

Amorphous-Si Thin Film Photovoltaic Module



BSC
BANGKOK SOLAR CO., LTD.

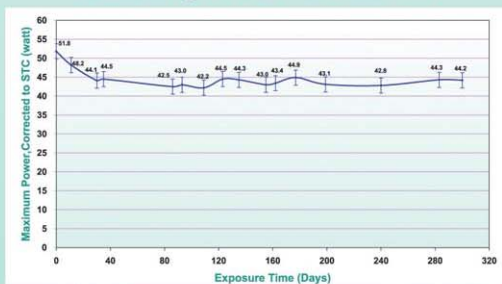
Why thin film ?

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).

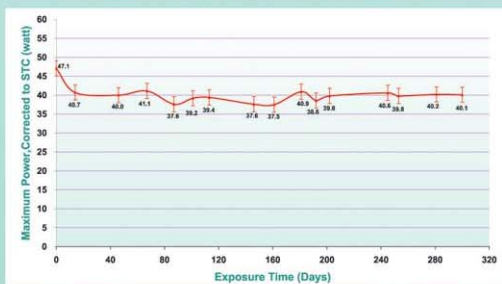
Stability Test of BS-44



Remark : STC CONDITION
1. Irradiance 1000 W/m^2
2. Air Mass 1.5
3. Temperature 23°C

Data From BSC's R&D Department

Stability Test of BS 40



Remark : STC CONDITION
1. Irradiance 1000 W/m^2
2. Air Mass 1.5
3. Temperature 23°C

Data From BSC's R&D Department



BS-44 B



BS 40

Inspired by

photosynthesis



RoHS
COMPLIANT



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

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Construction Drawing

