

Thin Film and Crystalline Solar PV Modules

A new partner for your solar energy needs



Sustainable energy. Reliable source.

HHV Solar

HHV Solar will soon be producing world class, technologically advanced solar photovoltaic (PV) modules and solar technology-based solutions—to meet the exacting demands of commercial and industrial establishments around the world.

We are in the process of setting up a state-of-theart automated manufacturing line in Bangalore, India. Our manufacturing facility will have the capability to produce both Crystalline and Thin Film Solar PV Modules, in compliance with IEC and UL standards for photovoltaic design and safety.

Some of India's best PV scientists, engineers and equipment manufacturers are part of our team. We are committed to continuous innovation and development of new solar technologies to meet future energy needs. Our full-fledged R & D Centre provides continuous upgradation support, exploring ways to increase product life-span, efficiency and energy yield.

Our ability to offer total solutions includes partnering with our clients for system optimisation and customised design options. Our products will meet a variety of small to high volume product requirements, in a wide range of consumer goods and services across both grid-connected and off-grid applications.

Crystalline Solar Modules

We offer a wide range of crystalline silicon technology solar PV modules, ideal for both off-grid and grid-connected systems:

- With high efficiency silicon cells.
- With both mono and poly crystalline solar cells.
- Optimum combination of high quality raw materials and components.
- Lightweight anodized aluminium frame.
- High reliability, even when exposed to extreme weather conditions.
- Meets IEC and UL standards.

Crystalline Solar Modules:

• Up to 250 watts.

Applications

- Grid-connected power plants
- Solar street lighting systems
- Solar home lighting systems
- Solar power packs
- Other off-grid systems

Thin Film Solar Modules

Our a-Si Thin Film Solar Modules are of the highest guality and guarantee high performance and energy yield per rated watt power. These a-Si modules are produced completely in-house, with stringent quality controls to achieve consistency in efficiency and output.

- Higher generated power compared to crystalline silicon PV modules.
- Superior performance, even under high temperature during summer.
- Highly stable power output for long period, hence more reliable.
- Environmentally friendly—uses 1/600 of the silicon used in crystalline cells, thereby consuming less energy and allowing high productivity for mass production.
- Shorter energy pay-back time because of high-energy yield.
- Up to 60 watts.

Laser scribing





Applications









PV Module laminator

In our entry into the global solar photo voltaic industry, we have leveraged on the strengths and reputation-in both technical and R&D areas—of:

HHV OUR PARENT COMPANY

OVER FOUR DECADES IN VACUUM TECHNOLOGY

Hind High Vacuum Co. Pvt. Ltd (HHV) is one of India's premier high vacuum technology companies and a leader in vacuum technology products. Established in 1965, it has manufactured a wide range of vacuum hardware and specialised equipment for the high vacuum market in India and abroad.

HHV has a highly trained and committed team comprising scientists, engineers, technological and technical manpower. Technology is constantly updated through inputs from leading research groups.

HHV also manufactures specialised equipment for the solar industry, used in the manufacturing process of solar PV modules. It has the capability to produce complete manufacturing lines used for the production of solar PV modules in both crystalline and thin film technology. As a part of its strategic diversification, HHV is integrating forward to produce high quality crystalline and thin film modules.





• Grid-connected power plants • Solar street lighting systems • Solar home lighting systems • Solar power packs • Other off-grid systems

Thin Film Solar Modules: Production commences by January 2009.

Magnetron sputtering