



**PAK ATIEH Co., LTD**  
Energy Production Industries

Made in IRAN

**Module Model: PAK - 330LP**

<b>Rated Maximum Power (Pmax):</b>	<b>330 W</b>
<b>Output Tolerance:</b>	<b>0/+5 W</b>
<b>Maximum Power Voltage (Vmp):</b>	<b>38.97 V</b>
<b>Maximum Power Current (Imp):</b>	<b>8.47 A</b>
<b>Open Circuit Voltage (Voc):</b>	<b>46.08 V</b>
<b>Short Circuit Current (Isc):</b>	<b>8.92 A</b>
<b>Cell Technology:</b>	<b>Poly-Si</b>
<b>Operation Module Temp:</b>	<b>-40 to 85°C</b>
<b>Maximum System Voltage:</b>	<b>1500 V DC (IEC)</b>
<b>Dimension:</b>	<b>1955*991*40 mm</b>
<b>Weight:</b>	<b>23 kg</b>

All technical data at Standard Test Condition (STC):  
AM= 1.5                      E= 1000 W/m2                      T= 25°C



**WARNING: ELECTRICAL SHOCK HAZARD**

**DO NOT TOUCH TERMINALS**

**TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED  
IN THE OPEN POSITION**



Alliance Int. Registrar Canada



**IEC 61215**

**IEC 61730**

Central Office: Building Atieh Group- No.17- 17th Fakoory - Fakoory Blvd- Mashhad- IRAN  
Website: [www.Pakatieh.com](http://www.Pakatieh.com)  
Email: [info@pakatieh.com](mailto:info@pakatieh.com)



**PAKATIEH**

**PAK - 330 LP** قطب مثبت

# 330 Watt CRYSTALLINE SILICON SOLAR MODULES



## Features



**High module conversion efficiency**

Module efficiency up to 17.02% achieved through advanced cell technology and manufacturing capabilities



**Excellent performance under low light environment**

Excellent performance under low light conditions (morning, evening and cloudy days)



**Guaranteed positive tolerance**

Positive tolerance of up to 5<sup>th</sup> delivers higher outputs reliability



**Strict quality control, meeting the highest international standard**

ISO 9001



**Extended wind and snow load tests**

Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal)



**Guarantee**

5 years product guarantee, 25 years linear performance warranty

Certifications and standards:  
IEC 61215, IEC 61730, conformity to CE



### Pak Atieh Energy Production Industries

We are the biggest manufacturer of crystalline silicon photovoltaic modules in Iran.

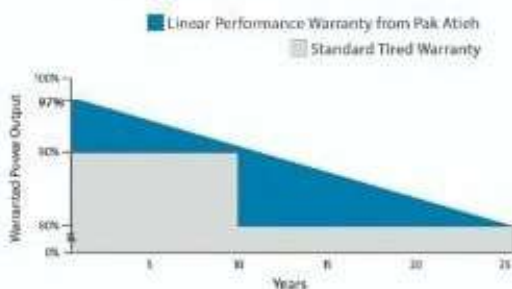
Our product range cover all from off-grid to on-grid panels, both mono-crystalline and poly-crystalline, suitable for all types of installation from residential to commercial projects.

Our solar modules can meet the IEC61215 and IEC61730 standards.

The company implemented strictly ISO9001 quality management system.

We use high quality solar materials

### Industry-leading Warranty based on nominal power



- %97 in the first year, thereafter, for years two (2) through twenty-five %0.7 maximum decrease from MODULE's nominal power output per year, ending with the %80.2 in the 25th year after the defined WARRANTY STARTING DATE.

### IP68 Rated Junction Box

Supports installations in multiple orientations. High reliable performance, low resistance connectors ensure maximum output for the highest energy production.



# Polycrystalline Solar Module

Model: PAK- 330LP

## Electrical Characteristics

STC	
Maximum Power at STC (Pmax)	330W
Optimum Operating Voltage (Vmp)	38.9V
Optimum Operating Current (Imp)	8.47V
Open Circuit Voltage (Voc)	46.1V
Short Circuit Current (Isc)	8.92A
Module Efficiency	17.03%
Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	20A
Power Tolerance	0/+5 W

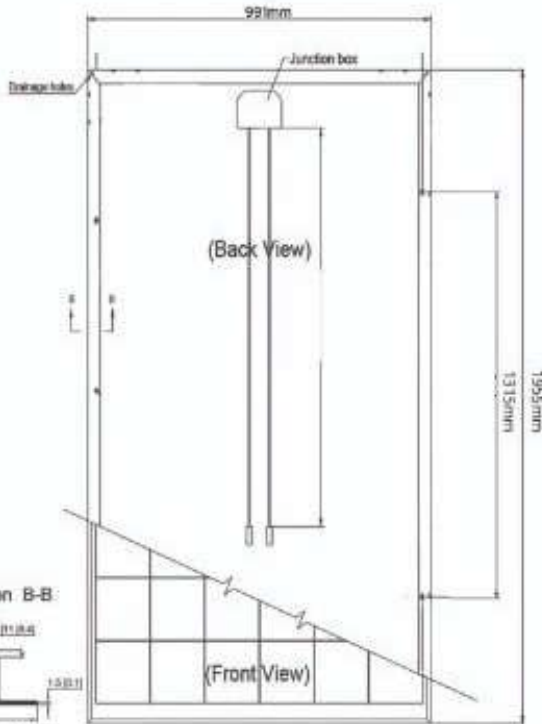
STC: irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5  
 Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- %3

## Temperature Characteristics

	Polycrystalline
Temperature Coefficient of Pmax	-0.42%/°C
Temperature Coefficient of Voc	-0.35%/°C
Temperature Coefficient of Isc	+0.06%/°C

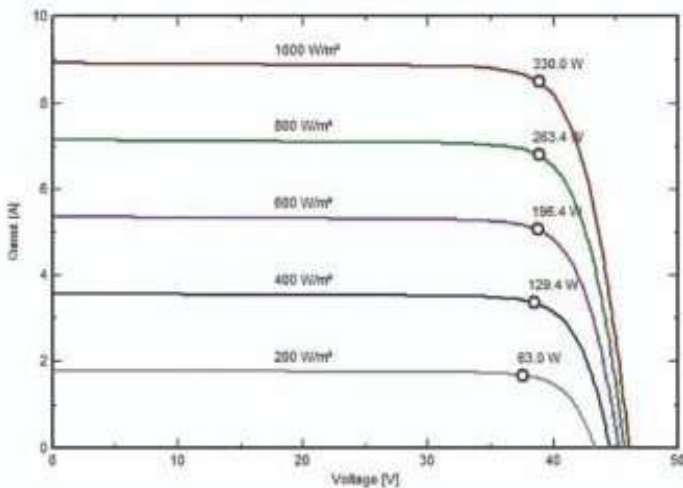
## Mechanical Characteristics

No. of Cells	72
Dimensions	1955*991*35 mm
Weight	23 kgs
Solar Cell	Polycrystalline (156.75*156.75 mm)
Front Glass	3.2 mm (0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	TUV (2Pfg1169:2007) 4.0 mm <sup>2</sup> Symmetrical lengths (-) 900 mm and (+) 900 mm
Connectors	MC4 connectors



Note: mm (inch)

## IV Curve



## PV Curve

