

VIKRAM SOLAR **BIFACIAL** MODULES
WITH **TRANSPARENT BACKSHEET**

TWO POWERFUL TWO GOOD



OUR BIFACIAL MODULES
PROVIDE:

- UP TO 15% POWER GAIN FROM GROUND FACING SIDE
- UV RESISTANT SUBSTRATES LEADING TO HIGHER OUTPUT
- EXTENDED UP TO 27-YEAR WARRANTY



EXTENDED
WARRANTY



HIGHEST PRECISION
MANUFACTURING



1500 V_{DC} MAXIMUM
SYSTEM VOLTAGE

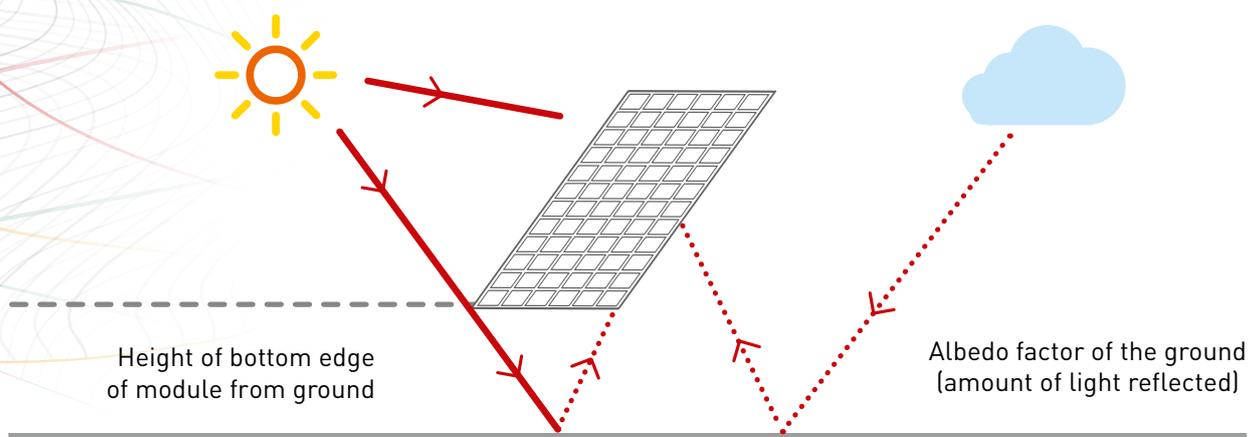


MORE
POWER OUTPUT

Solar panels are a great way of generating energy from the sun. But those **sunbeams do not always come from one direction.**

Wouldn't it be great if our solar panels could capture these diffused beams and result in high power density and satisfying your solar power needs?

HOW DOES A BIFACIAL MODULE WORK?



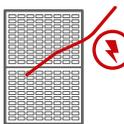
ADVANTAGES OF OUR BIFACIAL MODULES:

INCREASED POWER DENSITY:



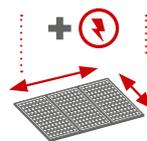
Conventional solar modules capture sunlight on one front side but bifacial solar modules' dual-sided design enables power to be produced from both the back and the front, boosting total energy generated thereby substantially increasing the power density. Cost of Balance of system (BOS) are also reduced when more power can be generated from bifacial modules in a smaller array footprint.

MORE POWER GENERATION:



Even with no special attention to system design, gain up to 5% for rooftops and up to 10% for ground-mount can be expected. With some modifications like change in module row spacing, tilt angles, highly reflective surface, or elevation and racking design, an energy gain upto 15% can be achieved in fixed-tilt ground-mount systems with bifacial modules.

MORE ENERGY DENSITY:



The amount of energy bifacial modules can generate is amplified due to absorption from both sides. In our Somera Duplex modules, we use transparent backsheets as substrate, allowing for more absorption of direct and diffused sunlight thereby creating more energy per unit area.

- More power per square meter results in fewer panels required to generate the same power;
- Fewer panels mean quicker installation times and fewer components (clamps & racks, combiner boxes, wiring) and reduced labour hours—all of which reduces the overall costs
- Furthermore, all these brings down the capital investments leading to lower payback periods

HIGH END CELL TECHNOLOGY:



An effective passivation of the superior monocrystalline n-PERT or P-PERC solar cell rear side help in achieving higher solar cell efficiencies.

NEAR ZERO PID:



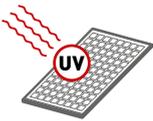
Vikram Solar Somera Duplex modules are UV resistant, the use of POE as encapsulant and transparent backsheet as substrate minimizes the risk of potential-induced degradation (PID) in systems with a high operating voltage, as the driving force for PID is the potential between the grounded frame and the cells resulting in least ion-migration.

FIT FOR ALL WEATHER:



The new upgraded material of bifacial modules provides greater resistance to heat and is more durable in fluctuating temperatures — our modules can be installed in a wide range of geographic terrains like snow, desert or water, the state of art design having glass to transparent backsheet have excellent capabilities to withstand the extreme topographies.

UV RAY RESISTANT:



No yellowing over prolonged exposure to UV rays due to the use of POE with least WVTR and no degradation to acidic compound as compared to EVA.

EXCELLENT LOW LIGHT PERFORMANCE:



Be it early morning, cloud or dusk, the bifacial modules perform at even low light conditions, due to the use of Mono-PERC cell technology, coupled with the option of vertical installation.

LONG DURABILITY & AGEING RESISTANCE



Advantages of Polyolefin Elastomeric (POE) encapsulant:

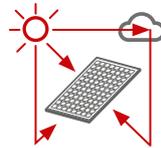
- Lower yellowness index;
- Relatively more UV resistance;
- Low water vapour transmission rate;
- Better adhesion to glass, which makes the module more durable

PERFORMANCE GUARANTEED IN PARTIAL SHADOW:



Half-cell generates only half the current, with better heat dissipation thus decreasing the chances of hot-spot thereby increasing module reliability.

EFFECTIVE UTILIZATION OF REFLECTED LIGHT: THE POWER OF ALBEDO



The albedo is the reflectivity of a non-luminous surface or body. The albedo varies with the colour and characteristics of the surfaces that reflect light on to rear of module. Light coloured, smooth surfaces have high albedos which can lead to high energy output from the rear of a module resulting in additional bifacial gain.

In snow conditions generation from rear side in Bifacial Module continues, resulting in melting of snow from the modules front side and consequently the power of whole module increases.

ADVANTAGES OF BIFACIAL MODULES WITH TEDLAR® BASED TRANSPARENT BACKSHEETS::



The clear DuPont Tedlar PVF film is an ideal backsheet material for bifacial modules that can generate greater power output. The breathable, clear Tedlar PVF film allows for higher reliability, lower operating temperature, and a lower module installation cost. The clear backsheet materials can meet the requirements of light-transmittance, weather-resistance and ultraviolet-resistance for bifacial solar panels.



WHY CHOSE US?



INDIA'S TIER 1* MODULE MANUFACTURER

meeting highest international standards



MORE THAN 1355 MW OF EPC EXPERIENCE**
and **MORE THAN 660** MW OF O&M EXPERIENCE**
in India



TOP PERFORMER in PVEL LLC and
modules audited by **Black & Veatch**



**PID FREE, AMMONIA RESISTANT, SALT
MIST CORROSION RESISTANT & SAND DUST
TEST CERTIFIED** modules



SECURED INVESTMENT through insurable
modules



* BLOOMBERG NEW ENERGY FINANCE 2020

**Includes ongoing (Ground Mounted & Rooftop), April 2020

SOME OF OUR SATISFIED CUSTOMERS



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LOCATIONS

◆ India: Kolkata | Gurugram | Mumbai | Pune
Bengaluru | Raipur | Surat | Ahmedabad

◆ International: Germany | USA | Singapore |
China | UK | LATAM | Japan