

# **520 Watt**

# 144 Half Cell Monocrystalline Module

## **Features**

**Ultra-light:** Glass free module weighs 7.7 kg, 70% lighter than conventional glass modules.

**Fast-Installation:** Through "Quick-Bonding" installation, It requires no penetration, reduces time on roof by 40% and eliminates the use of mounting hardware.

**Aesthetic:** Seamless integration with underlying installation surface.

**Durable:** It is the first glassless module to pass the same durability.

**Transportation:** Its innovative frame and low weight will very significantly reduce the cost of transportation.

**Deployment:** Ultra-light weight and customizable size make it the best choice to change the way how solar is deployed in the market and bring added value to special applications.

**Durability:** The panels are certified to withstand extreme wind (2400

Pascal) and snow loads (5400 Pascal), while special materials and stringent quality control ensure panel longevity.



# LINEAR

#### **PERFORMANCE**

#### WARRANTY

10 Year Product Warranty

25 Year Linear Power Warranty

515W ~ 520 W

**POWER OUTPUT RANGE** 

0-5 W

**POWER TOLERANCE** 











#### HSFSP520M-12X12



Electrical Characteristics				
STC	HSFSP515M-12X12	HSFSP520M-12X12		
Maximum Power (P <sub>max</sub> )	515	520		
Maximum Power Voltage (V <sub>mp</sub> )	42.12	42.31		
Maximum Power Current (I <sub>mp</sub> )	10.23	12.24		
Open-circuit Voltage (Voc)	49.3	49.5		
Short-circuit Current (I <sub>sc</sub> )	13.49	13.56		
Module Efficiency (%)	19.1	19.3		
Operating Temperature (°C)	-40 °C to 85 °C			
Maximum System Voltage	1500 V DC (IEC)			
Maximum Series Fuse Rating	25 A			
Application Class	Class A			
Power Tolerance	0/+5 W			

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM=1.5.

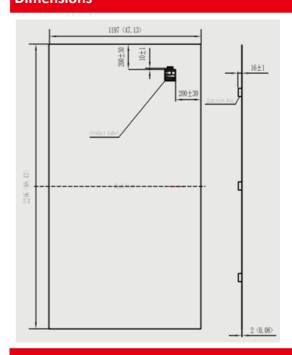
NOCT	HSFSP515M-6X24	HSFSP520M-6X24
Maximum Power (P <sub>max</sub> )	424.4	429.2
Maximum Power Voltage (V <sub>mp</sub> )	41.6	41.8
Maximum Power Current (I <sub>mp</sub> )	10.21	10.26
Open-circuit Voltage (Voc)	49.6	49.8
Short-circuit Current (I <sub>sc</sub> )	10.76	10.82

NOCT: Irradiance 800W/m $^2$ , Ambient temperature 20 $^{\circ}$ C, AM=1.5, Wind speed 1 m/s.

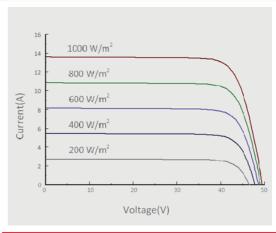
Mechanical Characteristics		
Solar Cell	Monocrystalline silicon (182mm half cell)	
No. of Cells	144 (12 × 12)	
Module Dimensions	2246×1197×2mm	
Weight	7.7 kgs	
Backsheet	White	
Frame	Flameless	
J-box	IP 68 rated	
Output Cables	Photovoltaic technology cable 4.0 mm <sup>2</sup> , (±)450 mm	
Connector	MC4 compatible	

Packaging Configuration				
	20' GP	40' HC		
Module per pallet	66	66		
Pieces per container	264	528		

#### **Dimensions**



### I-V Curve (520W)



Temperature Characteristics		
Nominal Operating Cell Temperature (NOCT)	41±2 ℃	
Temperature Coefficient of Pmax	-0.34 %/°C	
Temperature Coefficient of Voc	-0.26 %/°C	
Temperature Coefficient of Isc	0.033 %/°C	

