

## **Advantages of thin film solar panels:**

**Lightweight** – Thin film solar panels are lightweight; they are typically 10% the weight of a photovoltaic (crystalline) solar panel.

**Durable** – Thin film is encapsulated in ETFE (Ethylene Tetrafluoroethylene) exterior, which is a Teflon-type material that is applied using a downweb process to make the panels waterproof and durable. The panel is rated to operate safely between -55 degrees Celsius and +85 degrees Celsius.

**Flexible** – Thin film solar panels use a flexible, yet durable polyimide substrate that results in enhanced flexibility. It truly is the only thin film amorphous silicon solar module that is rollable.

**Adhesive-backed** – Thin film solar panels use a Butyl adhesive used by the automotive industry. The adhesive will permanently adhere to any nonporous surface.

**Longevity** – Thin film solar panels are not easily damaged since it is encapsulated in ETFE. Hail or other objects (rocks, golf balls, etc.) can easily damage photovoltaic solar panels. In addition, if a portion of the photovoltaic panel is damaged, it will not work. If a portion of a thin film solar panel is damaged, the rest of the panel will still work.

**Power** – Thin film solar panels work well in full sun, cloudy conditions, even at sunrise and sunset. Depending on your location and the time of year, thin film solar panels can double the amount of electricity-producing hours. The system will maintain a reserve capacity for up to five days with little to no direct sunlight. Photovoltaic solar panels will only produce electricity in full sun. If shade covers any portion of a photovoltaic panel, power drops off, sometimes to zero.

**Framing** – Thin film solar panels do not require a frame. Photovoltaic panels are protected by a heavy layer of tempered glass and housed in an aluminum frame.

## **WARRANTY**

20 years on the thin film solar panels

1 year replacement on the sealed lead acid batteries – 5 year depreciated schedule

3 years on the controls