



Massavi
Solar Energy Solutions



**SOLAR SOLUTIONS FOR
POWERING A BRIGHTER
FUTURE NATURALLY**

BLUE Sapphire Series

540 | 545 | 550 | 555 Watt

BIFACIAL MODULE WITH DUAL GLASS

MANAGEMENT SYSTEM CERTIFICATES*-

ISO 9001:2015 / Quality Management System

ISO 14001:2015 / Environmental Management System

ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215-2021/ IEC 61215-1-1/ IEC 61215-2:2021

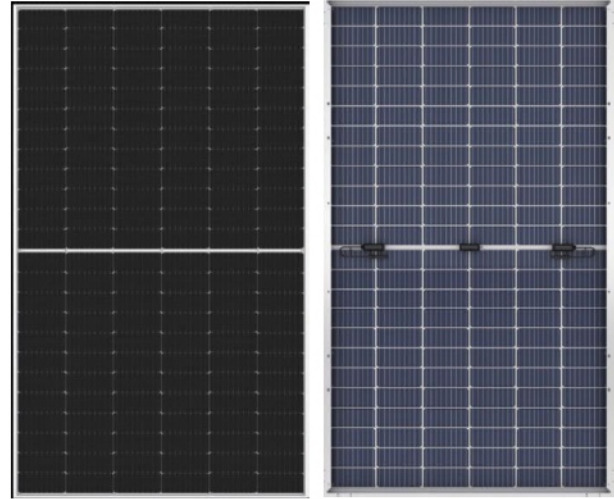
IEC 61730-1:2016 & IEC 61730-2:2016

UL 61730 / IEC 61701 / IEC 62716 / IEC 62804

IS 14286 / IS 61730-2

CEC

- All certifications are under process



Introduction

Assembled with 10BB PERC Cells, The Half-Cell configuration of the Modules offer the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.

MORE POWER



Compatible with mainstream trackers,
Cost effective product for utility power plant



Better shading tolerance

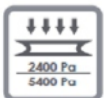


Up to 4.5 % lower LCOE
Up to 5.6 % lower system cost



Comprehensive LID / LeTID mitigation
Technology, up to 50% lower degradation

MORE RELIABLE



Enhanced Mechanical Load

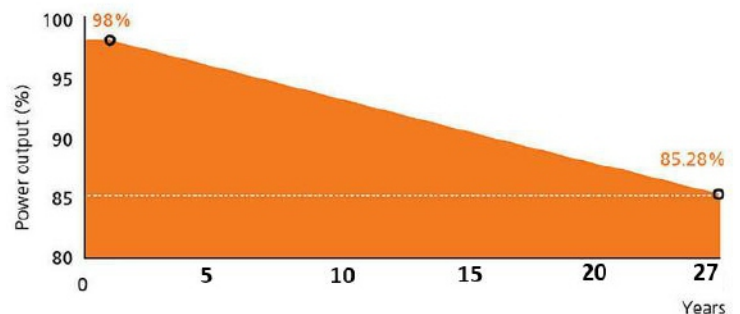


Minimizes micro-crack impacts



Tested In-House NABL Accredited LAB for
Maximum reliability.

LINEAR PERFORMANCE WARRANTY

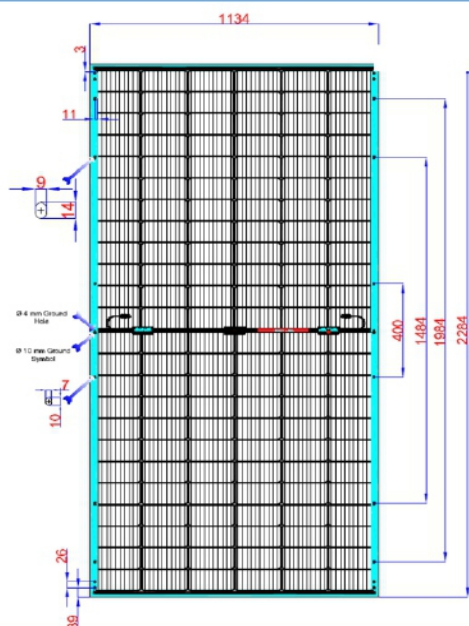


12 Years Product Warranty

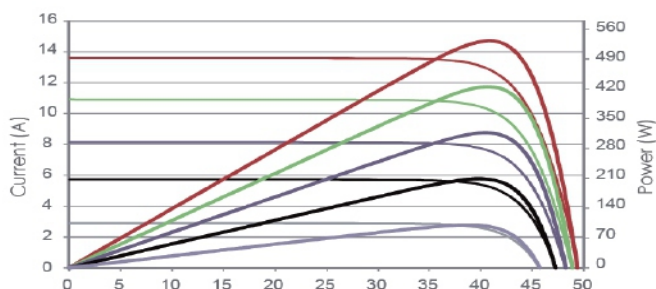


27 Years Power Warranty

TECHNICAL DRAWING



ELECTRICAL PERFORMANCE



MECHANICAL CHARACTERISTICS

Cell Type	Mono-crystalline Bifacial
No. of cells	144 [2 x (12 x 6)]
Dimensions	2284x1134x35mm
Weight	33 kg
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
EVA	Transparent EVA
Junction Box	IP68, 3 diodes 25amp,
Output Cables	4 mm ² (IEC), 12 AWG (UL)
Connectors	MC4 compatible Connectors
Cable Length	400 mm (Customize length available)

ELECTRICAL CHARACTERISTIC

Module Type	540w	545w	550w	555w
	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	540	403.3	545	407
Maximum Power Voltage (Vmp)	41.65	38.78V	41.80	38.92V
Maximum Power Current (Imp)	12.97	10.40A	13.04	10.46A
Open-circuit Voltage (Voc)	49.50	46.41V	49.65	46.55V
Short-circuit Current (Isc)	13.85	11.20A	13.92	11.25A
Module Efficiency STC (%)	20.84		21.03	
Operating Temperature()			-40°C ~+85°C	
Maximum system voltage			1500VDC	
Maximum series fuse rating			25A	
Power tolerance			0~+3%	
Protection Class			Class II	

TEMPERATURE CHARACTERISTIC

Temperature coefficients of Pmax	-0.35%/°C
Temperature coefficients of Voc	-0.28%/°C
Temperature coefficients of Isc	0.048%/°C

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

	Maximum Power (Pmax)	567Wp	572.25Wp	577.5Wp	582.75Wp
5%	Module Efficiency STC (%)	21.89%	22.09%	22.29%	22.5%
15%	Maximum Power (Pmax)	621Wp	626.75Wp	632.5Wp	638.25Wp
	Module Efficiency STC (%)	23.98%	24.19%	24.42%	24.64%
25%	Maximum Power (Pmax)	675Wp	681.25Wp	687.5Wp	693.75Wp
	Module Efficiency STC (%)	26.06%	26.3%	26.54%	26.78%

*STC: Irradiance 1000W/m²



Cell Temperature 25°C

AM=1.5

*NOCT: Irradiance 800W/m²



Ambient Temperature 20°C

AM=1.5



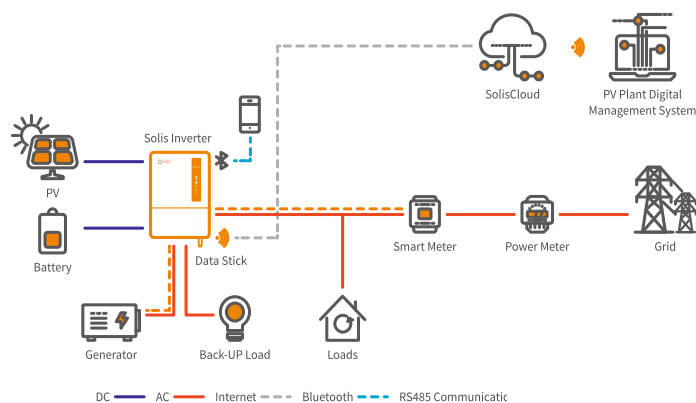
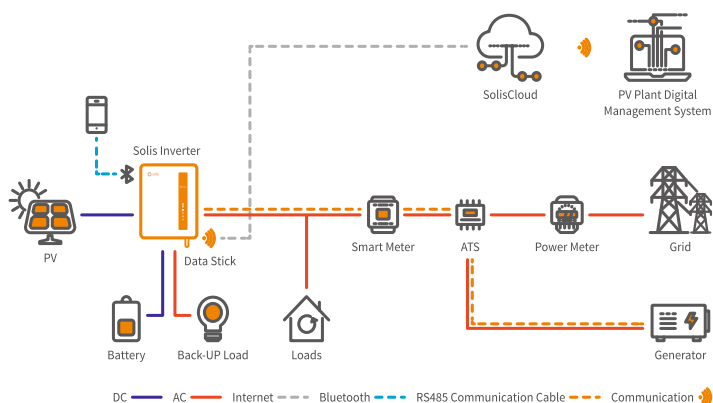
Wind Speed 1m/

Note: The specifications include in this datasheet are subjected to change without prior notice * the electrical data given is for reference purpose only * Warranty: Please read DHOP solar warranty documents thoroughly
Caution: Please read safety and installation manual before using the product*

The power range covers 3kW - 20kW. We can according to the requirements of your project application scenarios, rely on our flexible products to provide you with the best residential zero-carbon green power solutions.

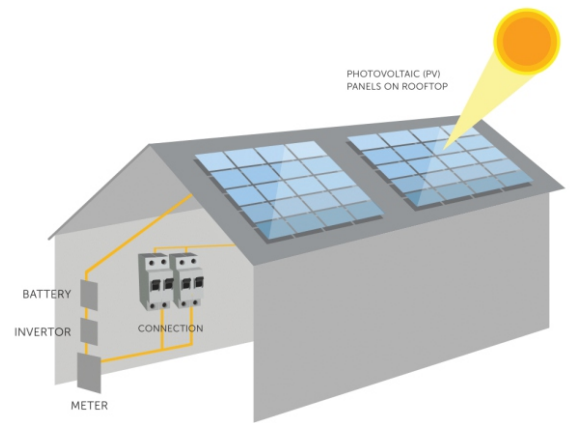
S5-EH1P(3-6)K-L	S6-EH3P(8-15)K-L-LD
S6-EH1P(3-6)K-L-EU	RHI-3P(3-10)K-HVES-5G
S6-EH1P(3-6)K-L-PRO	S6-EH3P(5-10)K2-H
S6-EH1P8K-L-PRO	S6-EH3P(3-10)K-H-EU
S6-EH1P(3-8)K-L-PLUS	S6-EH3P(12-20)K-H
S6-EH1P(3-8)K-L-PLD	S5-EA1P3K-L
S6-EH1P(12-16)K-L	S6-EA1P(3.6-6)K-L
S6-EH1P(12-16)K-L-LD	S5-EO1P(4-5)K-48
S6-EH3P(8-15)K-L	S6-EO1P(4-5)K-48-EU

Residential Energy Storage Solutions



Here's how your rooftop can produce electricity to run your home:-

Most states in India have a comprehensive residential solar rooftop policy and you can use the power produced from your own residential rooftop solar system for self-use. Use your roof space or any unused land within your premises to install solar panels and begin producing electricity. Feed it back into the grid or, if you wish, store it in batteries for future use. Called 'net metering', if you choose to feed the solar power produced during the day back into the grid, you will get credit for it in your electricity bill. Depending on your consumption and rooftop space, you can free yourself of utility power and enjoy free solar energy for life.



SOLAR SOLUTIONS FOR
POWERING A BRIGHTER
FUTURE NATURALLY



Efficient & Cost Effective Solar Rooftop System Solar Rooftop System –

Just like you, the sun works all day, shining in all its glory. Wouldn't it be great if you could use the power of the sun to light up your residential and commercial spaces, all year through? India is a country that enjoys abundant sunshine all year through but it is this very sunshine that makes us consume more electricity. We all use fans, coolers, air-conditioners and refrigerators 24 hours, and through the year, thus running up high electricity bills. Add to that the woes of unplanned power cuts and you are forced to depend on high cost, unreliable grid electricity. Instead, switch to a Solar Rooftop System to harness the power of the sun and enjoy the benefits of clean, uninterrupted electricity at significantly lower costs

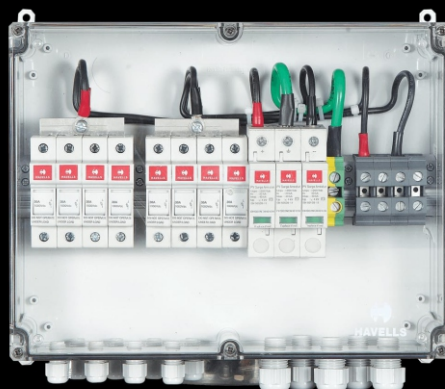


MOUNTING STRUCTURES & ACCESSORIES:-

Distribution Boxes These systems facilitate flow of current from DC side to AC side with proper protection. **Module Mounting Structures** The structures are mounted in such a way that the roof is not damaged. The structures are leak proof to avoid water leakage. **Cables and protection devices** Cables to transmit currents and protection devices to keep the system protected from lightening and other electric surges.

AC DISTRIBUTION BOX:-

SPD Type I+ II DC surge protection device Box Metal enclosure powder coated Specification Incomer MCB / MCCB as per required capacity, Outgoing MCB / MCCB / ACB as per required capacity, Multifunction meter with CTs (optional)



ALL IN ONE SOLAR STREET LIGHTS FROM 9WATTS TO 60WATTS

Massavi Energy's range of Solar Street Lighting Systems use high-efficient LEDs to provide lighting anywhere with direct access to sunlight. Our systems offer integrated battery bank (Internal LiFePO4 battery) and high efficient Monocrystalline solar panels in one compact offering. Our systems can also be configured for customized applications.



Integrated solar street light Integrated Solar Street light in 12W, 15W, 20W, 25W, 30W, 40W, 60W and 80W LED power. Integrated Solar Street light consists of a Solar panel and LED luminary with built-in Lithium-ion / Lithium Ferro Phosphate battery (LiFePO4) battery and solar driver card with charge controller. In addition, LED luminary has a motion sensor to increase / decrease the LED light brightness on detecting any movement near the solar light. As we can mount the solar panel independently in true South facing direction, Integrated Solar Street lights provide better performance as compared to All In one Solar street lights. Also, Integrated Solar Street light provides better value to customers in terms of cost as compared to traditional solar street lights. Since the battery is inside the LED light housing in integrated Solar Street lights, this eliminates the need for external battery box, which is part of traditional solar street lights. Moreover, eliminating the external battery box reduces chances of battery theft / vandalism. Hence, integrated solar street lights provide better value to customers without compromising on performance. The solar light with battery can also be used to retrofit existing solar lights where either the solar luminary is not working or the battery has been stolen / exhausted. The customer can still utilize the solar panel from earlier setup. The solar light with battery can be installed on existing light shoulder on the pole and simply connected to the solar panel to resume operation. This retrofit solution helps utilize the remaining value from earlier installation (thereby enhancing the environmental benefits) and also helps in reducing costs.

Working of a Solar Street Light: On receiving sunlight, the solar panel in solar street light produces electric power (blinking green color LED indicates the battery charging process during daytime). This power charges the battery during daytime. After sunset, the solar street light starts glowing automatically. The LED light consumes power stored inside the battery during daytime. A motion sensor uses Infrared motion sensor to detect any movement around the light (working explained later). This helps in conserving energy and providing better backup especially in cloudy or foggy weather conditions. Systellar also provides the option in solar light with battery to switch On/Off the motion sensor functionality. This special functionality can be requested at the time of placing order for Integrated solar street light or the solar light with battery.

Industrial Rooftop Solar Solutions



All About 1 MW Solar Power Plant: Price, Specifications & More
1 MW Solar Power Plant January 14, 2024
High-capacity systems of over 100kW are called Solar Power Stations, Energy Generating Stations, or Ground Mounted Solar Power Plants. A 1MW solar power plant of 1-megawatt capacity can run a commercial establishment independently. This size of solar utility farm takes up 4 to 5 acres of space and gives about 4,000 kWh of low-cost electricity every day. Surplus power can subsequently be sold to the government utility company as per the net metering mechanism. The Working of a 1MW Solar Power Plant
Solar photovoltaic panels do the same thing in all residential and commercial compositions regardless of the 1MW solar power plant cost or type. They absorb sunshine to generate clean solar electricity. The panel's surface contains multiple strings of solar cells (made up of silicon alloys) which lose their electrons. It happens in response to a change in their electrical field caused by photons present in sunlight. The drifting elections generate a flow of direct current. This is called the 'Photovoltaic Effect'.

Massavi Solar Energy Solutions

No.2566, 1st Floor, 20th Main Road, A Block, AECS Layout,
Singasandra, Bengaluru - 560068

Ph : 9844320037 / 7676527098 / 9019038213

✉ info@massavisolar.com

🌐 www.massavisolar.com