

37/74W

CIGS THIN FILM SOLAR PANEL

Applications

Off-grid systems

- Battery charging
- Home lighting systems
- Rooftop systems
- Street lighting
- Water pumping

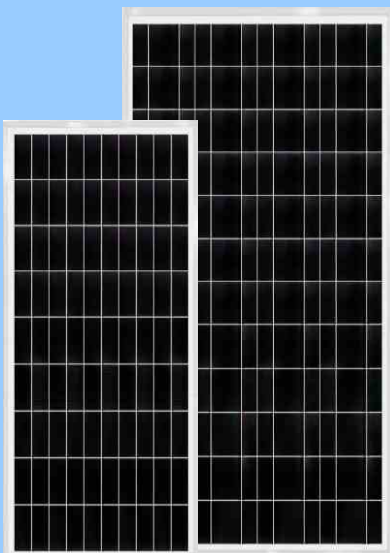
General

Shurjo Energy 2nd generation high efficiency photovoltaic panels are made using the latest Copper Indium Gallium diSelenide (CIGS) solar cells. CIGS perform well over a range of light-levels and climatic conditions, providing more KWhr per day compared to conventional silicon technology.

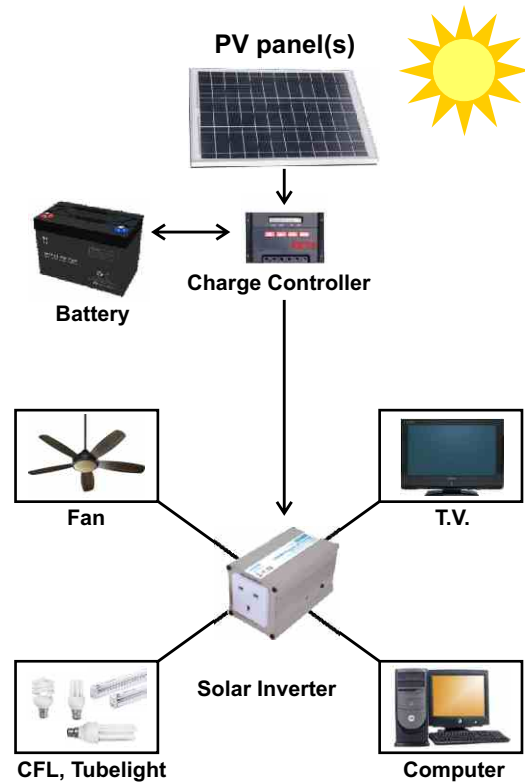
The panels provide consistent power, do not degrade when exposed to sunlight and are amongst the most efficient thin film panels in the market today.

They are constructed using the highest quality proven components, from the world's leading manufactures.

Panels are available in the range from 6-100W for battery charging applications & from 120-182W for grid connect. Customized BIPV panels are also available.



*Panel photograph is indicative.
Appearance may change with change in design.



Pictorial Representation

Features

- 3 layer tedlar® with aluminium interlayer
- Ultra-clear 3.2 mm toughened and textured glass
- Reinforced anodized aluminium frame
- Robust high quality junction box
- Pre-punched frame for easy mounting
- Manufactured to IEC 61646 & IEC 61730
- **25 years limited warranty**
5 years against manufacturing defects. 10 years to 90% of rated power, 25 years to 80% of rated power, provided panel is undamaged.

Advantages

- CIGS cells are 40x thinner than standard crystalline cells.
- This technology requires as little as 25% of energy required to produce crystalline panels.
- CIGS has a crystalline structure which is stable over a period of time giving unabated performance for many years.
- Due to its high light absorbing band-gap, it is an optimal, effective PV material.

Specifications

37/74W SOLAR PANEL SPECIFICATIONS

Electrical Characteristics

SE37MP-EB3509B

SE74MP-EB2411B

Cell

Crystalline CIGS onto thin film stainless steel foil

Characteristics (+/- 10%)

Open circuit voltage (Voc)

27.3V

26.6V

Optimum operating voltage (Vmp)

18.8V

18.5V

Short circuit current (Isc)

2.3A

4.6A

Optimum operating current (Imp)

1.97A

4.0A

Power at STC* (Pmax)

37W

74W

Temperature coefficient for Voc/°C

-0.37%

-0.37%

Temperature coefficient for Power W/°C

-0.44%

-0.44%

NOCT**

44.5°C

44.5°C

Panel Dimension

Weight

5.0 kg

9.4 kg

Dimension of panel (a) x (b)

387 x 982 mm

603 x 1188 mm

Mounting oblong hole (g) x (f)

8 x 6 mm

8 x 6 mm

Distance between mounting holes (c)

600 mm

800 mm

Distance from corner (d)

191 mm

194 mm

Frame thickness (x) - (y)

22 x 21 mm

34 x 22 mm

Limits

Operating temperature

-40 to +85°C

Maximum system voltage

500V DC

Output

Output terminal

Junction box with flying lead

Cable

2.5 mm² - 20 amp - 1100V

Cable length

1.5m (1 core x 2 nos.)

Connection

Stripped wire

*STC: Irradiance 1000W/m² @ 25°C, AM=1.5

**NOCT = Irradiance level 800 W/m², spectrum AM 1.5, wind velocity 1 m/s, T_{amb} 20°C

Note: Panels, when first used, need two days of full sun exposure before reaching optimum performance.

Panels are marketed in India by PAE Ltd.

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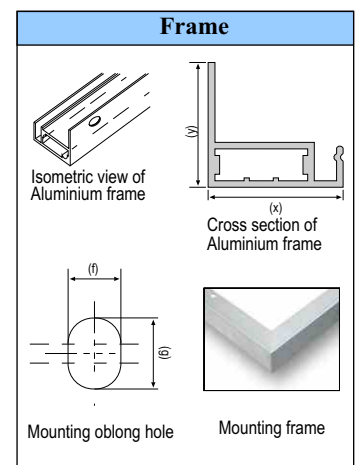
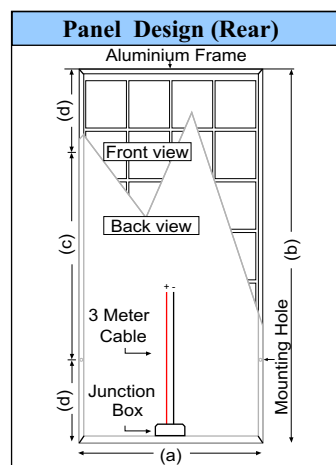
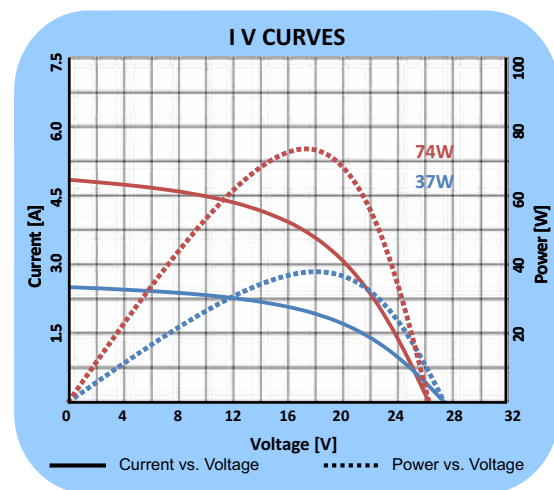
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Cells manufactured in the USA