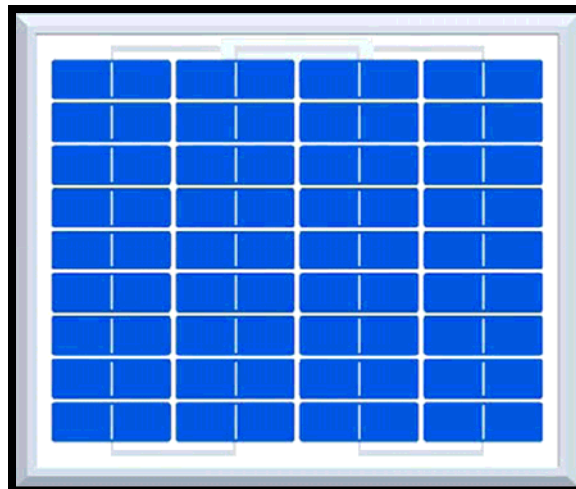


Description

This photovoltaic module generates DC electricity when exposed to sunlight and other light sources. The panel is designed for safe operation in 12-volt systems only. A voltage regulator and mounting hardware are included with all of Automata's Solar Panels. When using Automata's MINI Field Stations all Solar Panels should be connected to the battery or appliance with matching polarity. The red wire is positive (+) and the black wire is negative (-). Cover or shade the solar panel while making connections to avoid sparks or damage to the electrical equipment.



Electrical Characteristics	
Power at STC(Pm)	10W
Tolerance	+5%
Short circuit current (Isc)	0.64A
Open circuit voltage (Voc)	21.7V
Regulated Voltage	μ13.8 VDC
Maximum power current (Ipm)	0.6A
Maximum power voltage (Vpm)	10Wp
Module efficiency	9.15%
Maximum system voltage	1000V DC
Standard test conditions	Temperature 25°C, Irradiance 1000W/m ² AM=1.5
Temperature coefficient	Isc:0.07%K Voc:-0.36%K Pmax:-0.45%/K
Specifications	
Cell	Multicrystalline silicon solar cell, (78mmx26mm)
No. of cell and connection	36 (4x9)
Dimension	368mm x 310mm x 18mm
Ambient Conditions	
Operating Temperature	-40°C to +85°C
Storage Humidity	<90%

Email: sales@automata-inc.com • <http://www.automata-inc.com>
 Fax: (530) 478-5881 • Phone: (530) 478-5882 • (800) 994-0380
 138 New Mohawk Rd., Suite 151 • Nevada City, California 95959

TILT ANGLE

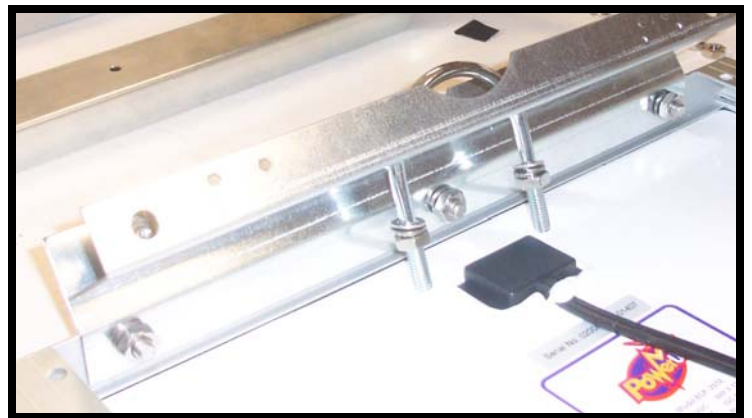
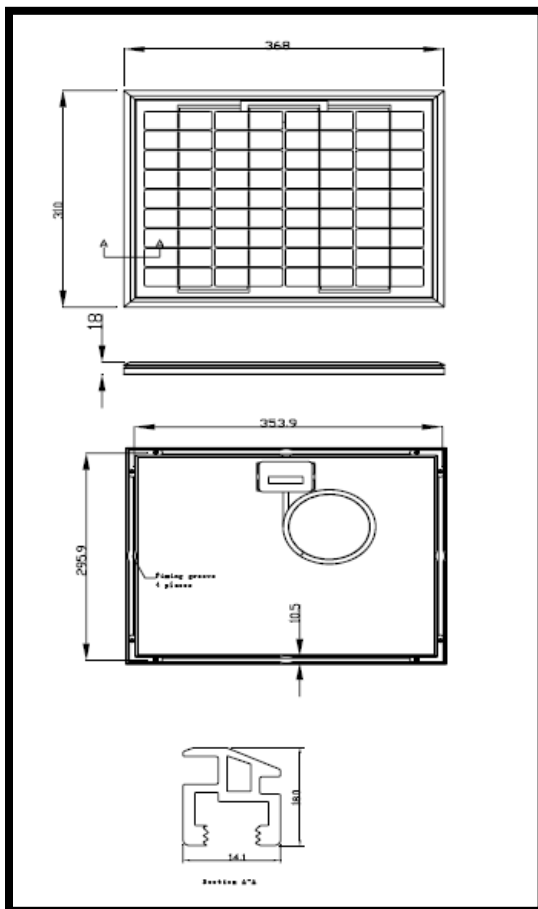
The following table shows the angle (from horizontal) at which the module should be installed in order to maximize annual energy output. At most latitudes, performance can be improved by less of an angle during the summer and more of an angle during the winter.

0-4°	10° from horizontal
5-20°	Add 5° to local latitude
21-45°	Add 10° to local latitude
45-65°	Add 15° to local latitude
66-75°	80° from horizontal

The module should be oriented toward the sun as much as possible. This is especially important during the middle part of the day – the module's most productive period. It is important to keep the module free from all shadowing.

DIRECTIONAL FACING

As a general rule, modules used in the northern hemisphere should be faced due south (not magnetic south). Modules used in the southern hemisphere should face due north (not magnetic north).



Mounting Bracket (included)