

ECO

Glass Integrated Photovoltaic
SSG® GIPV



Being more energy-efficient, and providing more cost savings, the new era of green buildings is here to stay. SSG®'s Glass Integrated Photovoltaic (GIPV) is the embedding of silicon solar cells in glass panes and integration of such panels onto buildings for electricity generation.

Actively harvesting sunlight, SSG® GIPV comes with a choice of mono-facial or bi-facial configurations, and can be installed both horizontally and vertically, producing free energy from natural sources. It is laminated using heat-treated glass, and can be made into an insulating glass unit for enhanced benefits such as thermal

insulation and anti-condensation properties.

Besides being a clean energy-generating tool, it also serves as a daylighting tool. The number of, and distance between the solar cells can be adjusted, leading to a customizable amount of light entry based on user's requirements.

Be it for retrofit or a new green building design with eco-friendliness in mind, SSG® GIPV is ideal for the next generation of net-zero energy buildings.

THE TECHNOLOGY

The embedded solar modules are

SPECIFICATIONS : Production Sizes

	SSG® GIPV
Maximum Size (W/mm x H/mm)	2,400 x 1,800

PRODUCT FEATURES

ENERGY CONSERVATION

By actively harvesting sunlight, SSG® GIPV produces free and clean energy that the building can use.

DURABILITY

SSG® GIPV is a long-life module given that it is a laminated safety glass. The interlayer is chosen for high durability while the solar cells are positioned in calculated distances away from the glass perimeters at the edge to ensure a long-life span.

INSTALLATION PROVIDED

SSG® provides installation service for the direct integration of SSG® GIPV as a structure of the building.

THERMAL CONTROL

As solar cells absorb and convert solar energy, the use of SSG® GIPV means less heat gain by the building and subsequently lower costs in air-conditioning.

USES AND APPLICATIONS

- Canopy • Curtain walls • Façades
- Skylights Roofs • Windows
- Walkway shelters • Balustrades

connected to form module strings and the module strings are connected to the junction box. SSG® GIPV then generates clean energy from the sun in two steps: first, it converts sunlight into direct current in the junction box. Then, the direct current either travels to the battery to be stored, or to the inverter where it is changed into alternating current that can be used immediately.

APPLICABILITY

SSG® GIPV comes with a choice of mono-facial or bi-facial configurations, and can be installed both horizontally and vertically. It can be designed with an aluminium frame, or frameless. The main advantage of installing SSG® GIPV frameless is to prevent a frame's shadow from casting over the solar cells, which will decrease the optimal exposure the solar cells have to the sunlight.

It is suitable for both on-grid and off-grid applications.