



浙江公元太阳能科技有限公司
ZHEJIANG ERA SOLAR TECHNOLOGY CO.,LTD

ERA PHOTOVOLTAIC MODULES MANUAL



[Http:// www.era.com.cn](http://www.era.com.cn)

INSTALLATION INSTRUCTION FOR SOLAR MODULE

ERA Solar modules are made of crystalline solar cells, laminated with high efficiency, high transmission rate and low iron tempered glass, anti-aging EVA and high flame resistant TPT, the frame is made of anodized aluminum alloy.

INSTALLATION

- Operating temperature:-40 to 85°C;
- Storage temperature: -40 to 85°C.
- Snowfall pressure: below 5400pa.
- Wind pressure: below 3000pa.
- Water resistance: do not install the PV module in a location where it would be immersed in water or continually exposed to water from a sprinkler or fountain etc.
- Corrosion resistance: avoid corrosive salt area and sulfurous area.
- Install the PV modules facing South (in Northern Hemisphere), or North (in Southern Hemisphere). Incorrect orientation will result in loss of power output.
- PV modules connected in series should be installed at the same orientation and angle.
- Install the PV away from shading. Shading causes loss of output, even though the factory fitted bypass diode of the PV module will minimize any such loss.
- Using spring washers and flat washers to fasten the PV module to shelf.
- Ground the PV module properly in accordance with mounting structure and environment.
- Note: Do not install the PV module near fire or flammable materials.
- Mounting structure should withstand forces from wind pressure and snowfall pressure etc.
- Mounting structure should select proper materials and anticorrosive treatment.
- Use appropriate methods to mount PV modules. Fall of modules from high place will cause death, injury or damage.
- Do not disassemble, bend, strike, walk on, throw or drop the PV module.
- Cannot be applied in the outer space or on the sea
- The manufacturer is not responsible for the "Hot Spot" problem when the solar modules are under usage

MOUNTING AND NOTES

- The PV module has a pair of male and female waterproof connectors. For a series electrical connection, connect the positive (+) connector of the first PV module to the negative (-) connector of the next module.
- Connect the output cable with equipment correctly.
- Use the connectors and wires which are specifically provided by our company.
- Do not short circuit the positive and negative.
- Screw down the connectors and make sure there is no gap between the insulators. Gap may result in spark.
- Please check with the manufacturer about the Limit of series module connections, otherwise, the manufacture is not responsible for the accident during usage.
- Sunlight shall not be concentrated on the module or other artificial light sources onto the module

- Recommend you attach all module frames to an earth ground. To avoid electrical shock, ground the frame of module or array before wiring the circuit. Attach a ground conductor at one of the ground holes on the module frame.
- The electrical characteristics are within ± 5 percent of indicated values of I_{sc} , V_{oc} , and P_{max} under standard test conditions (irradiance of $1\text{KW}/\text{m}^2$, AM 1.5) spectrum, and cell temperature of 25°C . Under normal conditions, a photovoltaic module with monocrystalline silicon cells is likely to produce more current and/or voltage than that specified under standard conditions. In these cases, the values of I_{sc} and V_{oc} may be multiplied by a factor of 1.25, and components such as fuses, conductors and controllers must be adapted to the photovoltaic generator's output.

MAINTENANCE

- Tighten the loose components if needed.
- Check the cables connections, grounding and connectors regularly.
- Clean the surface often with soft cloth etc.
- Change the module with the same kind and type.
- Do not touch the live parts of the cables and connectors. Use appropriate safety facilities (insulating tools and gloves, etc.) to touch them.
- Cover the front surface of the PV module by an opaque cloth or material when repairing. The PV modules generate high voltage when exposed to sunlight, and are dangerous.

QUALITY ASSURANCE

- It is normal that the power output of the solar modules is reduced when they are exposed to the Sun at the first time, it is not quality or labeling problem
- Our company have already got the certificates from TUV (IEC61215, Safety ClassII) and PTL (IEC61215) for the solar modules

CONTACT

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