

## Key Features

Sleek design and durable frame, the Solar Power Supply 190 Watt Monocrystalline Solar Panel provides you with the highest efficiency per area and is the perfect item for off-grid applications that include 12 volts arrays.

- High module conversion efficiency.
- Modules withstand extremely in temperature, load and impact
- All modules combination and packing through stepping current to keep effectively reduce mismatch loss.
- Quick and inexpensive mounting.
- 100% EL test to keep higher quality.



Anodized aluminum frame withstand corrosion and damage, Special osculum can reduce destruction by water freeze.

## Warranty

- 25 years Power Output Warranty.
- 5 years Material and Workmanship Warranty.



- IP65 junction box
  - With Diodes
  - long-term weather endurance.
  - Output Cables: 0.9M
- Connectors: 30A MC4, IP67

## Certifications



## Electrical Characteristics

Model No.	SPS-M190
Maximum Power (Pmax)	190W
Max-power Voltage (Vmp)	18.24V
Max-power Current (Imp)	10.42A
Open-circuit Voltage (Voc)	22.07V
Short-circuit Current (Isc)	11.04A
Module Efficiency	19.31%
Operating Temperature	-40°C~+85°C
Maximum System Voltage	1000Vdc
Maximum Series Fuse Rating	15A
Power Tolerance	±5%

\*STC condition: 1000 W/m<sup>2</sup>, 1.5AM and 25°C cell temperature.

## Temperature Characteristics

NMOT	46°C±2°C
Temperature Co-efficient of Pmax	-0.398%/°C
Temperature Co-efficient of Voc	-0.340%/°C
Temperature Co-efficient of Isc	0.0576%/°C

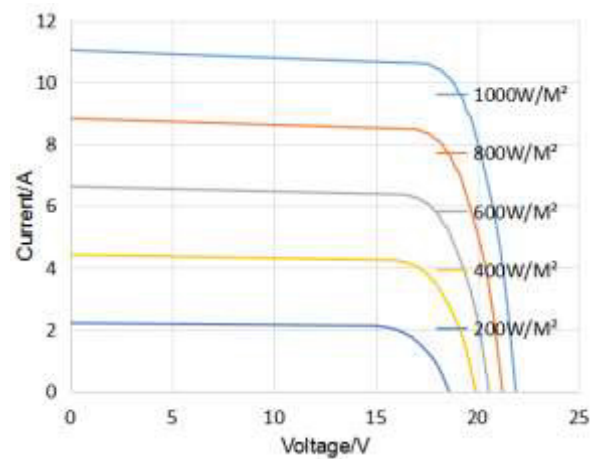
## Mechanical Characteristics

Mono Power	190W
Cell Type	Mono 166mm
Cell Arrangement	32(4*8)
Dimensions	1396*705*35mm
Weight	10.6kg
Front Cover	3.2mm tempered glass
Frame Material	Anodized aluminium alloy
Junction Box	IP65 rated
Output Cables	4mm <sup>2</sup> , Length 900mm+MC4

\*All specifications and data described in this data sheet are tested under Standard Test Conditions (STC - Irradiance: 1000W/m<sup>2</sup>, Temperature: 25 C,

Air Mass: 1.5) and may deviate marginally from actual values. Solar Power Supply and any of its affiliates has reserved the right to make any modifications to the information on this data sheet without notice. It is our goal to supply our customers with the most recent information regarding our products. These data sheets can be found in the downloads section of our website, [www.solarpowersupply.eu](http://www.solarpowersupply.eu)

## I-V Curve



## Module Diagram

