DIGITRONICS SOLUTION

Technically Power

PV Modules

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Technically Power

Small Modules

Series: Small Modules 40W To 90W

★ BIS & IEC Approved Solar PV Modules

- **Superior module efficiency as per international benchmarks**
- **Salt mist resistant**
- **High durability**
- **Excellent performance in low light**

Poly Modules

Series : Poly Modules 100W To 250W

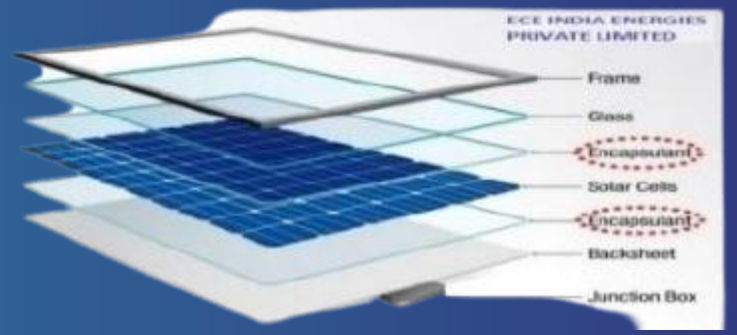
★ BIS & IEC Approved Solar PV Modules

- **Superior module efficiency as per international benchmarks**
- **Salt mist resistant**
- **High durability**
- **Excellent performance in low light**

Series: 300W To 350W

★ BIS & IEC Approved Solar PV Modules

- **PID resistant module ensuring long term reliability.**
- **Anti Reflective Coating for improved light transmission.**
- **Certified to withstand the most challenging weather.**
- **High system voltage reduced the BOS cost more reliability.**
- **25 Years Linear Warranty longer life.**



Mono Crystalline Modules

Series: Mono Crystalline Modules 360W To 525W

★ BIS & IEC Approved Solar PV Modules

- PID resistant module ensuring long term reliability.
- Anti Reflective Coating for improved light transmission.
- Certified to withstand the most challenging weather.
- High system voltage reduced the BOS cost more reliability.
- 25 Years Linear Warranty longer life.

: Mono Crystalline Modules 400W To 425 W

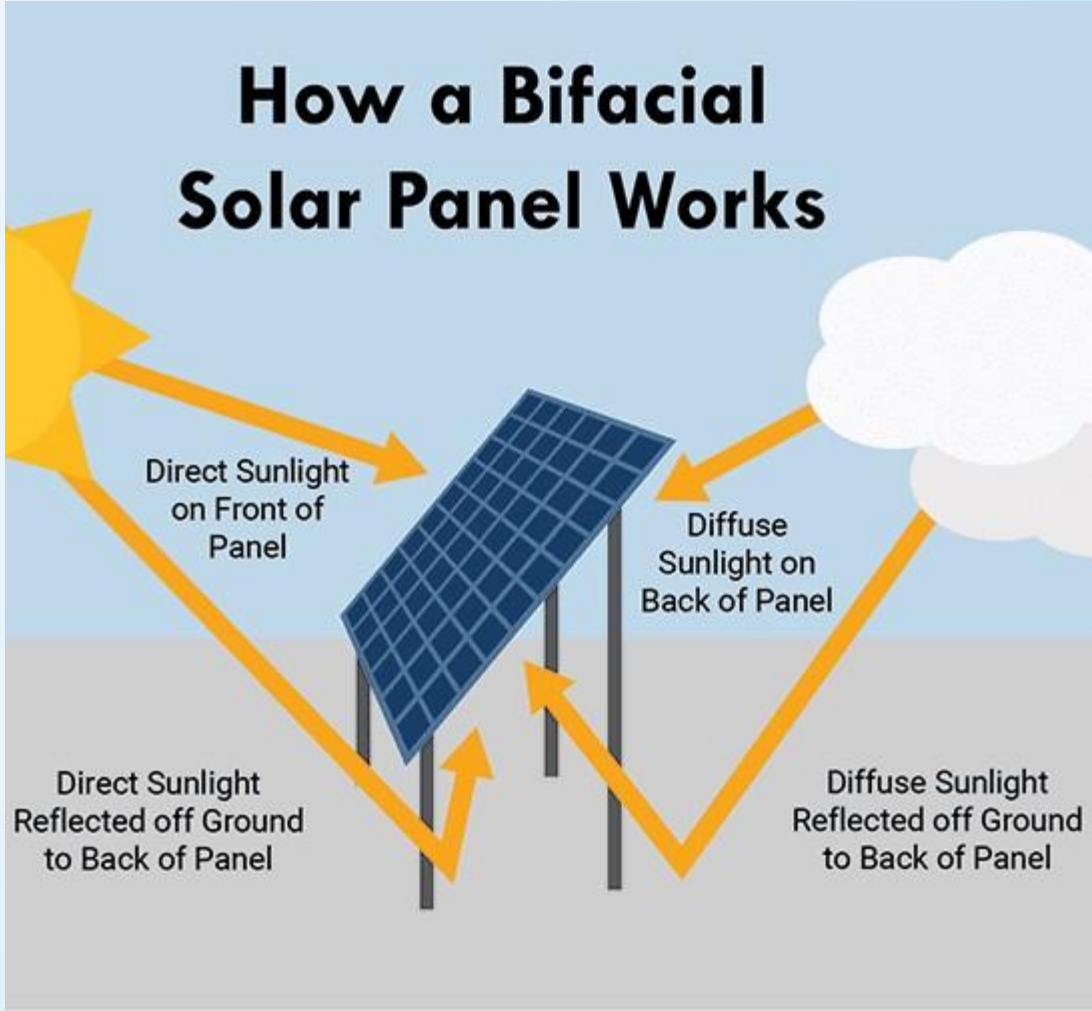
★ BIS & IEC Approved Solar PV Modules

- PID resistant module ensuring long term reliability.
- Anti Reflective Coating for improved light transmission.
- Certified to withstand the most challenging weather.
- High system voltage reduced the BOS cost more reliability.
- 25 Years Linear Warranty longer life.

Bifacial

Bifacial Solar Panel

Bifacial solar modules offer many advantages over traditional solar panels. Power can be produced from both sides of a bifacial module, increasing total energy generation. They're often more durable because both sides are UV resistant, and potential-induced degradation (PID) concerns are reduced when the bifacial module is frameless. Balance of system (BOS) costs are also reduced when more power can be generated from bifacial modules in a smaller array footprint.



What is a bifacial solar module?

Bifacial modules produce solar power from both sides of the panel. Whereas traditional opaque-backsheeted panels are monofacial, bifacial modules expose both the front and backside of the solar cells. When bifacial modules are installed on a highly reflective surface (like a white TPO roof or on the ground with light-colored stones), some bifacial module manufacturers claim up to a 30% increase in production just from the extra power generated from the rear.

Bifacial modules come in many designs. Some are framed while others are frameless. Some are dual-glass, and others use clear backsheets. Most use monocrystalline cells, but there are polycrystalline designs. The one thing that is constant is that power is produced from both sides. There are frameless, dual-glass modules that expose the backside of cells but are not bifacial. True bifacial modules have contacts/busbars on both the front and back sides of their cells.

BIPV

BIPV Solar Panels

• Building-integrated photovoltaics (BIPV) are photovoltaic materials that are used to replace conventional building materials in parts of the building envelope such as the roof, skylights, or facades.[1] They are increasingly being incorporated into the construction of new buildings as a principal or ancillary source of electrical power, although existing buildings may be retrofitted with similar technology. The advantage of integrated photovoltaics over more common non-integrated systems is that the initial cost can be offset by reducing the amount spent on building materials and labor that would normally be used to construct the part of the building that the BIPV modules replace. In addition, BIPV allows for more widespread solar adoption when the building's aesthetics matter and traditional rack-mounted solar panels would disrupt the intended look of the building. These advantages make BIPV one of the fastest growing segments of the photovoltaic industry.

DCR (Domestic Content Requirement)

DCR (20W to 340W) Solar Panel

- DCR is a term created by the MNRE (Ministry of New and Renewable Energy) to encourage the usage of Made in India solar panels.
- According to MNRE, DCR panels are those solar panels or modules wherein the solar cell and solar module are manufactured in India. MNRE reviews the Make in India initiative every year and its growth and is based on the capacities of various stages of solar panel manufacturing in India. This has become the mandate for specific projects promoted by MNRE, especially for residential projects associated with any form of subsidy.
- MNRE is also planning to increase the domestic content use to include wafers, ingots, and polysilicon manufactured in India in the coming years.

Solar Products

Home Light Systems

Home Light Components

- 2 to 5 LED bulbs or Tube Lights, Fan
- Li-ion, LFP, Lead Acid Batteries
- USB Port for Mobile Charger
- Long hours of backup
- Optimal - Remote monitoring and LCD Display

Solar Cooker

Major portion of total energy consumed in cooking.
Half the world's population burn wood or dried dung to cook food.
In village, 95% energy consumed for cooking.
Source of fuel used for cooking-coal, kerosene, cooking gas-firewood, dung etc.
People are exposed to indoor air pollution as a result of burning solid fuels for cooking and heating.
So we introduced our solar cooker to save energy and save environment.

Solar Lantern

Solar Lantern

- Charge for 6 hrs in Sun
- Don’t charge longer than 2 hrs on electricity
- Don’t turn on light while charging
- Avoid close eye contact of light

Solar Insect Killer

Solar Insect Killer Specifications

Light Type : 3 Watt UV Only

Battery : 6V, 2.5Ah SMF Battery

Solar Panel : 10Wp

The device gets charged in the day time using sunlight and automatically switches on at dawn to trap harmful insects. Solar chargable and automatic timer device turn on by sunset and turn off after 4 hours of continious operation.

Solar Blinker - Traffic Signal

On Grid Solar System

An on-grid or grid-tied solar system is a system that works along with the grid. This means that any excess or deficiency of power can be fed to the grid through net metering. Many residential users are opting for an On-grid solar system as they get a chance to enjoy credit for the excess power their system produces and save on their electricity bills. You will always have power either from the solar system or from the grid. They do not have batteries.

How It Works?

This system works in two-ways - the supply of electricity can flow from the grid to which it is connected to the user's home and from the user's home to the grid. This feature makes the on-grid solar system affordable and highly useful. The solar panels, installed on the user's home are 'tied' to the grid. The solar panels convert sunlight into electric energy, which is Direct Current (DC). This current is then sent to an inverter. The solar inverter then converts the DC to Alternating Current (AC), thus making it power the electrical items. This electricity is then routed to the grid where it is supplied for day to day use.

The grid tied inverter additionally regulates the amount and voltage of electricity fed to the household since all the power generated is mostly much more than a home needs or can handle. An important feature is the net meter. It is a device that records the energy supplied to the grid and the energy consumed. At the end of each month, the outstanding is recorded and the consumer is provided with a bill. This 'converted' power supply is then used by homes through the main electricity distribution panel.

Off Grid Solar System

An off-grid solar system is more popular and comes with a power backup. It works independently of the grid. Most home appliances such as Fans, TV, Cooler, AC, Water Pump, etc. can work through this system. For instance, a 1 kW off-grid solar system is sufficient for a 2-4 BHK house. But if you also want to run 1HP Water Pump in your home you could use a 3 kW off-grid solar system. If you are planning to run an AC then you should use a 5 kW solar system. For commercial setups like a shop, clinic or small mill, petrol pump a 10 kW off-grid solar system should be used.

It is the most common type of solar power system with backup. It works in day and night both, during the day, solar panel charges the battery and runs the home appliances such as Air Conditioners, Cooler, Television and submersible pump. At night, when the sun is not available, Inverter runs your home appliances using the battery power.

Advantage:

No dependency on government electricity power.

Solar Blinker - Traffic Signal

Solar Blinker Specifications

- Solar Cell : 3V Mono Crystalline
- Light Source : Super Bright 5mm LED
- Number of LEDs : 6 Nos
- Directional : Bi-Directional
- Battery : 1600 MAh

Solar Street Light - Traffic Signal

Solar Street Light Specifications

- Lamp type : LED/CFL
- Charging Current : 2A Max
- Idle Current : < 6 mA
- No of Days of Autonomy : 2 Days
- Mounting Type : Pole Mount

Solar Pumping System

Solar Pumping System

What is Solar Pump?
Solar pump definition is, as the name suggests the pump uses solar energy to function. Solar-pumps are robust, installation is simple, minimum maintenance is necessary and very expensive when we compare with normal water pumps. The life span of these pumps is a maximum of 20 years. But time to time the solar panels need to be cleaned for running. These kinds of pumps mainly used where there is an electricity problem otherwise consistent power supply is not accessible.

How Does Solar Pump Work?
When the solar energy drops sun rays on the PV panels then the solar panel converts the rays into electrical energy with the help of Si wafers fixed within the PV panels. Then the solar energy supplies to the electrical motor to operate the pumping system using cables. By the revolution of the shaft which is fixed to the pump, then the pump begins to pick up the soil water and supplies to the fields.

Solar Pump Types?
The solar-pumps are classified into four types namely submersible solar pumps, surface solar-pumps, DC pumps, and AC pumps.
Submersible Solar Pumps: These pumps can lift the water up to 650 feet and fit within a big well. Whenever the water deepness in the well is above 20 feet from the surface then these pumps can work straightly turn off batteries, solar panels, otherwise power source in some cases. Generally, water is pumped throughout the day as the sun is shining & the water is stored in a tank for utilize whenever required. It is suggested to store the water only in a good weather condition because if the weather is not good then the water will not pump. These types of pumps mainly used in places wherever water is accessible at a larger depth & wherever open wells do not exist. The highest suggested depth for pumping is 50 meters.
Surface Solar Pumps: These pumps are used in ponds, shallow wells, storage tanks otherwise streams. If the deepness of the water supply in the well is 20 feet or less than 20 feet from the surface. Generally, these pumps can't pick up the water very high from the deep well, they can push the water 200 feet or above distance. These pumps are apt for pumping as well as lifting water from the highest deepness of 20-meters.
DC Solar Pumps: The motor used in this kind of pump works with direct current, thus there is no need for inverter or battery.
AC Solar Pumps: The motor used in this kind of pump works with AC, which means the DC generated by the panels gets changed to AC with the help ofan inverter. This conversion leads to power failure from production & utilization.

Solar Pump Advantages?
The installations of solar pumps are flexible & applicable to different applications.
It allows people to handle their water supply for drinking, farm animals watering, irrigation, & other housing applications.
Generally, the usage of water in summer is utmost. During this season, the PV panels can generate the most power so that more water can be pumped into the water tank.
Because of the ease of PV power-driven water pumps, solar technology is consistent, as well as needs small protection.