



# SOVA SOLAR®

ENERGISING THE FUTURE...



**ENERGISING THE FUTURE...**

QUALITY SOLAR PV MODULE MANUFACTURER EXPORTER & EPC SOLUTION PROVIDER

## ABOUT US

Across the vastness of billions of years, the miracle planet Earth has nurtured diverse life forms. The precious life of our Earth confronts an ongoing crisis as a result of climate change, environmental destruction, the result of human economy and society over the course of just a few centuries. Our goal is to contribute to the resolution of these issues on a global and human scale and be a part of worldwide initiative.



**SOVA POWER LTD.** was established in 2008 to manufacture and market cost effective high quality solar photovoltaic products for Grid Connected & Off-Grid Power Plants, Solar Water Pumps, Solar Street Lights etc. Specifically, we are focusing on Silicone crystalline based products using high quality raw materials. A range of products have been developed based on customer needs which are supplied to domestic and international customers. We have also setup Kilowatt to Megawatt Solar PV Power Plants all over India.

**SOVA POWER LTD.**, operating out of its facility at Durgapur, West Bengal, India, has commenced its production of Crystalline Solar Photovoltaic Module in the financial year 2009-10 Export Promotion Industrial Park, Banskopa. The present installed capacity of production of PV Modules is **100 MW per Year**. It is in the process of enhancing up to **200MW** capacity within December, 2015".

M/s. **SPIRE CORPORATION**, Bedford, USA and **M/S TEAM TECHNIK**, Germany have provided us the technological support. Our products range is from **3Wp to 320Wp**. The Photovoltaic modules are produced with an efficiency up to **16.67%** with Positive Tolerance upto **4.9Wp**, in compliance with international standard. We are approved vendor of Steel Authority of India (SAIL). We are regularly working with Government companies like **BHARAT HEAVY ELECTRICALS LTD. (BHEL)**





## THE MANAGEMENT

The key personnel of SOVA team are qualified and have high managerial experience and contributing themselves to strengthen THE TEAM of **Sova Power Limited** for efficient operation and to make the company a trustworthy organization in the field of Solar Renewable Energy.

The company is associated with *Centre of Excellence for Green Energy and Sensor Systems (CEGESS)*, department of **“Indian Institute of Engineering Science & Technology, Shibpur, Howrah”**, one of the oldest engineering institute of the country, and first in the field of Research and Development project on Solar Renewable Energy and develop the Solar PV Technology. Apart from the same renowned scientists, academicians and technocrats are advising the company in its quest for excellence.

The company, in association with AW Solution GmbH and Professor Markus Amendt of Berlin University, has left its foot print in the soil of Europe also.





## OUR PRODUCTS

During the tenure of last 5 years, the Company has broadened its Product Range from Manufacturer of Solar Modules to Manufacturer of DC Distribution Box, AC Distribution Box, Array Junction Box, Module Mounting Structure etc.

### ● Solar Photovoltaic Crystalline Modules:

The current product range is from 3Wp to 320Wp Solar panels. The panels are constructed with Anti Reflective Coating (ARC) toughened low iron, textured high light transmission glass on the front and a three layer fluoropolymer tedlar back sheet to protect the panel from moisture and long term weathering. Our modules are PID Free and FSI tested.

The panels are finished with an anodised aluminium frame with mounting holes pre-drilled and a junction box with cables. Our products are unique in incorporating Si\_Cys cells. This format provides flexibility in the design of panels with the possibility of different sizes and electrical characteristics. Our panels offer a number of benefits over competing types of panels.







## SALIENT FEATURES OF MODULE OF SS230P - SS320P

- All the modules are PID ( Potential Induced Degradation) resistant
- F.S.I. (Flame Spread Index) tested modules **first in India**
- Salt mist corrosion tested ( IEC 61701)
- High performance modules with efficiency up to 16.67% with positive tolerance up to 4.9 Wp
- 12 Years limited product warranty
- 25 Years of Linear Power Guarantee
- Excellent power output in different climate zones of India as well as globally
- Generate power even at low light
- Anti Reflective Coating (**ARC**) toughened low iron, textured high light transmission glass
- Multi layer tedlar® and Fast Cure EVA
- Reinforced anodized Aluminium Frame
- Pre-drilled frame for easy mounting
- IP-65 & IP-67 rated Junction Box
- Solar MC4 compatible connector



**SOVA SOLAR®**  
ENERGISING THE FUTURE...

**SS 54 Cells  
Series**

## SS230P: 220Wp-230Wp

- Excellent Power Output with +ve Tolerance up to 4.9Wp
- 12 Years Limited Product Warranty
- 25 Years of Linear Power Guarantee
- High Performance Modules with efficiency up to 16.67%
- All the modules are PID ( Potential Induced Degradation) resistant.
- F.S.I. (Flame Spread Index) tested modules first in India

[www.sovasolar.com](http://www.sovasolar.com)

## Features

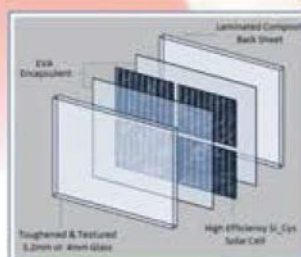
- The panels are constructed with Anti Reflective Coating (ARC) toughened low iron, textured high light transmission glass
- Multi layer tedlar® and Fast Cure EVA
- Reinforced anodized Aluminium Frame
- Pre-drilled frame for easy mounting
- IP-65 & IP-67 rated Junction Box
- Solar MC4 compatible connector

### Application

- On-grid systems
- BIPV
- Solar farms
- Standalone (off-grid) systems

### Constructional Characteristics

- Frame
- Glass
- EVA
- Cells
- Back sheet

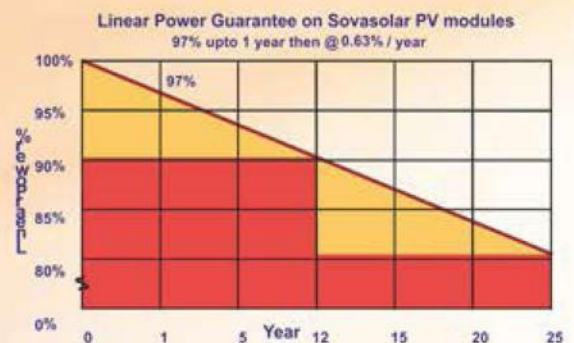
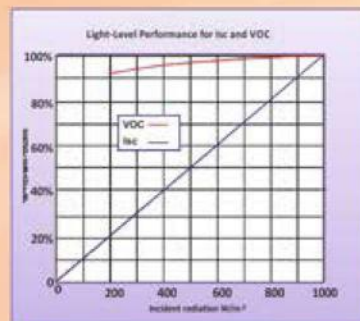
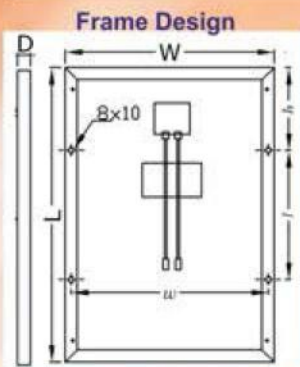


### Certification

- IEC 61215 & 61730
- IEC 61701 (Salt Mist Test)
- UL Listed: UL 1703
- CEC Registered
- MNRE (India) Certified
- ISO 9001-2008;
- ISO 14001-2004



Specifications	SS220P	SS225P	SS230P
Cell	Cell Multicrystline Solar Cell		
Electrical Characteristics			
Open Circuit Voltage (Voc )	33.19 V	33.35 V	33.46 V
Optimum Operating Voltage (Vmp)	27.06 V	27.16 V	27.25 V
Short Circuit Current (Isc)	8.61 A	8.74 A	8.84 A
Optimum operating Current (Imp)	8.15 A	8.31 A	8.45 A
Power at STC (Pmax)	220 W	225 W	230 W
Module Efficiency (η) %	15.13%	15.47%	15.81%
Operating Conditions	- 40°C to + 85°C at 85% RH		
Temperature Co-efficient for Voc/°C (β)	-0.34%		
Temperature Co-efficient for Isc/°C (α)	0.05%		
Temperature Co-efficient for power/°C (γ)	-0.43%		
NOCT	45°C ± 2°C		
Mechanical Characteristics			
Weight	16.7 Kg		
Module Dimension (L) x (W) x (D)	1481 x 982 x 35.3 mm		
Mounting Hole (Oblong) (Ø)	8 x 10 mm		
Mounting Hole CTC distance - vertical (l)	800 mm		
Mounting Hole distance from corner (h)	340.5 mm		
Mounting Hole CTC distance - horizontal (w)	946 mm		





**SS 72 Cells  
Series**

[www.sovasolar.com](http://www.sovasolar.com)

**SS300P: 295Wp – 320Wp**

- Excellent Power Output with +ve Tolerance up to 4.9Wp
- 12 Years Limited Product Warranty
- 25 Years of Linear Power Guarantee
- High Performance Modules with efficiency up to 16.67%
- All the modules are PID ( Potential Induced Degradation) resistant.
- F.S.I. (Flame Spread Index) tested modules first in India

**Features**

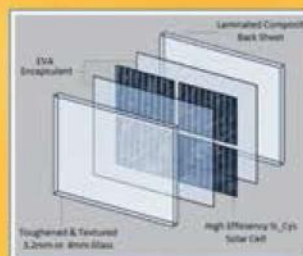
- The panels are constructed with Anti Reflective Coating (ARC) toughened low iron, textured high light transmission glass
- Multi layer tedlar® and Fast Cure EVA
- Reinforced anodized Aluminium Frame
- Pre-drilled frame for easy mounting
- IP-65 & IP-67 rated Junction Box
- Solar MC4 compatible connector

**Application**

- On-grid systems
- BIPV
- Solar farms
- Standalone (off-grid) systems

**Constructional Characteristics**

- Frame
- Glass
- EVA
- Cells
- Back sheet

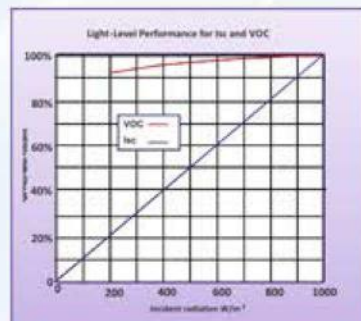
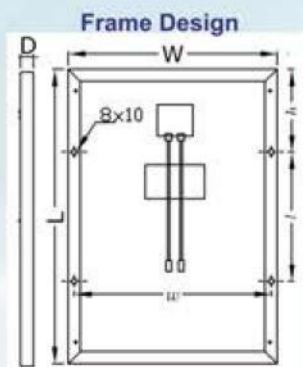


**Certification**

- IEC 61215 & 61730
- IEC 61701 (Salt Mist Test)
- UL Listed: UL 1703
- CEC Registered
- MNRE (India) Certified
- ISO 9001–2008;
- ISO 14001–2004



Specifications	SS295P	SS300P	SS305P	SS310P	SS315P	SS320P
Cell	Cell Multicrystalline Solar Cell					
<b>Electrical Characteristics</b>						
Open Circuit Voltage (Voc )	44.31 V	44.46 V	44.60 V	44.71 V	44.86 V	45.01 V
Optimum Operating Voltage (Vmp)	36.11 V	36.22 V	36.30 V	36.40 V	36.49 V	36.60 V
Short Circuit Current (Isc)	8.64 A	8.74 A	8.82 A	8.92 A	9.01 A	9.11 A
Optimum operating Current (Imp)	8.19 A	8.31 A	8.41 A	8.52 A	8.63A	8.76 A
Power at STC (Pmax)	295 W	300 W	305 W	310 W	315 W	320 W
Module Efficiency ( $\eta$ ) %	15.37%	15.63%	15.89%	16.15%	16.41%	16.67%
Operating Conditions	- 40°C to + 85°C at 85% RH					
Temperature Co-efficient for Voc/°C ( $\beta$ )	-0.34%					
Temperature Co-efficient for Isc/°C ( $\alpha$ )	0.05%					
Temperature Co-efficient for power/°C ( $\gamma$ )	-0.43%					
NOCT	45°C $\pm$ 2°C					
<b>Mechanical Characteristics</b>						
Weight	22.1 Kg					
Module Dimension (L) x (W) x (D)	1955 x 982 x 42 mm					
Mounting Hole (Oblong) ( $\emptyset$ )	8 x 10 mm					
Mounting Hole CTC distance - vertical (f)	978 mm					
Mounting Hole distance from corner (h)	488.5mm					
Mounting Hole CTC distance - horizontal (w)	944 mm					



**SS 60 Cells  
Series**

**SS250P: 245Wp – 260Wp**

- Excellent Power Output with +ve Tolerance up to 4.9Wp
- 12 Years Limited Product Warranty
- 25 Years of Linear Power Guarantee
- High Performance Modules with efficiency up to 16.67%
- All the modules are PID ( Potential Induced Degradation) resistant.
- F.S.I. (Flame Spread Index) tested modules first in India

[www.sovasolar.com](http://www.sovasolar.com)

**Features**

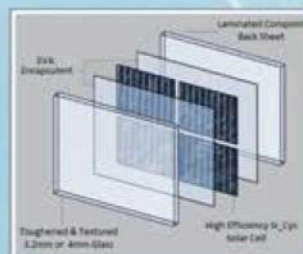
- The panels are constructed with Anti Reflective Coating (ARC) toughened low iron, textured high light transmission glass
- Multi layer tedlar® and Fast Cure EVA
- Reinforced anodized Aluminium Frame
- Pre-drilled frame for easy mounting
- IP-65 & IP-67 rated Junction Box
- Solar MC4 compatible connector

**Application**

- On-grid systems
- BIPV
- Solar farms
- Standalone (off-grid) systems

**Constructional Characteristics**

- Frame
- Glass
- EVA
- Cells
- Back sheet

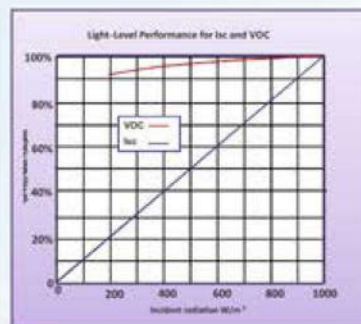
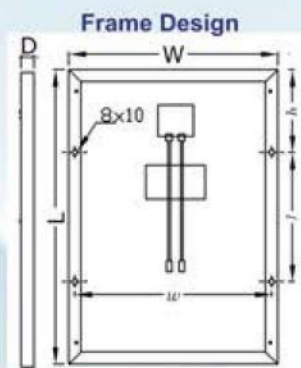


**Certification**

- IEC 61215 & 61730
- IEC 61701 (Salt Mist Test)
- UL Listed: UL 1703
- CEC Registered
- MNRE (India) Certified
- ISO 9001–2008;
- ISO 14001–2004



Specifications	SS245P	SS250P	SS255P	SS260P
Cell	Cell Multicrystalline Solar Cell			
<b>Electrical Characteristics</b>				
Open Circuit Voltage (Voc )	36.88 V	37.05 V	37.18 V	37.30 V
Optimum Operating Voltage (Vmp)	30.06 V	30.18 V	30.27 V	30.35 V
Short Circuit Current (Isc)	8.61 A	8.74 A	8.84 A	8.94 A
Optimum operating Current (Imp)	8.15 A	8.31 A	8.43 A	8.58 A
Power at STC (Pmax)	245 W	250 W	255 W	260 W
Module Efficiency ( $\eta$ ) %	15.22%	15.53%	15.84%	16.15%
Operating Conditions	- 40°C to + 85°C at 85% RH			
Temperature Co-efficient for Voc/°C ( $\beta$ )	-0.34%			
Temperature Co-efficient for Isc/°C ( $\alpha$ )	0.05%			
Temperature Co-efficient for power/°C ( $\gamma$ )	-0.43%			
NOCT	45°C $\pm$ 2°C			
<b>Mechanical Characteristics</b>				
Weight	18.5 Kg			
Module Dimension (L) x (W) x (D)	1639 x 982 x 42 mm			
Mounting Hole (Oblong) ( $\emptyset$ )	8 x 10 mm			
Mounting Hole CTC distance - vertical (l)	820 mm			
Mounting Hole distance from corner (h)	409.5 mm			
Mounting Hole CTC distance - horizontal (w)	944 mm			







**SOVA SOLAR®**

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**SS 66 Cells  
Series**

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## SS280P: 270Wp – 280Wp

- Excellent Power Output with +ve Tolerance up to 4.9Wp
- 12 Years Limited Product Warranty
- 25 Years of Linear Power Guarantee
- High Performance Modules with efficiency up to 16.67%
- All the modules are PID ( Potential Induced Degradation) resistant.
- F.S.I. (Flame Spread Index) tested modules first in India

## Features

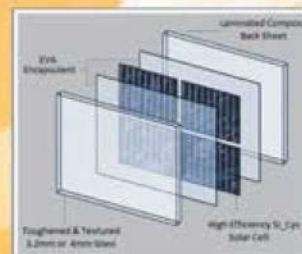
- The panels are constructed with Anti Reflective Coating (ARC) toughened low iron, textured high light transmission glass
- Multi layer tedlar® and Fast Cure EVA
- Reinforced anodized Aluminium Frame
- Pre-drilled frame for easy mounting
- IP-65 & IP-67 rated Junction Box
- Solar MC4 compatible connector

### Application

- On-grid systems
- BIPV
- Solar farms
- Standalone (off-grid) systems

### Constructional Characteristics

- Frame
- Glass
- EVA
- Cells
- Back sheet

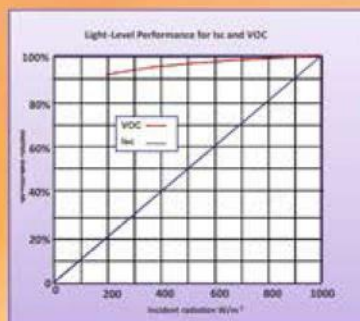
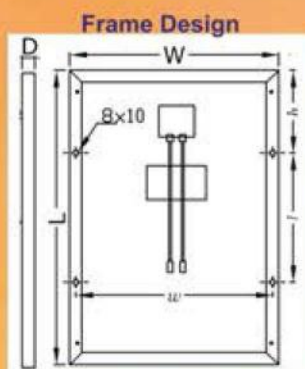


### Certification

- IEC 61215 & 61730
- IEC 61701 (Salt Mist Test)
- UL Listed: UL 1703
- CEC Registered
- MNRE (India) Certified
- ISO 9001–2008;
- ISO 14001–2004



Specifications	SS270P	SS275P	SS280P
Cell	Cell Multi crystalline Solar Cell		
<b>Electrical Characteristics</b>			
Open Circuit Voltage (Voc )	40.58 V	40.76 V	40.89 V
Optimum Operating Voltage (Vmp)	33.08 V	33.20 V	33.29 V
Short Circuit Current (Isc)	8.62 A	8.74 A	8.84 A
Optimum operating Current (Imp)	8.17 A	8.31 A	8.43 A
Power at STC (Pmax)	270 W	275 W	280 W
Module Efficiency ( $\eta$ ) %	15.13%	15.58%	15.87%
Operating Conditions	- 40°C to + 85°C at 85% RH		
Temperature Co-efficient for Voc/°C ( $\beta$ )	-0.34%		
Temperature Co-efficient for Isc/°C ( $\alpha$ )	0.05%		
Temperature Co-efficient for power/°C ( $\gamma$ )	-0.43%		
NOCT	45°C $\pm$ 2°C		
<b>Mechanical Characteristics</b>			
Weight	20.3 Kg		
Module Dimension (L) x (W) x (D)	1797 x 982 x 42 mm		
Mounting Hole (Oblong) ( $\varnothing$ )	8 x 10 mm		
Mounting Hole CTC distance - vertical (l)	899 mm		
Mounting Hole distance from corner (h)	449 mm		
Mounting Hole CTC distance - horizontal (w)	944 mm		





## CERTIFICATES & TESTIMONIALS:

Our products have been extensively tested have the following over the last 5 years and we have the following certificates and test reports:

- IEC 61215 and IEC 61730
- IEC Salt Mist Corrosion (IEC61701)
- Certified from TUV Rheinland & UL India UL 1703
- CEC (California, USA)
- CEC (Australia)
- Accredited Partner MNRE ( Category A+)
- PID ( Potential Induced Degradation)
- F.S.I. (Flame Spread Index)
- Electronics Regional Test Laboratory (East), Kolkata
- Registered with Directorate General of Supplies and Disposal (DGS&D), SAIL & BHEL

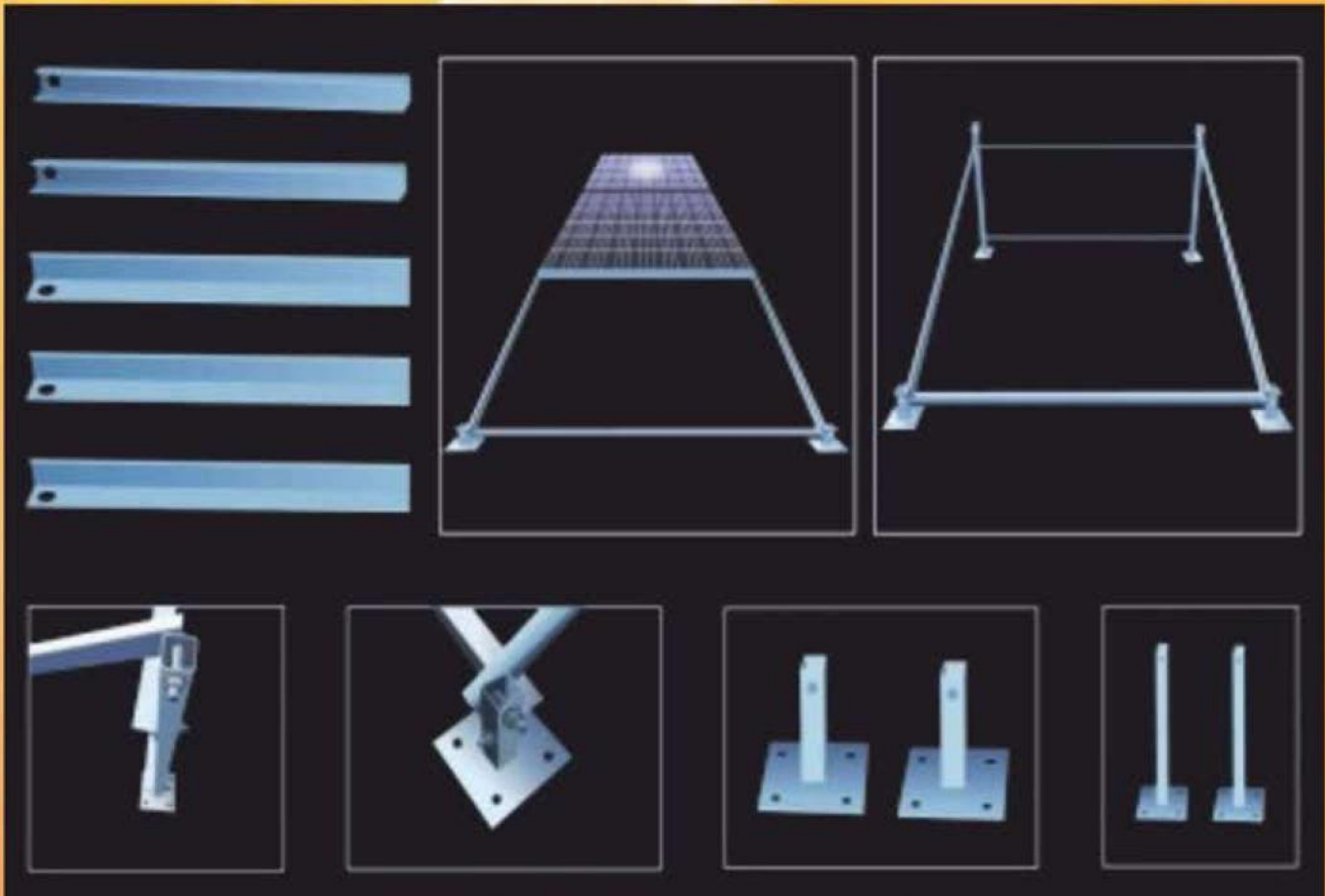












#### Module Mounting Structure:

Module Mounting Structure is made of galvanized iron. Each structure will hold 2 numbers of modules and can be attached side wise through nuts and bolts made of stainless steel. It is designed for 150 KM/H wind speed. The thickness of galvanization structure is minimum 80 micron.



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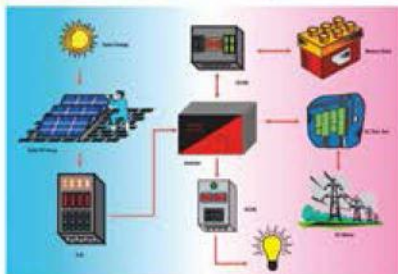
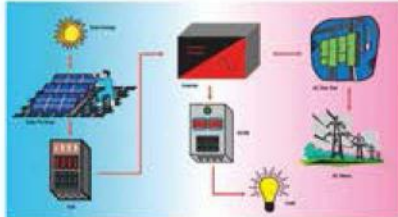
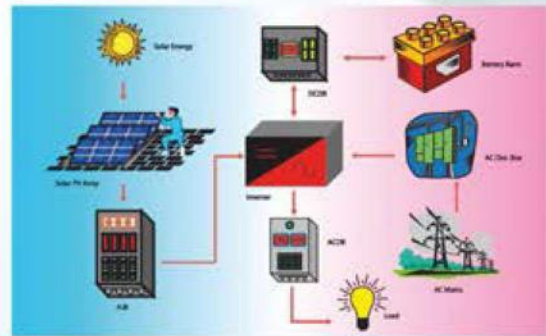
# Solar PV Plants

## Off Grid SPV Plant:

Solar modules will charge the battery & supply power to load. Battery can also be charged from AC mains.

Main Components:

1. Solar PV Module
2. Structure
3. AJB, DCDB, ACDB
4. Inverters/ Charge Controllers
5. Battery Bank
6. Cables & accessories



## On Grid without Battery SPV Plant:

Solar modules will supply power to load & excess power will be pushed to AC mains. If solar modules can't meet the energy requirement of connected load, the excess power can be consumed from AC mains. It is a bi directional process.

Main Components:

1. Solar PV Module
2. Structure
3. AJB, DCDB, ACDB
4. Inverters/ Charge Controllers
5. Battery Bank
6. Cables & accessories

## Application:

- Office & Building Lighting
- Emergency backup for critical load
- Reduction of conventional electricity consumption
- Revenue earning by selling electricity

## On Grid without Battery SPV Plant:

Solar modules will supply power to load & excess power will be pushed to AC mains. If solar modules can't meet the energy requirement of connected load, the excess power can be consumed from AC mains. It is a bi directional process.

Main Components:

1. Solar PV Module
2. Structure
3. AJB, ACDB
4. Inverter
5. Cables & accessories



# Solar Pumps

Our modules are certified with Kirloskar, Rotomac and Shakti Pumps

Solar-Powered water pump uses the sun's energy to pump water and can be an excellent choice in applications where the volume of water to be pumped is relatively small, the hours of operation limited, the sunshine is plentiful, and access to electricity is a challenge.

## Why Solar Pumps

- 50% of energy produced in the world is used in operating various kind of pumps.
- Independence from grid
- Pollution & Noise Free
- Low maintenance
- Early payback period
- Environment friendly
- Long Life

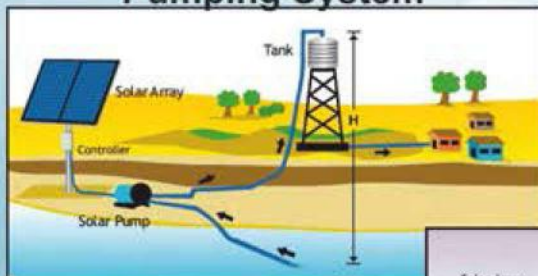
## Applications

- Flood Irrigation
- Drip Irrigation
- Community water supply
- Fish Farming
- Poultry farming
- Cattle watering

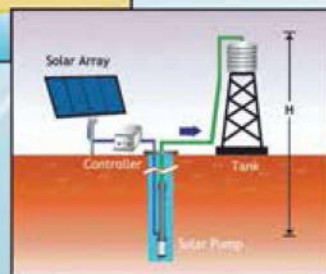
## System Configuration

- Solar Panel
- Controller
- Electric Motor
- Pumps

### Submersible Pumping System



### Surface Pumping System







495 kWp SPV Plant at GCG, Chandigarh, Sec 11 (CREST)



Srinagar



Jammu & Kashmir, 50 KW SPVPP





Jammu & Kashmir  
DAKSUM Sheep Breeding Farm 100 KW



Haryana  
IG Solar - 12 KW Rooftop, Gurgaon,



Jammu & Kashmir  
5 KW SPVPP, JAKEDA





Chattisgarh  
RAIPUR- PHC-KORAR 7.5 KW SPVPP



Jammu & Kashmir  
100 KW SPVPP



West Bengal  
12 KW Durgapur Women's College,



West Bengal  
3 KW Sundarban



Maharastra  
Solar Wind Hybrid 23 KW, Dhapoli,



West Bengal, Durgapur  
2 KW Durgapur Women's College,



Jammu & Kashmir  
15 KW SPVPP, JAKEDA



Jammu & Kashmir 20KW



JAMURIA  
1 MW Grid Connected Solar Power Plant



## OUR PLANT







**SOVA SOLAR®**

**SOVA POWER LTD.**

**REGISTERED OFFICE**

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Ph. +91 9874 700535

E-mail: sales@sovasolar.com

Works: Layout Plot No. 25, EPIP | Banskopa, Durgapur: 713 212

**BRANCHES:**

Greater Noida | New Delhi | Raipur | Pune | Patna | Nagpur | Jammu

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[www.sovasolar.com](http://www.sovasolar.com)