

## ET SOLAR – ET-M572180 / ET-M572185

Solar modules are the key element of every solar power system as they convert sunlight into electricity. Their quality and the optimum use of the respective technology are therefore decisive for the yield and profit of your system. Monocrystalline solar modules provide reliable experience based on more than 40 years of use and continuously deliver excellent yields.

Phoenix Solar selects the best solar modules from leading international manufacturers based on strict quality criteria. They are tested by our own technical experts as well as independent institutes. This provides you with investment security whilst optimising your return at the same time.



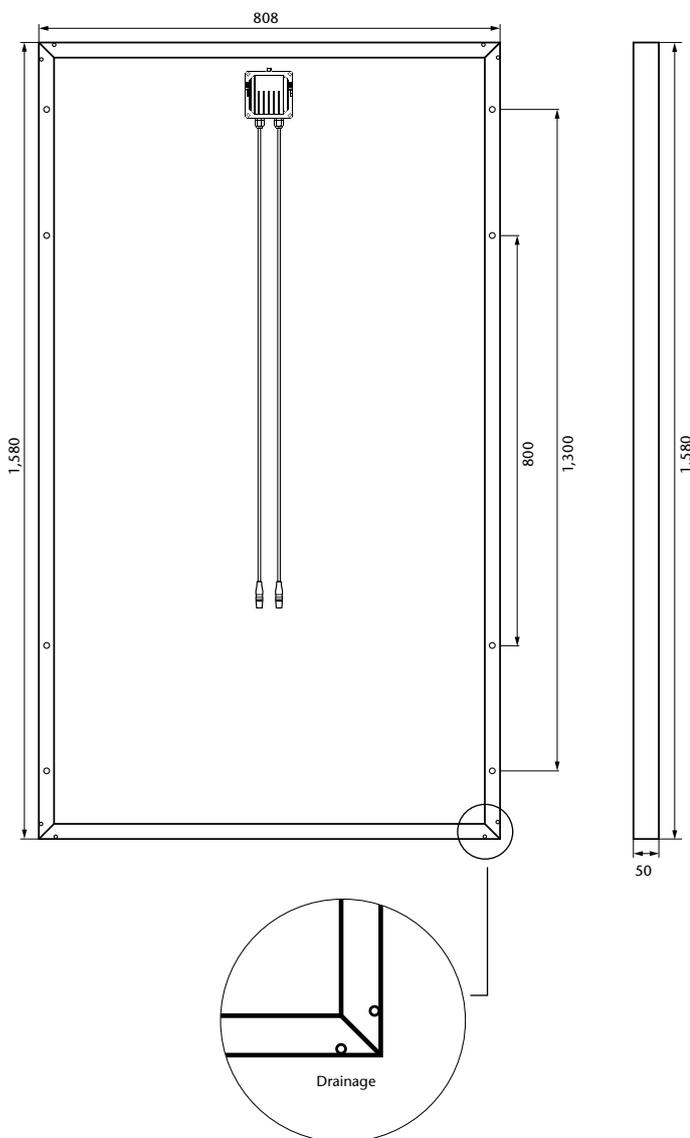
### The advantages at a glance:

- 180 and 185 Wp power output
- Tested in a RAL certificated process, independent of the manufacturer
- Module with monocrystalline cells with an efficiency of up to 14,49 %
- Performance guarantee\*: 25 years at 80 %, 12 years at 90 % of the minimal rated power output
- Anodized aluminium frame which resists even extreme climate conditions
- Newly developed three-layer foil on rear cover
- Drainage holes on all four sides to ensure reliable water drain
- Low negative power output tolerance

\* The manufacturer's terms and conditions of guarantee apply

### Experience that pays

Phoenix Solar or your local Phoenix Solar partner individually match the solar modules and all additional system components to ensure that you get the ideal system to meet your requirements. All of our sales partners have a considerable amount of expertise and many years of experience in solar technology and have been personally chosen by us according to the strictest quality criteria.



## Mechanical parameters

Length [mm]	1.580 ± 1
Width [mm]	808 ± 1
Depth [mm]	50 ± 0.5
Depth with connection socket [mm]	50
Weight [kg]	15,90
Connection socket (manufacturer/ number of diodes)	ZJRH/3
Positive cable (manufacturer/length [mm]/ cable cross-section [mm <sup>2</sup> ])	Nanyang/900/4
Negative cable (manufacturer/length [mm]/ cable cross-section [mm <sup>2</sup> ])	Nanyang/900/4
Plug connector (manufacturer/type)	Multicontact/ MC3 or MC4
Front cover (material/thickness [mm])	Glass/3,2
Cell type (quantity/technology)	72/monocrystalline
Cell embedding (material)	Ethyl Vinyl Acetate (EVA)
Rear cover (material)	Toyo
Frame (material/profile type)	Aluminium/ hollow profile

## Manufacturer's guarantee

Product guarantee	5-year product guarantee*
Performance guarantee	12 years at 90 % of the minimal rated power output* 25 years at 80 % of the minimal rated power output*

\* The manufacturer's terms and conditions of guarantee apply

## Qualifications and Certificates

IEC 61215 Ed 2

IEC 61730 Class A



The ET Solar Group with headquarters in Nanjing (China) is a vertically integrated solar energy equipment manufacturer. The products are used in a large number of residential and utility scaled solar PV projects around the world. ET Solar is a member of PV-Cycle.



## Electrical parameters

Electrical parameters for STC (1,000 W/m<sup>2</sup>, T<sub>Module</sub> = 25 (+/- 2) °C, AM 1.5, according to EN/IEC 60904-1 to 60904-3)

Article number	100880	100877	100882
Plug connector	MC3	MC4	MC3
Power output [P <sub>mpp</sub> ]	180		185
Power output tolerances [%]	- 1/+ 3		- 1/+ 3
Efficiency [%]	14.10		14.49
Max. voltage V <sub>mpp</sub> [V]	36.30		36.30
Max. current I <sub>mpp</sub> [A]	4.95		5.09
Open circuit voltage V <sub>oc</sub> [V]	44.60		44.60
Short circuit current I <sub>sc</sub> [A]	5.61		5.80

Electrical parameters for 800 W/m<sup>2</sup>, T<sub>Module</sub> = NOCT, AM 1.5, according to EN/IEC 60904-1 to 60904-3  
NOCT = Nominal Operating Cell Temperature, cell temperature under nominal operating conditions

Max. power output P <sub>mpp</sub> [Wp]	143	145
Max. voltage V <sub>mpp</sub> [V]	35.80	35.80
Max. current I <sub>mpp</sub> [A]	3.99	4.30
Open circuit voltage V <sub>oc</sub> [V]	43.80	43.80
Short circuit current I <sub>sc</sub> [A]	4.50	4.60

Electrical parameters for 200 W/m<sup>2</sup>, T<sub>Module</sub> = 25 (+/- 2) °C, AM 1.5, EN/IEC 60904-1 to 60904-3

Max. power output P <sub>mpp</sub> [Wp]	30.50	30.80
Max. voltage V <sub>mpp</sub> [V]	33.20	33.30
Max. current I <sub>mpp</sub> [A]	0.90	0.90
Open circuit voltage V <sub>oc</sub> [V]	40.60	40.70
Short circuit current I <sub>sc</sub> [A]	1.10	1.20

Reverse current loading capability I <sub>R</sub> [A]	10.80
Max. permissible system voltage V <sub>sys</sub> [V]	1,000

### Parameters of the thermal characteristics

NOCT [°C]	45
Temperature coefficient of the short circuit current I <sub>sc</sub> [%/K]	0.042
Temperature coefficient of the open circuit voltage V <sub>oc</sub> [%/K]	- 0.34
Temperature coefficient of the MPP power P <sub>mpp</sub> [%/K]	- 0.47

## Operating conditions

Max. operating temperature [°C]	- 40 to + 85
Max. snow load [Pa]	5,400
Max. wind load [Pa]	5,400

Subject to modifications and errors

## PLANNING GUIDE

The module array displayed below applies specifically to ET Solar ET-M572180 / ET-M572185 modules, including the distances for connecting them together (using the Tecto-Sun mounting system, scale: 1:100).

**Notes on use:** Draw a scale diagram of the roof (1:100) with all the details (windows, dormer windows, chimneys,

etc.) on transparent paper and place it over this module array. Copy the intersecting points of the grid on the roof diagram and connect them with a line. If the roof diagram is larger than the grid, it can be moved as required. Doing this allows you to determine the maximum allocation of modules while taking shading and objects on the roof into account.

