Building integrated photovoltaic (BIPV) system boosted by mirrored window insulting transparent panes

The present invention relates to a method and a device for protecting a solar cell module of a building integrated photovoltaic (BIPV) system, which are capable of maintaining and achieving a stable operation of the BIPV system as well as preventing a reduction in lifespan and efficiency of the solar cell module due to abnormal temperature. The device for protecting the solar cell module comprises: one or more BIPV solar cell modules ; temperature sensors which are respectively installed in the solar cell modules and detect temperatures of the solar cell modules; and a transmission module which wirelessly transmits temperature data detected by the temperature sensors so as to enable a reception module of a controller to receive the temperature data. The temperature sensors are installed in a predetermined space formed between solar cells of the solar cell module.

The method for protecting the solar cell module comprises the following steps of: operating a plurality of solar cell modules; detecting temperatures of the solar cell modules by the temperature sensors installed in the plurality of solar cell modules; comparing the temperature inputted from the temperature sensor with a reference temperature preset in a controller; outputting a closing signal of the corresponding solar cell module, when there is a solar cell module in which the inputted temperature is out of a reference temperature range, the closing signal of the corresponding solar cell module is outputted; and operating an array opening/closing unit by the closing signal and closing the corresponding solar cell module.

The invention provides a high -efficient BIPV photovoltaic module of two mattes, includes glass back plate and outer glass, be provided with a plurality of battery pieces of connecting through the interconnector between glass back plate and the outer glass, its characterized in that: outer glass is two matte coating film glass, reflect glued membrane sealing connection through transparent glued membrane with increasing between glass back plate and the outer glass, the battery piece of telling is fixed at transparent glued membrane with on increasing the interface of reflection glued membrane, the last terminal box that is fixed with of glass back plate. The utility model discloses light loss when not only having reduced the light incidence to through the secondary reflection of light, increased the incident volume that gets into the light of battery, improved 5.66% with the generating efficiency.

The invention discloses a BIPV support for support the panel. This BIPV support includes: the purlin, first supporting beam is provided with a plurality ofly and arranges side by side, links firmly on the purlin, the second props up supporting beam, and the U type that is the U type for the cross section props up supporting beam, and a second supporting beam is provided with a plurality ofly and is the multirow and arranges, the overlap joint is on two adjacent first supporting beam respectively at every second supporting beam's both ends, and a plurality of seconds prop up supporting beam and a plurality of rectangle installing frames that are used for supporting the installation panel of a plurality of first supporting beam constitutions, the briquetting, including the intermediate junction end and the blank pressing of extending, the intermediate junction end position links firmly with first supporting beam in the gap between two adjacent panels, and the blank pressing of extending is withheld on the panel, joint strip is located second supporting beam's U type in slot, and is located that crowded compacting seals between two adjacent panels. The utility model discloses a BIPV support, simple structure, construction swiftly makes things convenient for, the installation is firm.