size 2x 4mm ²
DC-Connect-B	Connection cable controller - battery. Pre-assembled with ring cable lug. Length 1m, size 2x 6mm ²
DC-Connect-M-Set	Connection or extension cable for modules. Fits to all Solara and DCSolar modules. Length 2m, size 2x 4mm ²
MC4 Y-Set	Y-adapter set for parallel connection of two modules, set with plus and minus
Schaudt Laderegler	LR 18/12, for connection to Schaudt EBL, 12V, I _{max} 18A, incl. all wires, connection material and fuses
EBL connection cable	Connection wire for any solar controller with Schaudt EBL
DA20	SOLARA digital display, on-wall mounting, Voltage 8-48V, current up to 20A
DA20/E	SOLARA digital display, flush mounting, Voltage 8-48V, current up to 20A
Haltespoiler 53,5	Black mounting spoiler, size 53,5cm. Fits perfectly to DCSolar modules
Cable 2x2,5	Installation cable for outside use, 2 x 2,5 mm ² , roll with 100 m
Cable 2x4,0	Installation cable for outside use, 2 x 4,0 mm ² , roll with 100 m
SM/cell protector	Hotspot protector for SOLARA M-Series as spare part
KS	Edge protector for Solara M-Series
SLÜ25E	Solar ventilator with stainless steel cover



DC Connect C



DA20 (Aufbau)



Haltespoiler 53,5



Schaudt Laderegler



Edelstahl-Solarlüfter

SOLARA ABS MOUNTING SPOILERS

TÜV tested, lightweight and UV-resistant

Solara ABS spoilers in black and white are perfectly made for RVs, caravans, huts and cottages. They are mounting solution and wind shield at the same time.

We use only high-quality ABS material that has been specially coated prior to the forming process to make sure that our brackets are long lasting in color and shape.

The ABS brackets exactly match exactly with the size of our solar panels, but can also be used for other panel brands. Also available are corner brackets and connectors for universal use. The brackets are glued onto the vehicle roof with our special ABS adhesive FIX PACK. The solar panels are fixed to the spoilers by using the included screws.

Features

- Best symbiosis between functionality and optic
- More than 50% lighter than other materials
- ABS plastics with special coating
- UV-resistant
- 100% recyclable
- Screws included
- 5-year warranty

Please note: Always use the special ABS adhesive for installation, such as SOLARA FixPack



HSXX/W



HSV/W



HSE/W

Type	Art.-No.	Max. solar panel width	Pc/set
Mounting spoilers set	HS35/W	350 mm	2
Mounting spoilers set	HS45/W	450 mm	2
Mounting spoilers set	HS55/W	550 mm	2
Mounting spoilers set	HS55/black	550 mm	2
Mounting spoilers set	HS68/W	680 mm	2
Edge spoiler set	HSE/W	all type of solar panels	4
Universal mounting spoiler set	HSV/W	all type of solar panels	2

SPOILER HS55 IN BLACK



HS55/black

Features

- very estatical with Solara Power S-Series modules
- More than 50% lighter than other materials
- ABS plastics with special coating
- UV-resistant
- 100% recyclable
- Screws included
- 5-year warranty

SOLARA ABS ROOF GROMMET

5 YEARS PRODUCT WARRANTY

Everlasting waterproof

Our roof grommets are being made out of the same high-quality ABS material know from our spoilers.

A broad glueing seam and a quality cable-gland ensure a watertight installation.

Glued with same ABS adhesive from our FIX PACK will guarantee a safe and durable feedthrough to the interior.

Type	Art.-No.	No. of inlets
Roof grommet	DD1/W	1 x PG13,5 for 1 cable
Roof grommet	DD2/W	2 x PG13,5 for 2 cable
Roof grommet	DD2/S	2 x PG13,5 for 2 cable



SOLARA ADHESIVE SET FIX PACK

Proofed and safe bonding

Special adhesive for SOLARA ABS mounting systems, roof grommets, aluminium mounting brackets or SOLARA M-Series modules.

Features

- Storable for one year
- For gluing ABS material on to painted surfaces
- Content of all Solara Complete Sets
- Single compound adhesive MS-Polymer
- Isocyanate-free and thus poison free



Scope of delivery: cartridge 290 ml, primer (Dekavator) cleaning cloth, sanding pad

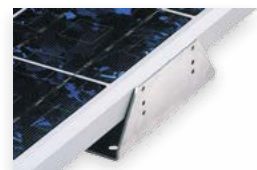
SOLARA ALUMINUM BRACKETS

For individual installation

Features

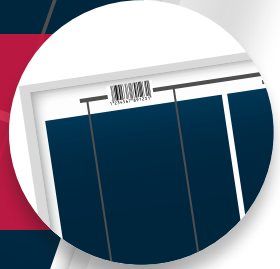
- Sturdy aluminium brackets with a large base area for glueing
- Good for installation on caravans, RVs, garden sheds and holiday homes
- Mounting height of the panels is adjustable
- All screws included
- Brackets can be screwed onto the roof or glued by using the SOLARA FIX PACK.

Type	Art.-No.	Max. module length	No. of brackets
Brackets set	HSP	up to 1250 mm	4 brackets
Brackets set	HSP400	up to 1250 mm	6 brackets



DCsolar
POWERED BY SOLARA®

Each DCsolar panel has an unchangeable serial number protected behind the front glass.



The standardized label on the backside informs about the panel type, the power and additional technical data.



The extremely stable, untwist able hollow profile frame is made of seawater resistant aluminum. The edges are stabilized by solid aluminum angles.



The modern water protected junction box (IP65) is not higher than the frame and is pre-wired with 90cm 4qmm MC4 compatible solar cable.



POWERFUL ENERGY ON THE MOVE

High tech with proved quality

DCsolar POWER SETS AND ECO SETS

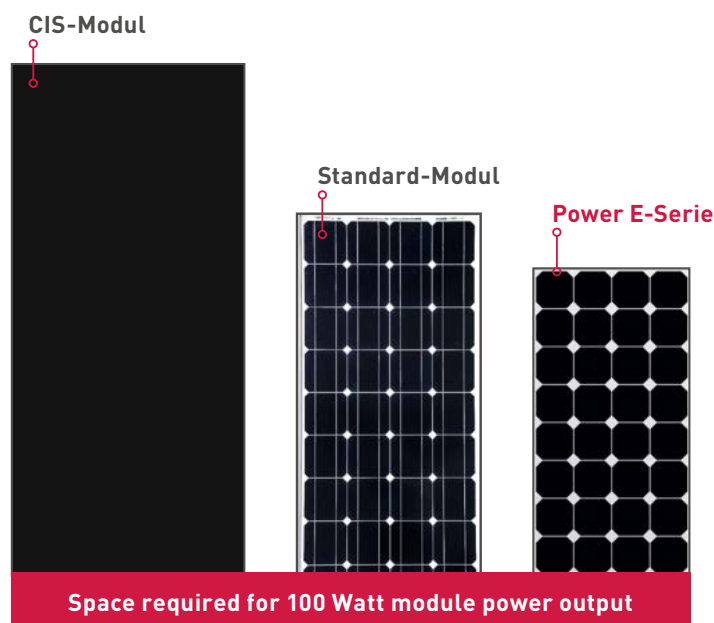
Are you looking for a high-quality solar complete set at a fair price?
Then **DCsolar** products are the right choice!

SOLARA offers perfectly composed complete sets with the brand **DCsolar**.
All necessary components packed in one box, incl. detailed installation instructions
and everything plug and play!

DCsolar MODULES FOR PROFESSIONAL APPLICATIONS

The **Power E-Series** with its state of the art back-contact solar cells has beside the naturally higher cell voltage also an excellent low-light performance and better temperature behaviour. Hence these modules produce even under low radiation conditions a sufficient voltage to charge your onboard batteries.

If only a small area is available, the **Power E-Series** is also the perfect solution, because they need up to 21% less space requirement compared to a conventional crystalline and even **over 45% less than a thin film module** (e.g., CIS).



The **E-Series** represents solar modules at a high technical level. This we achieve because we use of state-of-the-art materials and manufacturing processes, further development and review of all our products. Whether on your camper, boat or holiday home, the **E-Series** is a versatile module that, wherever you want it, charges your battery enviromentally friendly.

CERTIFICATIONS AND TESTS

- Mechanical load tests
- Climate tests of the whole solar panel
- Degradation test
- Testing the cells for micro cracks



DCsolar POWER SETS MPPT

High daily yield with MPPT technology



MAXIMUM PERFORMANCE ON SMALLEST AREAS

SCOPE OF DELIVERY

- All delivered in one carton
- Power E-Series module(s)
- Charge controller Victron MPPT 75/15
- ABS spoiler in black, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Module extension cable set *
- MultiContact Y set *
- Detailed installation instructions

DCsolar POWER SETS MPPT

Type	Set 5	Set 6
Power (W)	100	200
Daily yield (Wh)	400	800
Solar panel (Type)	E400M32	E400M32
No. of cells (pc)	32	32
No. of solar panel (pc)	1	2
Solar panel size (mm)	1037 x 527 x 35	1037 x 527 x 35
Charger	Victron MPPT 75/15	Victron MPPT 75/15

2 YEARS PRODUCT WARRANTY

* only with the 200 Watt Set

DCsolar POWER SETS EBL

For RVs with Schaudt EBL-Bloc



CHARGES TWO BATTERIES AT THE SAME TIME

SCOPE OF DELIVERY

All delivered in one carton

- Power E-Series module(s)
- Charge controller Schaudt LR1218
- ABS spoiler in black, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Module extension cable set*
- MultiContact Y set *
- Detailed installation instructions

DCsolar POWER SETS EBL

Typ	Set 3	Set 4
Power (W)	100	200
Daily yield (Wh)	400	800
Solar panel (Type)	E400M32	E400M32
No. of cells (pc)	32	32
No. of solar panel (pc)	1	2
Solar panel size (mm)	1037 x 527 x 35	1037 x 527 x 35
Charger	Schaudt LR1218	Schaudt LR1218

2 YEARS PRODUCT WARRANTY**Proved
Quality**

* only with the 200 Watt Set

DCsolar POWER SETS PWM

Optimal battery charging



READY TO INSTALL - PLUG AND PLAY

SCOPE OF DELIVERY

All delivered in one carton

- Power E-Series module(s)
- Charge controller Solara SR280E, 16A
- ABS spoiler in black, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Module extension cable set *
- MultiContact Y set *
- Detailed installation instructions

DCsolar POWER SETS PWM

Typ	Set 1	Set 2
Power (W)	100	200
Daily yield (Wh)	400	800
Solar panel (Type)	E400M32	E400M32
No. of cells (pc)	32	32
No. of solar panel (pc)	1	2
Solar panel size (mm)	1037 x 527 x 35	1037 x 527 x 35
Charger	SR280E	SR280E

2 YEARS PRODUCT WARRANTY

* only with the 200 Watt Set

DCsolar ECO SETS

The price-performance winner



PROOFED QUALITY AT A GOOD PRICE

SCOPE OF DELIVERY

All delivered in one carton

- E-Series module(s)
- Charge controller Solara SR280E, 16A
- ABS spoiler in black, UV-resistant, screws included
- Roof grommet DD1 in white for completely watertight cable feedthrough
- Special glue set SOLARA FIX PACK for gluing the ABS spoilers
- Module connection cable, UV-resistant with MC4 compatible plugs
- Module extension cable set*
- MultiContact Y set *
- Detailed installation instructions

DCsolar ECO SETS

Typ	Set 1	Set 2
Power (W)	100	200
Daily yield (Wh)	400	800
Solar panel (Type)	E400M36	E400M36
No. of cells (pc)	36	36
No. of solar panel (pc)	1	2
Solar panel size (mm)	1195 x 545 x 35	1195 x 545 x 35
Charger	SR280E	SR280E

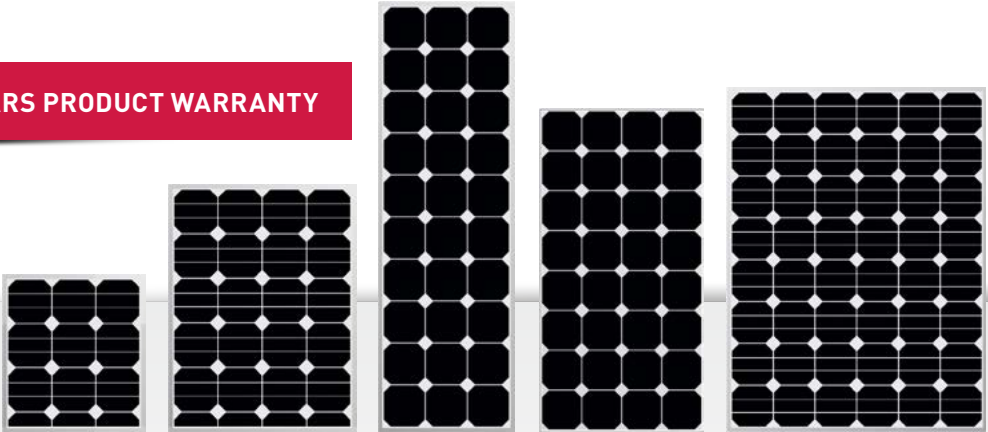
2 YEARS PRODUCT WARRANTY

Proved
Quality

* only with the 200 Watt Set

DCsolar POWER E-SERIES

Highest performance on smallest areas

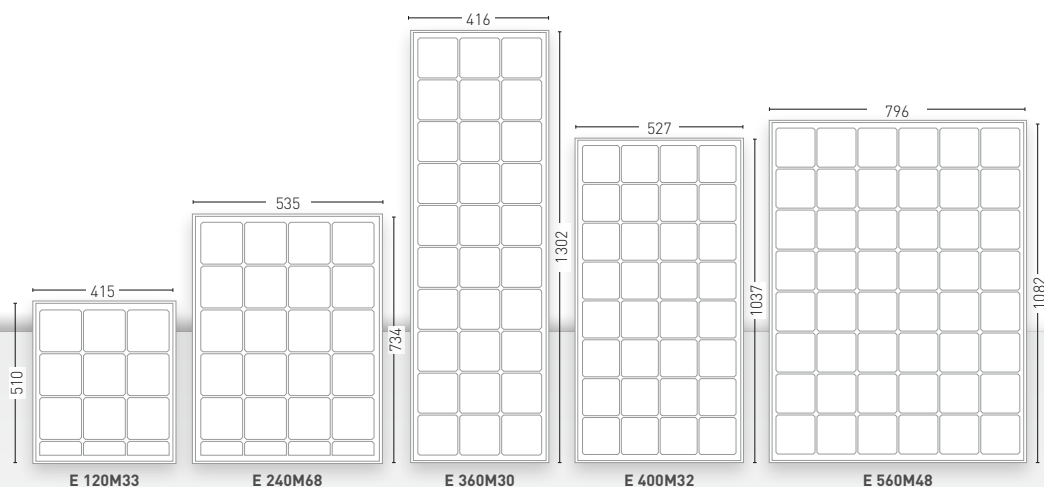
2 YEARS PRODUCT WARRANTY**TOP PERFORMANCE – FOR HIGH DEMANDS**

- Monocrystalline back-contact cells with more than 22% efficiency
- Highest daily yields from the most compact designs
- Outstanding low-light performance
- Temperature resistant
- Stable hollow-profile aluminum frame
- MultiContact compatible connection plugs

**WE GUARANTEE**

- High daily yields
- 2 years product guarantee
- Unchangeable serial number
- Proved quality

* Full terms of guarantee: www.dcsolar.de

**30 W · 60 W · 90 W · 100 W · 140 W****PERFORMANCE UNDER STC***

Type	E 120M33	E 240M68	E 360M30	E 400M32	E 560M48
Ø Daily yield during summer (Wh/d)	120	240	360	400	560
Nominal Power (Pmpp) Watt	30	60	90	100	140
Short circuit current (Isc) A	1.88	3.78	5.96	6.15	7.82
Open circuit voltage (Uoc) V	21.0	21.3	20.3	21.6	24.1
Current (Impp) A	17.5	17.5	16.8	17.9	19.7
Voltage (Umpp) V	1.68	3.42	5.36	5.59	7.14

Dimensions and weight

Size (L x W x H) mm	510 x 415 x 35	734 x 535 x 35	1302 x 416 x 35	1037 x 527 x 35	1082 x 796 x 35
Weight kg	3.0	5.8	7.0	7.4	11.0
No. of cells	33	68	30	32	144
Frame color	silver	silver	silver	silver	silver

Thermal Characteristics

TK Pmpp %/K	-0.32
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2
Operating temperature range	-40°C to +85°C

More Information

Measuring accuracy Pmpp at STC	± 5 %
Cell technology	monocrystalline back-contact cells
Junction box	IP65 with MC4 compatible connectors

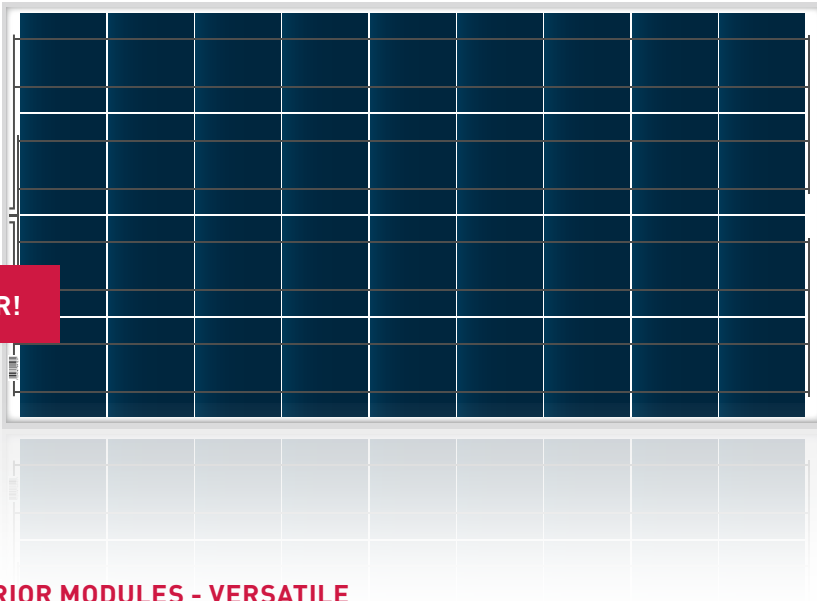
Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

DCsolar E-SERIES

The standard module

BESTSELLER!

SUPERIOR MODULES - VERSATILE

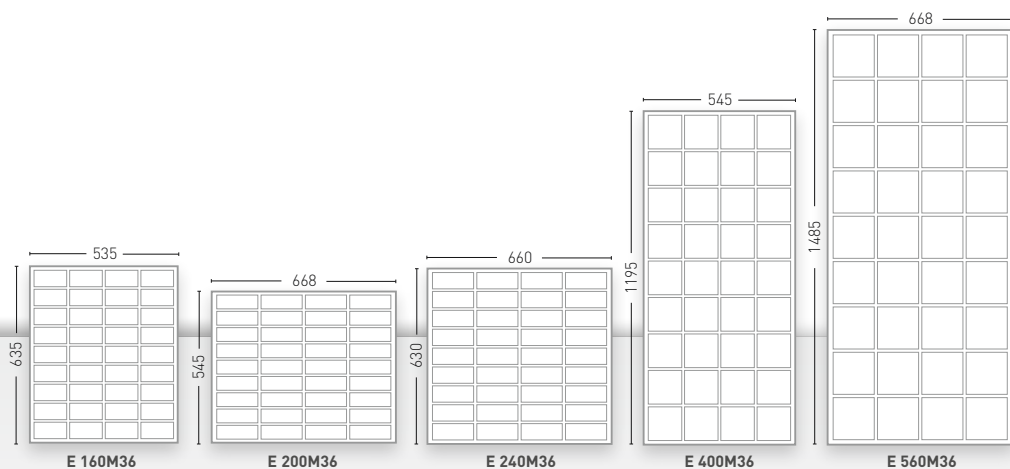
- 36 monocrystalline high-yield solar cells
- Stable silver hollow profile frame
- Junction box with connection cable and MC4-compatible plugs
- High-translucent solar glass
- Hail resistant



WE GUARANTEE

- High daily yields
- 2 years product guarantee
- Unchangeable serial number
- Proved quality

* Full terms of guarantee: www.dcsolar.de



40 W · 50 W · 60 W · 100 W · 150 W

PERFORMANCE UNDER STC*

Type	E 160M36	E 200M36	E 240M36	E 400M36	E 560M36
Ø Daily yield during summer (Wh/d)	160	200	240	400	600
Nominal Power (Pmpp) Watt	40	50	60	100	150
Short circuit current (Isc) A	2.58	3.13	3.81	5.53	9.08
Open circuit voltage (Uoc) V	21.6	22.19	22.0	22.6	22.70
Current (Impp) A	17.2	18.02	17.5	19.35	18.0
Voltage (Umpp) V	2.33	2.79	3.43	5.17	8.34

Dimensions and weight

Size [L x W x H] mm	635 x 535 x 35	545 x 668 x 35	630 x 660 x 35	1195 x 545 x 35	1485 x 668 x 35
Weight kg	4,4	4,3	5	7,6	10,1
No. of cells	36	36	36	36	36
Frame color	silver	silver	silver	silver	silver

Thermal Characteristics

TK Pmpp %/K	-0,44
TK Uoc %/K	-0,36
TK Isc %/K	0,03
NOCT °C	45 ± 2
BOperating temperature range	-40°C to +85°C

More Information

Measuring accuracy Pmpp at STC	± 5 %
Cell technology	monocrystalline
Junction box	IP65 with MC4 compatible connectors

Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

DCsolar POWER FLEX

Lightweight, flat and semi-flexible

**MORE CELLS FOR
MAXIMUM YIELDS**



Innovation

TOP PERFORMANCE – FOR HIGH DEMANDS

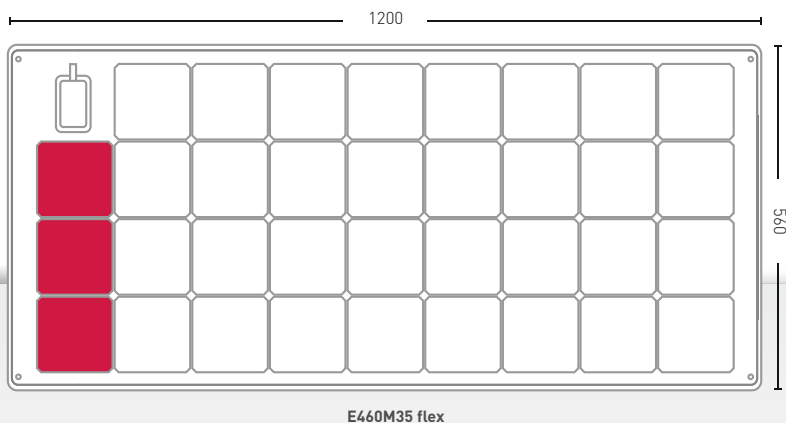
- Semi- flexible solar panel
- Fits to any curved roof
- Extremely light weight
- Monocrystalline back-contact cells with more than 22% efficiency
- Highest daily yields and outstanding low-light performance
- Temperature resistant



WE GUARANTEE

- High daily yields
- 2 years product guarantee
- Unchangeable serial number
- Proved quality

* Full terms of guarantee: www.dcsolar.de



115 W

PERFORMANCE UNDER STC*

Type	E 460M35 flex
Ø Daily yield during summer (Wh/d)	460
Nominal Power (Pmpp) Watt	115
Short circuit current (Isc) A	6.30
Open circuit voltage (Uoc) V	24.0
Current (Impp) A	20.30
Voltage (Umpv) V	5.80

Dimensions and weight

Size (L x W x H) mm	1200 x 560 x 4 (15)
Weight kg	4.1
No. of cells	35

Thermal Characteristics

TK Pmpp %/K	-0.32
TK Uoc %/K	-0.28
TK Isc %/K	0.057
NOCT °C	46 ± 2
Operating temperature range	-40°C to +85°C

More Information

Measuring accuracy Pmpp at STC	± 5 %
Cell technology	monocrystalline back-contact cells
Connection	2 x 1,5 mm ² , open wire

Date 03/2017. Errors and omissions excepted. Technical changes reserved.



*Performance at STC, Standard Testing Conditions: 1000W/m², AM 1.5, cell temperature 25° C

SOLARA®

module. komponenten. systeme



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