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**Solar Panel Guide**

**Specification Data Sheet**

Learn more at [energypal.com/best-solar-panels-for-homes](https://energypal.com/best-solar-panels-for-homes)

# DIAMOND semi-flex

PV MODULES WITH X-FACTOR



## FLEXIBLE MONO CRYSTALLINE MODULES

**60Wp-180Wp**  
POWER OUTPUT RANGE

Founded in 1997, Alpex Solar Pvt. Ltd. is a multi-location, multi-business enterprise with diverse business activities consisting of:

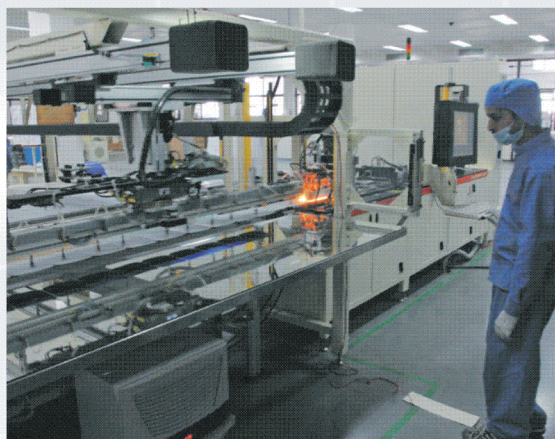
- » Solar Panel Manufacturing
- » International Trading

Headquartered in Greater Noida, India, the state of the art offices are located in New Delhi, Mumbai, Tirupur, Jaipur, Ludhiana, Surat, Kolkata, Seoul and Sydney.

Our world class manufacturing units are located in Nalagarh (HP) and Greater Noida (UP). These fully automatic plants have a manufacturing capacity of 450 MW slated to go up to 1 GW soon. With a strong team of 350 professionals/workers and manufacturing experience of more than 10 years, we aim to become a significant global player in the field of highly specialised high power photovoltaic modules which are not only world class but also most cost effective.



ISO 9001 : 2008 • ISO 14001 : 2004  
OHSAS 18001 : 2007 CERTIFIED COMPANY (100% EOU)



**Xtra Long Life**



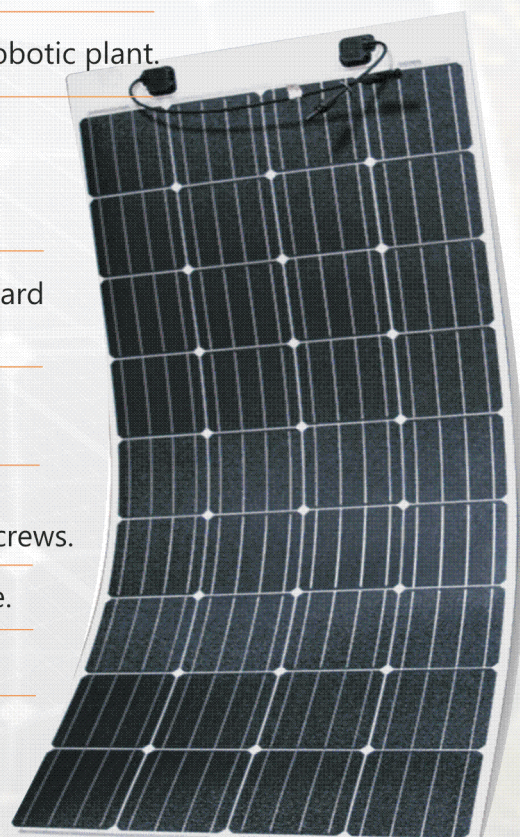
**Xtra Energy / Power**



**Xtremely Compact Size**



- Manufactured in fully automatic robotic plant.
- Fully waterproof, ideal for boats, caravans, motorhomes, camping. Marine grade and anti - corrosive.
- Lightweight PV module with onboard solar cable and MC4 connector.
- Completely glass and aluminium frame free module.
- Low system installation costs, can be installed with adhesive or screws.
- Super BOM for super performance.
- Flexible upto 30 degree.



SOLAR POWER PLANTS

SOLAR PV PANELS

SOLAR PUMPS

SOLAR EPC

SOLAR ELECTRICITY  
(RESCO)

# DIAMOND semi-flex

## PV MODULES WITH X-FACTOR

### 60Wp-180Wp Flexible Mono Crystalline



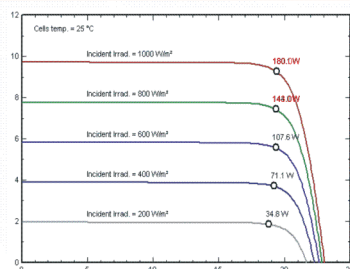
#### Electrical Specifications

Model	ALP-SFM-60	ALP-SFM-90	ALP-SFM-120	ALP-SFM-180S	ALP-SFM-180R
Peak Power (Pmax)	60Wp	90Wp	120Wp	180Wp	180Wp
Rated Voltage (Vmp)	18.90 V	18.90 V	18.90 V	18.90 V	18.90 V
Rated Current (Imp)	3.18 A	4.77 A	6.35 A	9.53 A	9.53 A
Open Circuit Voltage (Voc)	22.50 V	22.50 V	22.50 V	22.50 V	22.50 V
Short Circuit Current (Isc)	3.38 A	5.06 A	6.75 A	10.13 A	10.13 A
Module Efficiency (%)	15.12	16.10	16.72	17.31	16.94
Tolerance (%)	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%
Maximum System Voltage (V DC)	50V	50V	50V	50V	50V

#### Mechanical Specifications

Solar Cell Type	Mono Crystalline	Mono Crystalline	Mono Crystalline	Mono Crystalline	Mono Crystalline
Cell Matrix	4X9	4X9	4X9	6X6	4X9
Length(L) x Width (W) ±2mm	575X690 mm 22.64X27.17 in	810X690 mm 31.89X27.17 in	1040x690 mm 40.94x27.17 in	1040x1000 mm 40.94x39.37 in	1540x690 mm 60.63X27.17 in
Thickness Max at J-Box Module ±2mm	22 mm, 3 mm	22 mm, 3 mm	22 mm, 3 mm	22 mm, 3 mm	22 mm, 3 mm
Weight Kg / lbs	1.07 kgs (2.36 lbs)	1.45 kgs (3.20 lbs)	1.82 kgs (4.01 lbs)	2.60kgs (5.73 lbs)	2.63 kgs (5.80 lbs)
Bend Angle (Degree)	Upto 30°	Upto 30°	Upto 30°	Upto 30°	Upto 30°
Waterproof	Yes	Yes	Yes	Yes	Yes
Frame	Frameless	Frameless	Frameless	Frameless	Frameless
Junction Box	2.5mm <sup>2</sup> Cable with MC4 Connectors.	2.5mm <sup>2</sup> Cable with MC4 Connectors.	2.5mm <sup>2</sup> Cable with MC4 Connectors.	4mm <sup>2</sup> Cable with MC4 Connectors.	4mm <sup>2</sup> Cable with MC4 Connectors.

#### Modul IV Curve



#### Temperture Coefficient

Normal Operating Cell Temperature (NOCT)	46°C ± 2°C
Temperature Coefficient of Power	-0.45 % / °C
Temperature Coefficient of Voltage	-0.31 % / °C
Temperature Coefficient of Current	0.05 % / °C

Note:- Electrical Specifications are affective at standard Test Condition, irradiances 1000W/m<sup>2</sup>, Module Temperature 25°m Spectrum AM 1.5

#### Product Features

1. Company glass and aluminum free modules.
2. Flexible up to 30 degree.
3. Fully waterproof ideal for Boats, Carvans & RV.
4. Lightweight PV module and fitted with solar cable & Mc4 connectors.
5. Low system installation cost.
6. Can be fix with adhesive or screws.
7. Ultra portable modules.

#### Safety Information

1. Use only at stated voltage.
2. Do not drop.
3. Never touch live terminals.
4. Do not cross the polarity.
5. Avoid access mechanical stress.
6. Do not try dismantle.
7. If unsure consult a trained person.

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