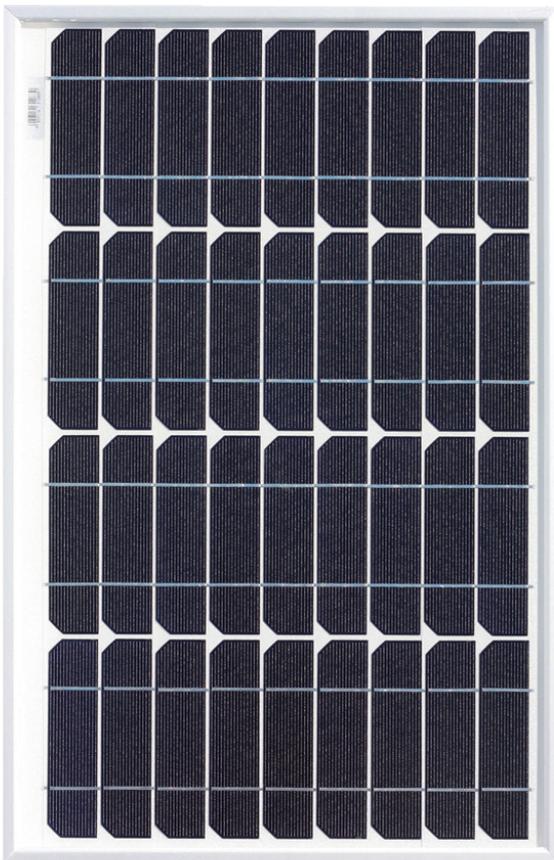


**SP-EN20W**  
**F 30mm**  
**Mono Solar Panel**

## Key Features



**High Conversion Efficiency**  
 Module efficiency up to 10.56% achieved through advanced cell technology and manufacturing capabilities



**Positive Tolerance**  
 Positive tolerance of up to -1%+~3% delivers higher output reliability



**High PID Resistant**  
 Advanced cell technology and qualified materials lead to high PID resistant



**Current Sorting Process**  
 System output maximised by reducing mismatch losses up to 2% with modules sorted and packaged by amperage



**Extended Wind and Snow**  
 Load tests  
 Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)



**Withstanding Harsh Environment**  
 Reliable quality leads to a better sustainability even in harsh environments in the outdoors

## Quality Guarantee

- \* High efficiency solar cells, Low resistance loss and higher conversion efficiency
- \* Double EL test before and after lamination, highly controls product defects
- \* Solar panel classified by current, to improve system performance

## Certificates

- \* ISO9001:2015
- \* ISO14001:2015
- \* ISO45001:2018
- \* CE;CQC;SGS;IN METRO;DEKRA



# SP-EN20W F 30mm Mono Solar Panel

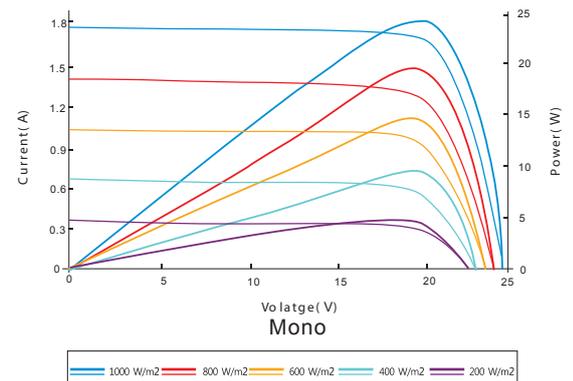
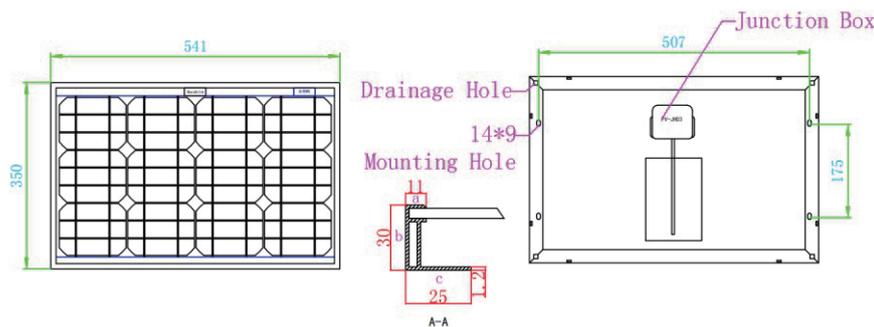
## Electrical Characteristics

STC	SP-EN20W
Maximum Power(Pmax)	20W
Optimum Operating Voltage(Vmp)	17.6V
Optimum Operating Current(Imp)	1.14A
Open Circuit Voltage(Voc)	22.0V
Short Circuit Current(Isc)	1.50A
Module Efficiency	10.56%
Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	715/1000V DC (IEC)
Power Tolerance	-1%~+3%

STC Irradiance 1000 W/m<sup>2</sup>, module temperature 25°C, AM=1.5; Best in Class AAA solar simulator (IEC 60904-9) used

## Engineering Drawing

## I-V Curve



Excellent performance under weak light conditions: at an irradiation intensity of 800W/m<sup>2</sup> (AM 1.5, 25°C), 95.5% or higher of the STC efficiency(1000W/m<sup>2</sup>) is achieved.

## Mechanical Characteristics

Solar Cell	Monocrystalline silicon 125mm×27.5mm
No. of Cells	36 (4×9)
Dimensions	350x541x30mm
Weight	2.7kg
Front Glass	3.2mm(0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	Ip67 rated
Output Cables	TÜV (2Pfg1169:2007)
	0.75mm <sup>2</sup> , symmetrical lengths(-) 1500mm and (+) 1500mm
Connectors	MC4 connectors

## Temperature Characteristics

NOCT	45±2°C
Temperature Coefficient of Pmax	-0.48%/°C
Temperature Coefficient of Voc	-0.34%/°C
Temperature Coefficient of Isc	0.037%/°C