

Off-Grid Module

Product Catalog

SUNTECH
Solar powering a green future™



Suntech's Solar Products



Suntech offers a broad range of off-grid solar modules designed for urban and rural applications including telecommunications, data collection, water pumping, and illumination. Suntech solar panels have been used in thousands of stand-alone systems worldwide. The excellent performance of the system brings electricity and light in remote locations and also serves as an independent power supply solution in high-quality industrial applications.

Suntech is the world's largest crystalline silicon solar module manufacturer with more than 2.5GW of solar products installed worldwide. All products are designed in conformity with both IEC and UL standards¹ and manufactured in ISO9001 and ISO 14001 certified production facilities. Suntech is also an active member of PV Cycle, an independent PV industry association dedicated to establishing a take-back and recycling program for PV solar modules and their end-of-life waste. All Suntech off-grid solar modules come with a 25-year warranty on power output and a 5-year warranty on material and workmanship.

1. Please contact a local sales representative for details.
2. Please refer to Suntech product data sheet.

Why Suntech?

- Broad product range, from 5W to 135W
- IP 65 rated junction box
- Superior module temperature coefficients²
- Excellent product warranty terms
- IEC and UL certified

Product Manual Series:

- 1 Standard Module Product Catalog
- 2 *Off-Grid Module Product Catalog*

SPECIFICATION CATEGORIES

	STP005B -12/DEA	STP010D -12/KEA	STP020B -12/CEA	STP030D -12/LEA	STP040D -12/REA	STP045D -12/REA	STP050D -12/MEA	STP055D -12/MEA	STP060D -12/SEA	STP065D -12/SEA	STP085B -12/BEA	STP090B -12/BEA	STP130D -12/TEA	STP135D -12/TEA
Open-Circuit Voltage (Voc)	21.6V	21.6V	21.7V	21.6V	21.8V	22.0V	21.8V	22.2V	21.6V	21.8V	22.2V	22.4V	22.0V	22.3V
Optimum Operating Voltage (Vmp)	17.4V	17.4V	17.6V	17.2V	17.4V	17.6V	17.4V	17.5V	17.4V	17.6V	17.8V	18.0V	17.4V	17.5V
Short-Circuit Current (Isc)	0.32 A	0.65 A	1.26 A	1.94 A	2.58 A	2.79 A	3.13 A	3.34 A	3.90 A	4.11 A	5.15 A	5.29 A	8.09 A	8.20 A
Optimum Operating Current (Imp)	0.29 A	0.57 A	1.14 A	1.74 A	2.30 A	2.56 A	2.93 A	3.14 A	3.45 A	3.69 A	4.80 A	5.00 A	7.47 A	7.71 A
Maximum Power at STC* (Pmax)	5Wp	10Wp	20Wp	30Wp	40Wp	45Wp	50Wp	55Wp	60Wp	65Wp	85Wp	90Wp	130Wp	135Wp
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Maximum System Voltage	30V DC	30V DC	30V DC	30V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC
Maximum Series Fuse Rating	5 A	5 A	5 A	5 A	10 A	10 A	10 A	10 A	15 A	15 A	15 A	15 A	20 A	20 A
Power Tolerance	±10%	±10%	±10%	±10%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Nominal Voltage	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V

ELECTRICAL CHARACTERISTICS

	Monocrystalline	Polycrystalline	Monocrystalline	Polycrystalline	Polycrystalline	Polycrystalline	Monocrystalline	Polycrystalline	Monocrystalline	Polycrystalline	Monocrystalline	Polycrystalline	Polycrystalline	Polycrystalline	
Solar Cell															
No. of Cells	36 (4x9)	36 (6x6)	36 (2x18)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	36 (4x9)	
Dimensions (mm/inch)	216x306x18 / 8.5x12.0x0.7	310x368x18 / 12.2x14.5x0.7	656x306x18 / 25.8x12.0x0.7	426x680x18 / 16.8x26.8x0.7	537x665x30 / 21.1x26.2x1.2	537x665x30 / 21.1x26.2x1.2	631x665x30 / 24.8x26.2x1.2	631x665x30 / 24.8x26.2x1.2	771x665x30 / 30.4x26.2x1.2	771x665x30 / 30.4x26.2x1.2	1198x541x30 / 47.0x21.3x1.2	1198x541x30 / 47.0x21.3x1.2	1482x676x35 / 58.3x26.6x1.4	1482x676x35 / 58.3x26.6x1.4	1482x676x35 / 58.3x26.6x1.4
Weight (kg/lbs)	0.8 / 1.8	1.5 / 3.3	2.5 / 5.5	3.2 / 7.0	4.5 / 9.9	4.5 / 9.9	5.3 / 11.7	5.3 / 11.7	6.2 / 13.7	6.2 / 13.7	8 / 17.6	8 / 17.6	12 / 26.4	12 / 26.4	12 / 26.4
Junction Box	IP65 rated (Openable)	IP65 rated (Openable)	IP65 rated (Openable)	IP65 rated (Openable)	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated
Output Cables (mm/inch)	—	—	—	—	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	H+S (12 AWG) Symmetrical Lengths (-) 750 / 29.5 and (+) 750 / 29.5 MC4 Connectors	
Nominal Operating Cell Temperature (NOCT ^{***})	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	
Temp. coefficient of Pmax	-0.48 %/°C	-0.47 %/°C	-0.48 %/°C	-0.47 %/°C	-0.48 %/°C	-0.48 %/°C	-0.47 %/°C	-0.47 %/°C	-0.47 %/°C	-0.47 %/°C	-0.48 %/°C	-0.48 %/°C	-0.47 %/°C	-0.47 %/°C	
Temp. coefficient of Voc	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	-0.34 %/°C	
Temp. coefficient of Isc	0.037 %/°C	0.045 %/°C	0.037 %/°C	0.045 %/°C	0.037 %/°C	0.037 %/°C	0.045 %/°C	0.045 %/°C	0.045 %/°C	0.045 %/°C	0.037 %/°C	0.037 %/°C	0.045 %/°C	0.045 %/°C	

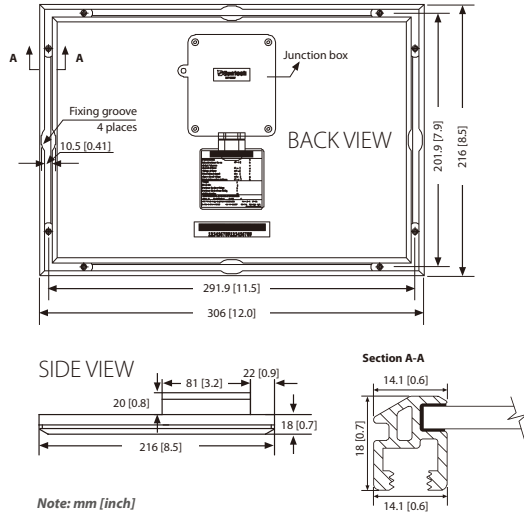
TEMP. CHARACTERISTICS

*STC: Irradiance 1000W/m², module temperature 25°C, AM=1.5 **NOCT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

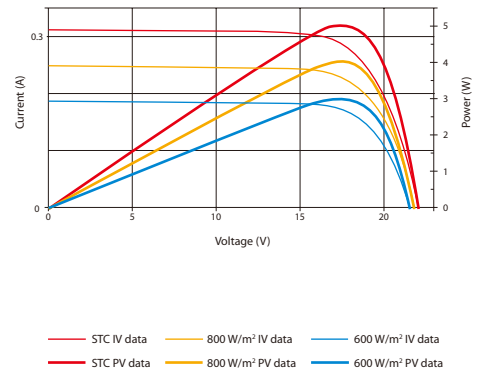
5W ~ 20W

STP005B-12/DEA

25-YEAR WARRANTY

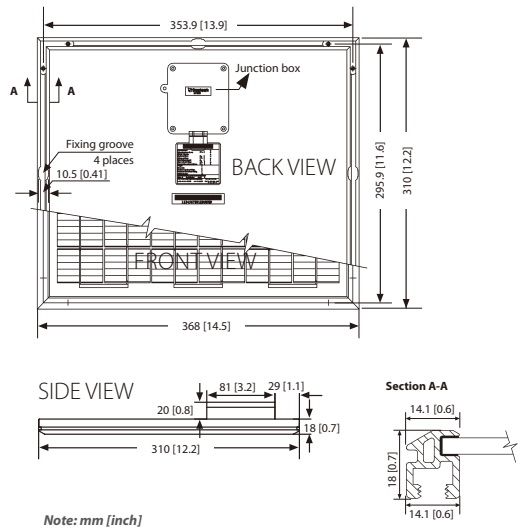


Module IV Graph 5W

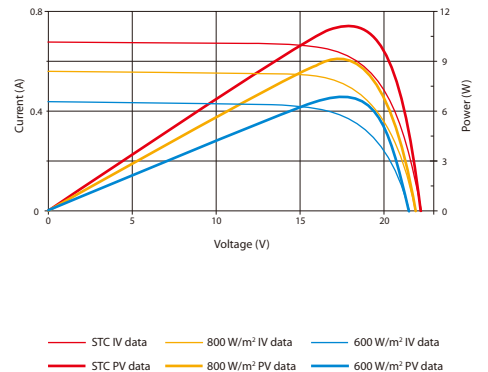


STP010D-12/KEA

25-YEAR WARRANTY

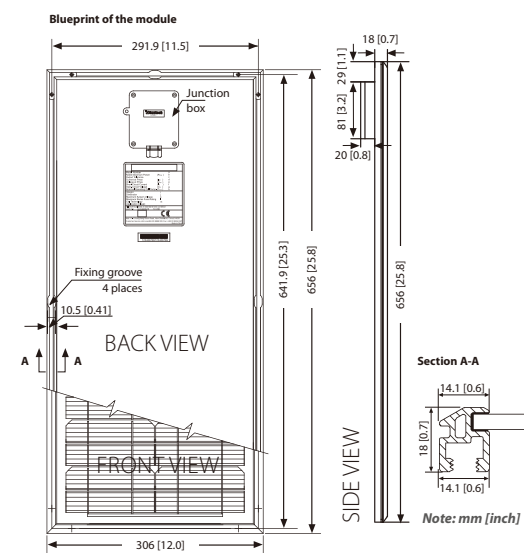


Module IV Graph 10W

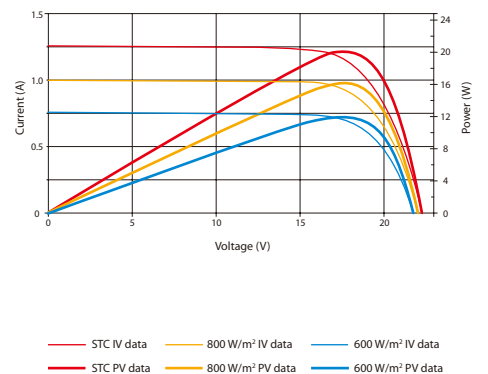


STP020B-12/CEA

25-YEAR WARRANTY



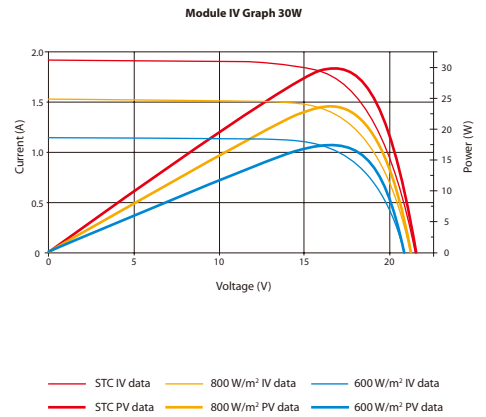
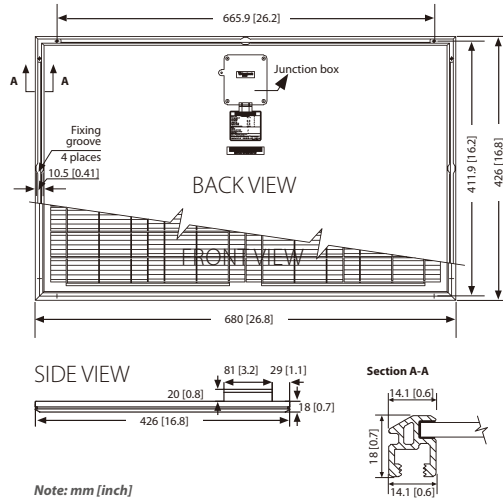
Module IV Graph 20W



30W ~ 50W

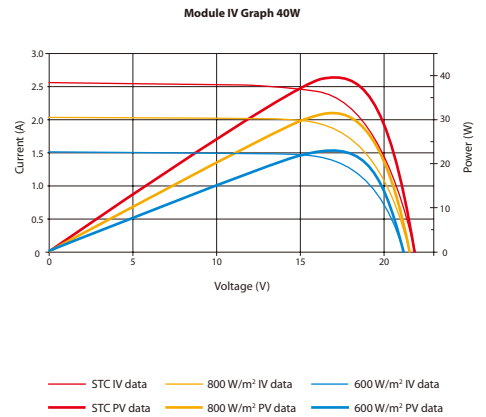
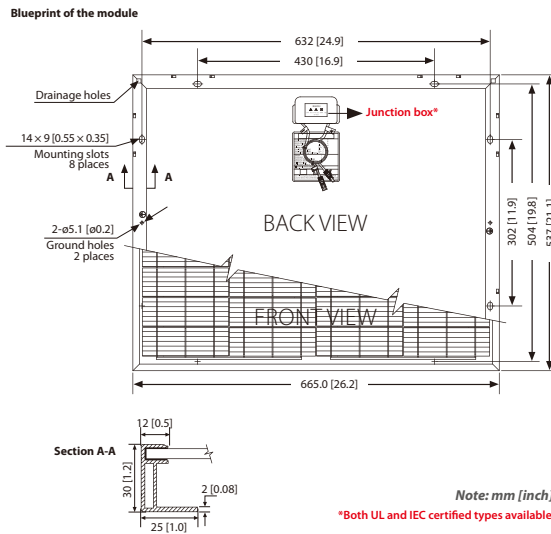
STP030D-12/LEA

25-YEAR WARRANTY



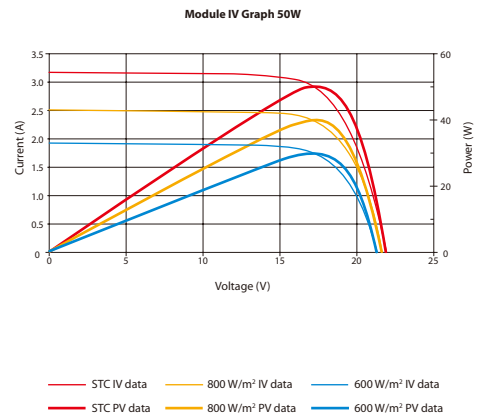
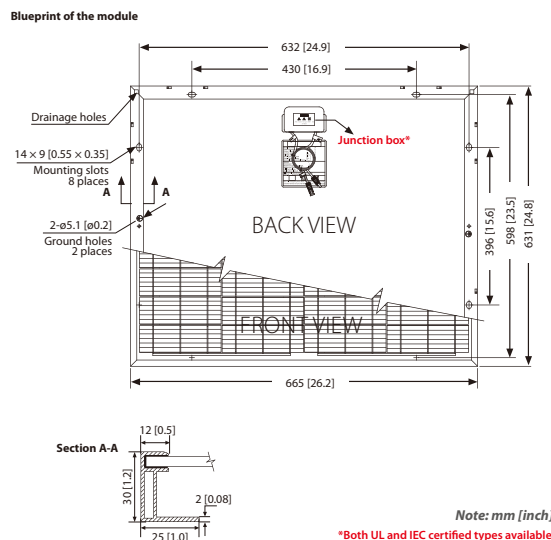
STP040D-12/REA

25-YEAR WARRANTY



STP050D-12/MEA

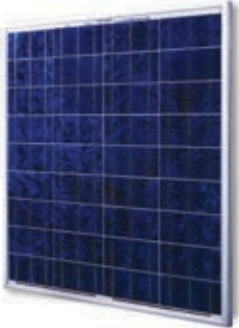
25-YEAR WARRANTY



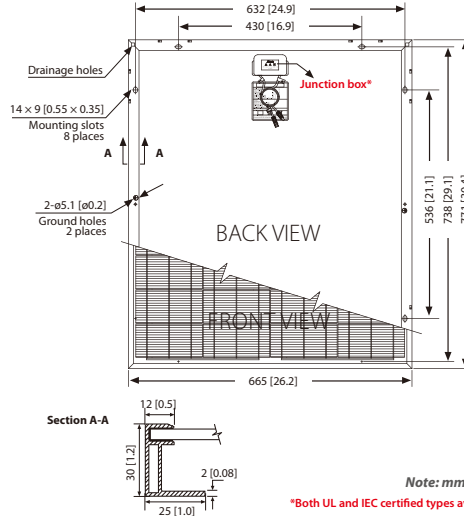
60W ~ 130W

STP060D-12/SEA

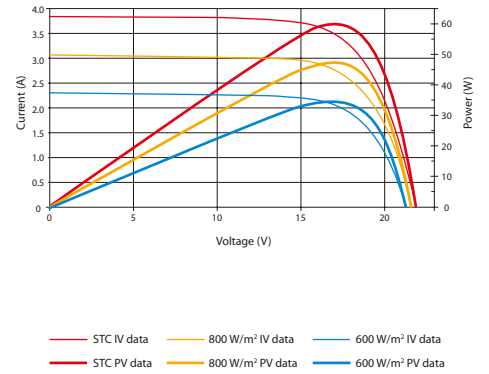
25-YEAR WARRANTY



Blueprint of the module



Module IV Graph 60W

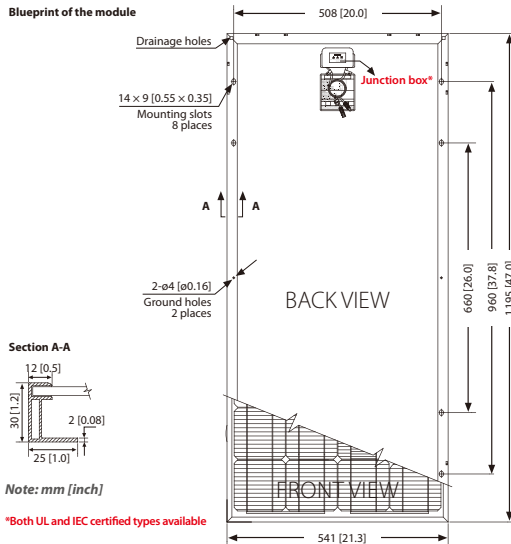


STP085B-12/BEA

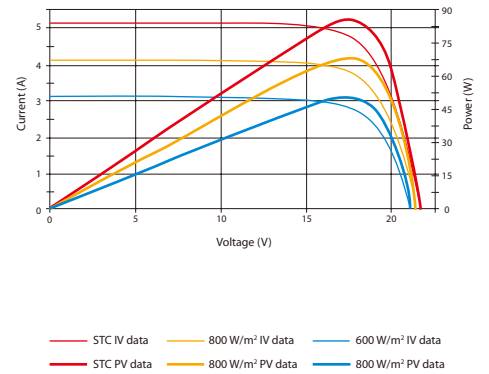
25-YEAR WARRANTY



Blueprint of the module



Module IV Graph 85W

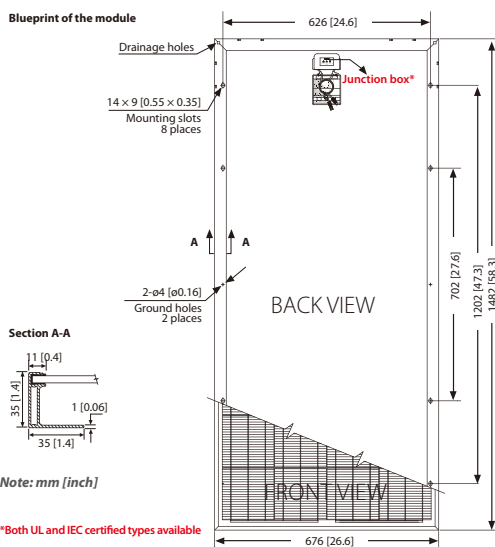


STP130D-12/TEA

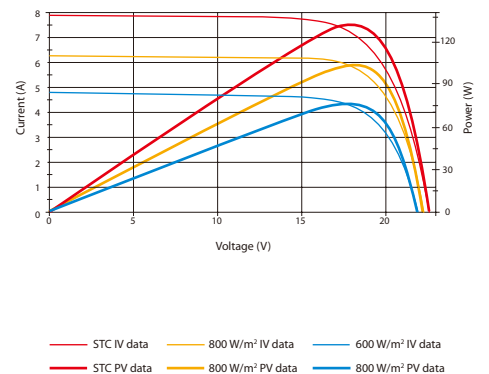
25-YEAR WARRANTY



Blueprint of the module



Module IV Graph 130W



Suntech Application Examples

Meeting All Your Off-Grid Requirements



01
Signal transferring station



02
Remote rural electrification



03
43 kWp Solar powered water pumping and desalination system (43kWp in Dubai, UAE)



04
Road security and railroad signals systems



05
Solar powered lights, such as traffic lights, street lamp and etc



06
Medical and education facilities in rural areas



07
Pumping systems for irrigation, rural water supplies and livestock



08
Power source for vacation homes



09
Remote solar home systems (50 kWp in Indonesia)



10
Aviation directional lighting



11
Marine charging systems

Suntech Power Holdings Co., Ltd.

EN-BR-Offgrid-No2.02-Oct 2010

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