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Solar Panel Guide

Specification Data Sheet

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Amorphous-Si Thin Film Photovoltaic Module



BSC
BANGKOK SOLAR CO., LTD.

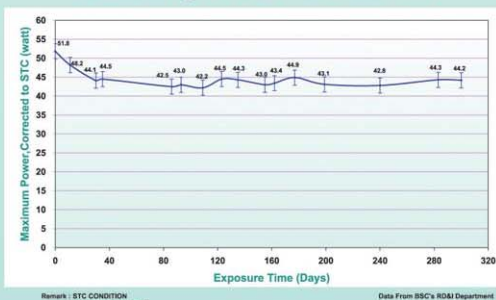
Why thin film ?

A growing interest in the cost of energy per kilowatt hour of production has been a major factor in advancing amorphous silicon thin-film technology. This is why BSC has focused on the development of thin-film modules that can provide solar electricity at the lowest price per kilowatt-hour. Amorphous silicon modules generate more electricity per unit of installed capacity than crystalline silicon modules, leading to lower electricity generating costs and superior cost-effectiveness for many applications.

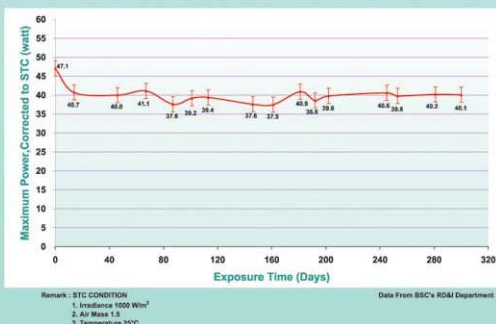
BSC a-Si Thin Film PV Module Benefits:

- Better temperature coefficients and so can generate much more power at higher ambient temperatures.
- Generate higher energy yield under low-light and diffuse light conditions (cloudy days).
- Environmentally Friendly with a cell thickness of just 0.6 μm .
- Shorter Energy Pay-Back Time (EPT) when compared to c-Si PV Modules, (EPT is one of the most important factors when evaluating ecological benefits of PV systems).

Stability Test of BS-44



Stability Test of BS 40



Inspired by
photosynthesis



RoHS
COMPLIANT



TIS 2210 : Thailand Industrial Standard Equivalent to IEC 61646

SPECIFICATIONS

| Model | BS 40 | BS 42 A | BS-44 | BS-44 B | BS-46 | BS-50 | BS-52 |
|--|------------|------------|------------|------------|------------|------------|------------|
| Mechanical Characteristics | | | | | | | |
| Dimensions (mm x mm) | 635 X 1245 | 635 X 1245 | 635 X 1245 | 652 X 1262 | 635 X 1245 | 635 X 1245 | 635 X 1245 |
| Weight (kg.) | 13.5 | 13.5 | 13.5 | 15.0 | 13.5 | 13.5 | 13.5 |
| Electrical Characteristics | | | | | | | |
| Nominal power (W) | 40 | 42 | 44 | 44 | 46 | 50 | 52 |
| Operating voltage (V) | 44.8 | 45.8 | 46.9 | 46.9 | 70.3 | 70.9 | 71.2 |
| Current at rated operating voltage (A) | 0.93 | 0.96 | 0.99 | 0.99 | 0.66 | 0.71 | 0.74 |
| Open circuit voltage (V) | 62.2 | 62.4 | 62.6 | 62.6 | 93.0 | 93.4 | 93.6 |
| Short circuit current (A) | 1.14 | 1.16 | 1.17 | 1.17 | 0.82 | 0.86 | 0.88 |
| Maximum system voltage (V) | 600 | 600 | 1000 | 1000 | 1000 | 1000 | 1000 |

Temperature Coefficients

| | | |
|---------------------------|--------|--------|
| Maximum power (W) | - 0.20 | - 0.15 |
| Open circuit voltage (V) | - 0.30 | - 0.30 |
| Short circuit current (A) | + 0.04 | + 0.08 |

Measurements made under the standard test conditions (STC):

- Irradiance of 1000 W/m²
- Spectrum of Air Mass 1.5
- Module temperature of 25°C

*BSC reserves its rights to change without prior notice the contents of this data.

Construction Drawing

