



ALWAYS BE YOUR SOLAR SUPPORT



INSTALLATION MANUAL

CG ground mounting system-Landscape

Version 2019 1.0



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GENERAL INTRODUCTION

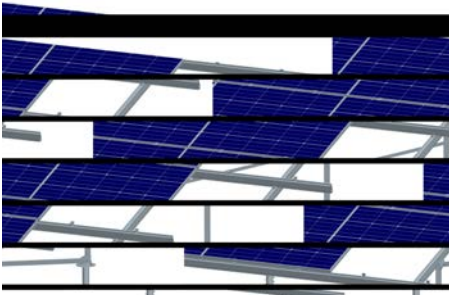
Antaisolar Alu-terrain is the CG ground mounting system-Landscape, has been developed as a universal PV module mounting system for flat roof or open space ground installation.

Aluminum profile with special hollow structure and connection method, easy to install. Pre-assembly such as cutting and drilling has been done before shipping, greatly reducing installation time and labor costs;

Antaisolar features series of highly engineered new innovative product, designed with experienced engineers to the speed of installation

Antaisolar Alu-terrain solar mounting system is backed by a 10-year warranty and is compliant with AS/NZS1170.2.2011 Amdt 3 – 2012

- Easy Installation
- Diversified Application
- High Accuracy
- Choice Quality
- Engineered to highest standards
- Maximum Lifespan
- Guaranteed durability



TECHNICAL SPECIFICATIONS

Applications

- ☐ Commercial and residential buildings
- ☐ Marine applications and remote areas

Features

- ☐ Anodized 6005-T6 aluminum extrusion
- ☐ Innovated designed of the Tilt-in modules, which can be pre-assembly with the clamp, make the installation easy and quick.
- ☐ Suitable for difference conditions and the most solar panels at present market.
- ☐ Significantly higher strength-to-weight ratio than other framing products, providing improved efficiency due to greater frame spans, inherent corrosion resistance resulting in low ongoing maintenance and an extended product life.
- ☐ Complies with Australian/New Zealand Standard on Wind Actions, AS/NZS1170.2.2011 Amdt 3– 2012
- ☐ 10 years limited warranty backed up by parent company Antai Aluminium

Material Standard

| Material | Mechanical Property | |
|--------------------------------------|-----------------------|----------------------|
| | Tensile Strength(MPa) | Yield Strength (MPa) |
| 6005 T6 extruded aluminum Profile | 295 | 263 |
| Stainless steel 304 | 625.55 | 263.8 |
| Stainless steel A2-70 | 700 | 450 |

SAFETY AND INSTALLER RESPONSIBILITIES

Handling and Installing Antaisolar

It is critically important that safety practices are observed when installing

- Do not throw or roughly handle any Antaisolar components.
- Do not bring Antaisolar system into contact with sharp or heavy objects.
- Do not modify Antaisolar components in any way. The exchange of bolts, drilling of holes, bending or any other physical changes not described in standard installation procedure will void the warranty.
- It is the installer's responsibility to verify the integrity of the structure to which Antaisolar components is fixed. Roofs or structures with rotten/rusted bearers, undersized bearers, excessively spaced bearers, or any other unsuitable substructure cannot be used with Antaisolar components, and installation on such structures will void the warranty, and could result in death or serious injury.

Wind and Climate Design

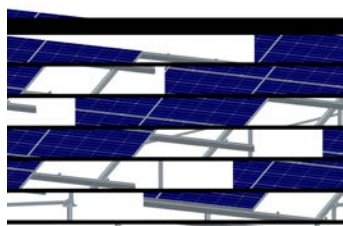
AS/NZS1170.2.2011 provides guidance on determining the wind pressures applicable to your Antaisolar system install site, taking into account roof shape and geographic location. Sufficient guidance is given in this document, but you may wish to procure a copy of these standards if your company installs Australia/New Zealand wide.





- REMEMBER average wind speeds are higher for structures mounted closer to the roof perimeter zone(edge). Refer to 'Fixing within Roof Installation Zone' for more information)
- Make sure your installation complies with local and national building codes. Take into account relevant design parameters (wind speed, exposure and topographic factor) when determining the loading for the installation.
- If alternative fasteners are used to fix the framing to the roof (assuming supplied fasteners are unsuitable for any reason), all screw fasteners must conform to corrosion resistance Class 4 Australian Standard AS3566 and be of equal or greater strength to those supplied with your Antaisolar system order.




CAUTION: INSTALLATION OF THIS PRODUCT IS TO BE PERFORMED ONLY BY PROFESSIONALLY TRAINED INSTALLERS. ANY ATTEMPT BY AN UNQUALIFIED PERSON TO INSTALL THIS PRODUCT COULD RESULT IN DEATH OR SERIOUS INJURY.

COMPONENTS LIST

Overview of system components



| Item No. | Material | Production | Production Picture |
|----------|------------|-------------------|---|
| 1 | AL-6005-T6 | End clamp |  |
| 2 | AL-6005-T6 | Mid clamp |  |
| 3 | AL-6005-T6 | Foot seat (front) |  |
| 4 | AL-6005-T6 | Foot seat(rear) |  |









| | | | |
|---|------------|--------------------------|---|
| 5 | AL-6005-T6 | T106 Rail |  |
| 6 | AL-6005-T6 | Pre assembled Supporting |  |
| 7 | AL-6005-T6 | Rail Splice |  |
| 8 | AL-6005-T6 | Rail clamp |  |
| 9 | AL-6005-T6 | Aluminum Angle |  |

BEFORE INSTALLING

Receipt of goods

Check that the Antaisolar equipment is undamaged and that the order is complete. Check for correct quantities of the items.

Tools required for installation

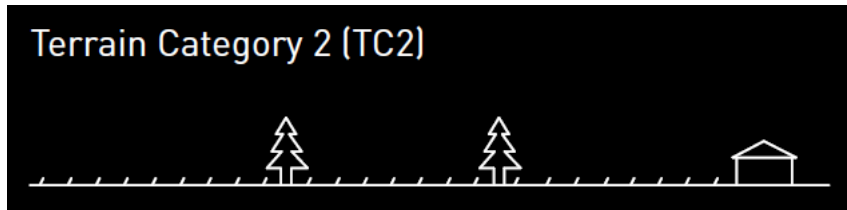
| | | | |
|---|---|--|---|
|  |  |  |  |
| 6mm Allen key or hexagonal driver bit. | monkey spanner | Torque wrench | Measuring tape |
|  |  |  |  |
| Power tool | Pen | pipe wrench (M10/M14) | Rope |

INSTALLATION PLANNING

DETERMINING WIND TERRAIN CATEGORY

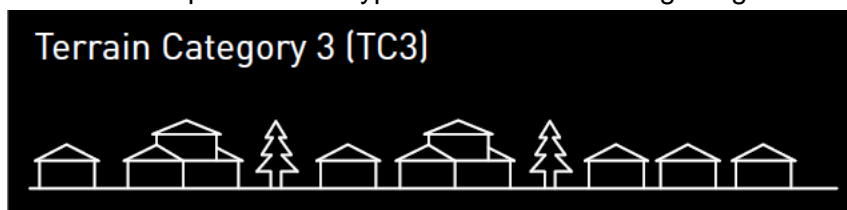
Terrain Category 2

Open terrain, including grassland with well scattered obstructions having heights generally from 1.5 meters to 5 meters. Examples include farmland or cleared sub-divisions with isolated trees and uncut grass.



Terrain Category 3

Terrain with numerous closely spaced obstructions having heights generally from 3 meters to 10 meters. Examples include typical suburban housing or light industrial areas.

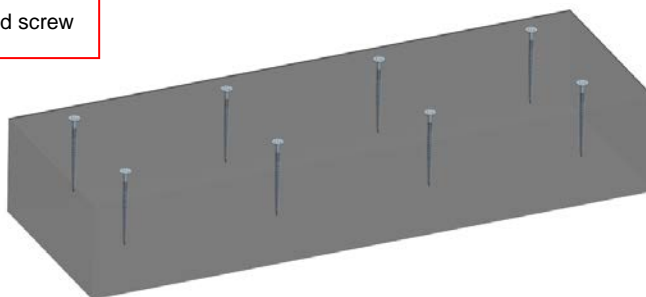


INSTALLATION INSTRUCTION

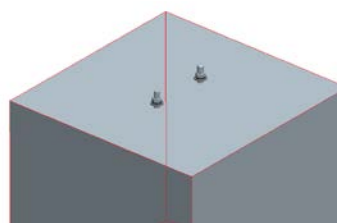
1. Install Ground screw and Concrete foundation

1. Before installing it, install it and prepare a tool and each part beforehand. I mark with the location of each screw pile by a plan of contract drawing. It's secured to drive screw pile in the ground and make screw pile of time and the same line the same height as the same line. A stick hole of screw pile is also unified in the same direction at the same time.

Ground screw



concrete base

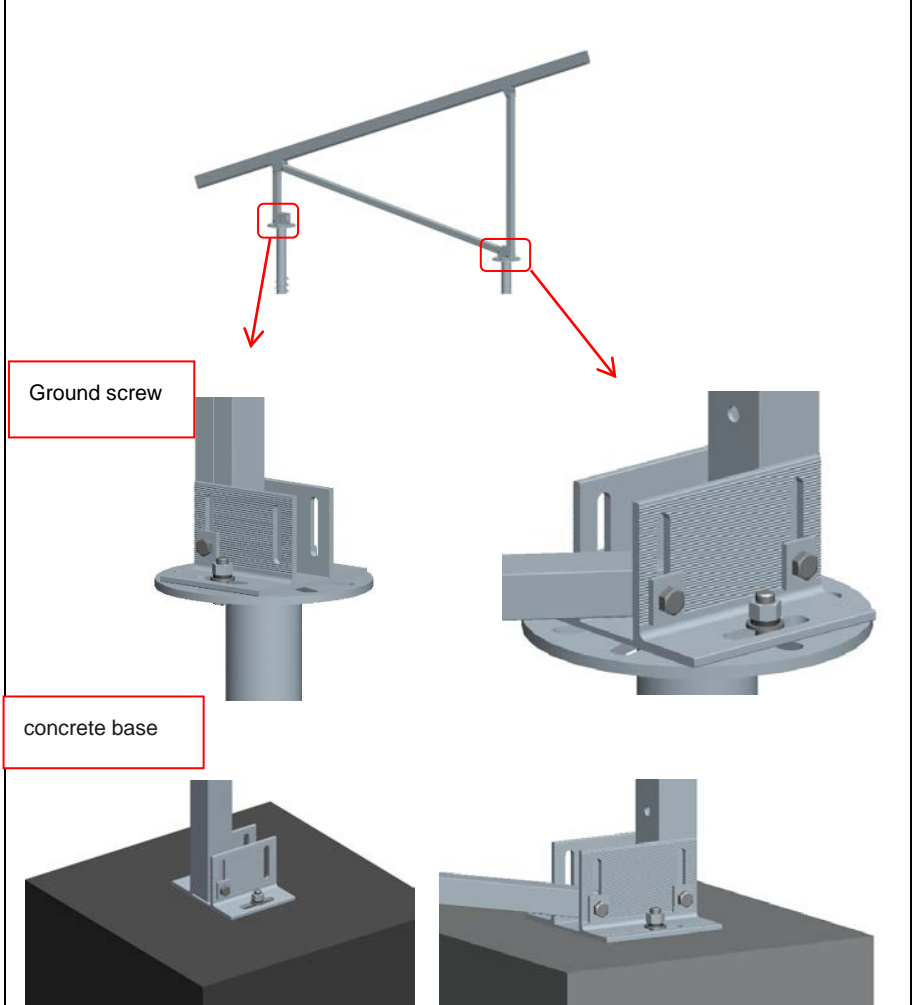


2. Install the Leg and the Aluminum angle

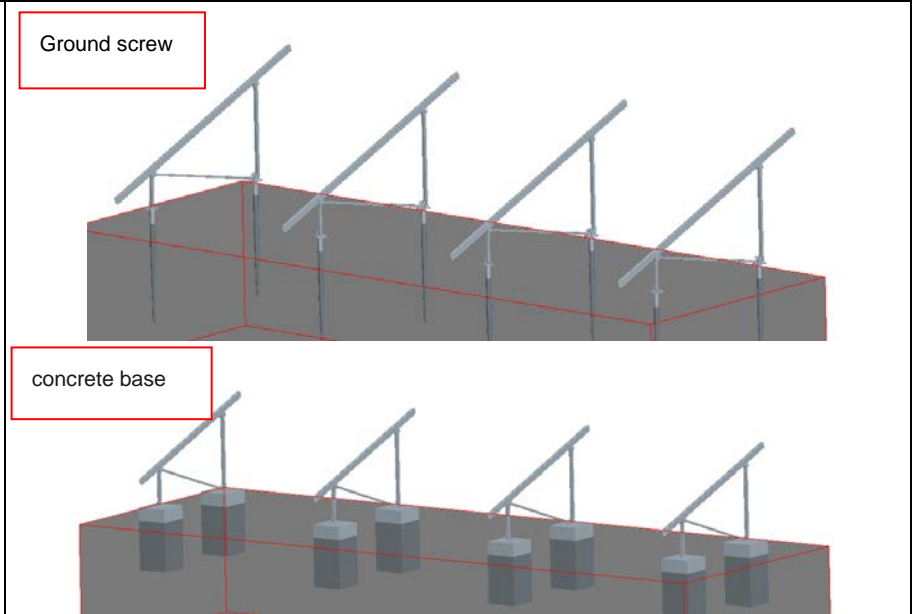
a. Open the Pre-assembled Supporting
Fixed the Foot seat



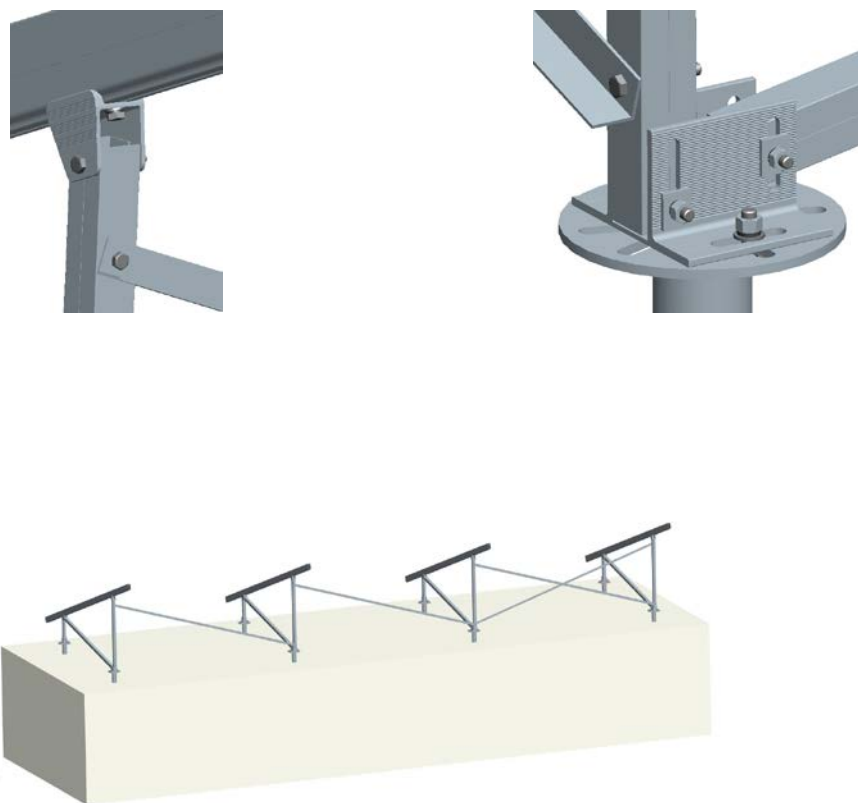
b.Place the whole Pre-assembled Supporting on the Ground screw or Concrete foundation and lock the bolt.



c.It's installed in the above mentioned installation explanation . And unification of the height and agreement of the installed height of the rail are secured by a size adjustment by a request on a drawing.



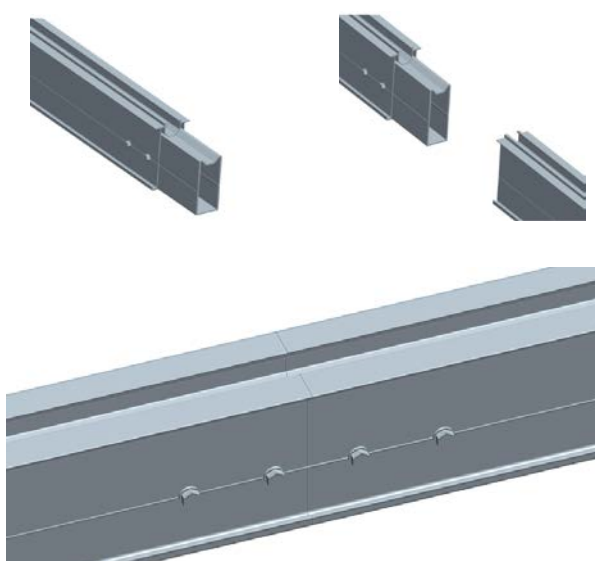
d. According to the drawings, connect the aluminum angle and support, Fixed tightly with M10*80 hex bolt.



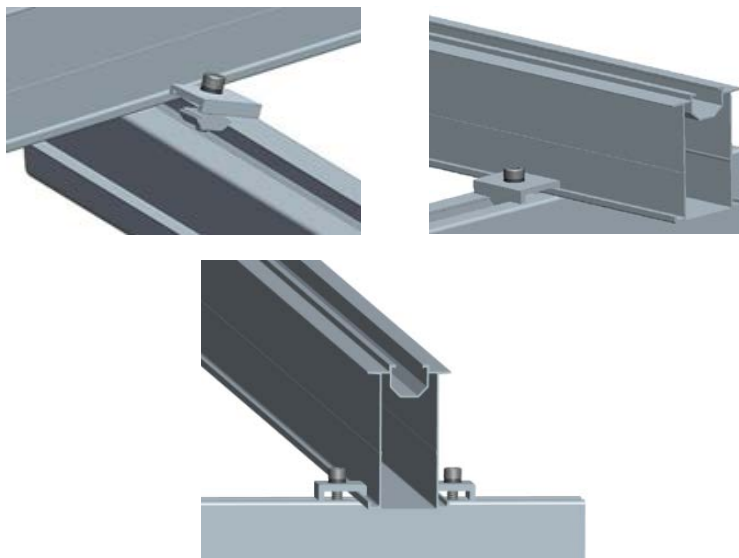
3. Install the rail

a. (When the length doesn't have enough rails, connection is needed. When the length of the rail is enough, I don't need this step.)

Put the Rail joiner into the rail, adjust it to the proper position and fix it with hex bolt.



b. Place the rail on the beam and secure it with the rail clamp (One on each side of the rail)

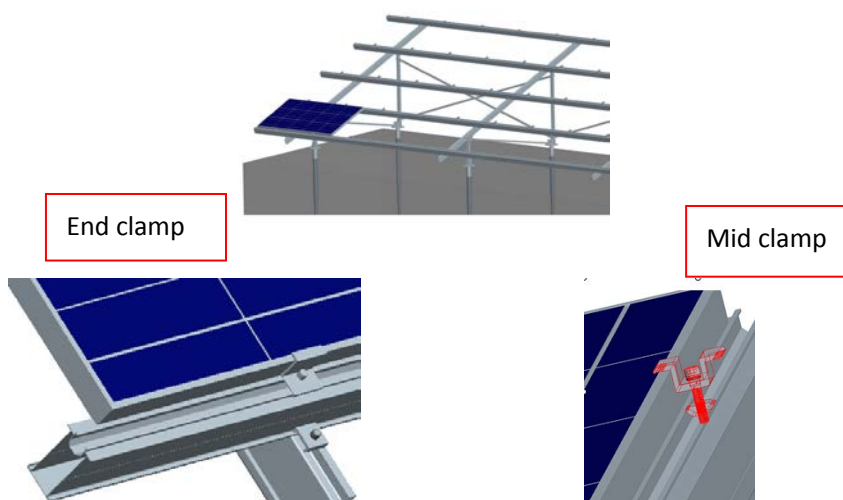


c. In accordance with the above method, the rail is fixed to the beam.

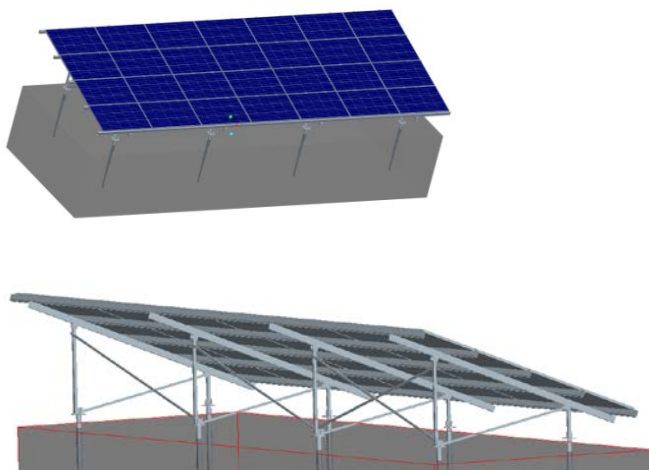


4. Install the panel

a. Install the panel from below, Fixed method, please refer to the picture



b.Antai Solar CG ground mounting system-Landscape.



WARRANTY

In so far as Xiamen Antai New Energy Tech. Co., Ltd. (Hereafter called Antaisolar) grants the customer a 10 year warranty to solar mounting systems, except for the anodized finish, which finish shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of five (5) years. The Warranty Start Date is the date of delivery of the Product(s) to the Buyer or 2 months after the date of Product(s) dispatch from Antaisolar manufacturing site, whichever date is earlier.

Warranted Products

All anodized aluminum products and stainless steel 304 components in the solar mounting systems.

Exclusions and Limitations

In the event that damage is caused to a purchased item, despite proper installation and handling and in the context of normal use and maintenance, Antaisolar will immediately exchange the respective component within the warranty period. The following terms shall apply

1. Failure to comply with Antaisolar' s installation manual;
2. Service by serviced technicians who are not qualified under the relevant law and/or applicable regulations at the place of installation;
3. The warranty period for each component defined in the respective product sheet by Antaisolar shall apply. The warranty period commences with the transfer of risk of the respective component; if, for particular components, generally or for a particular type of use a possible shorter life is expressly indicated within Antaisolar' s individually-generated plans, an exchange is scheduled within a shorter period, the warranty period shall be restricted to such life or period.
4. The warranty is limited to additional delivery for the defective components upon notification of the damage within the warranty period. Any statutory guarantee or liability claims shall remain unaffected.
5. The obligation to fulfill the warranty shall not apply if the damage has arisen in connection with exceptional stress (e.g. storm damage, impact of instability of the sub-surface, particular chemical or biological effects). Or in such conditions, accident, force of nature (such as lightning strike, earthquake), influence from chemical products or other acts beyond Antaisolar's reasonable control (including damage

by fire, flood, etc.)

6. With regard to installation and handling, the technical product descriptions and installation instructions regarding the respective products as supplied by us shall apply, as shall the statutory and generally recognized standards and principles of building and construction work in local market as well as, as appropriate, on a priority basis, the plans, statics and instructions prepared by us individually for the customer.

7. No claims shall exist if the damage is covered or can usually be covered by insurance against storm and similar events (natural-peril insurance).

8. This warranty shall only be applied to solar mounting systems designed by Antaisolar. Custom design products if suggestions by Antaisolar are declined, this product is excluded in this warranty.

9. This warranty shall only establish claims of Antaisolar's customer, via which all warranty claims are to be settled. Assertion by third parties shall only be possible if Antaisolar agrees thereto.

10. Limited Warranty does not apply to any Products which have been subjected to use of the Products in such a manner as to infringe Antaisolar's or any third party's intellectual property rights (e.g. patents, trademarks).

Repair, Replacement or Refund Remedy

1. As Buyer's sole and exclusive remedy under this Limited Warranty (though Buyers should note paragraph 4 below regarding the potential existence of other statutory rights), Antaisolar will, in its sole discretion, either, with regard to the applicable Product (or component thereof in the case of Mounting Product):

- a) refund the historical purchase price of the relevant Product(s); or
- b) repair the defective Product(s) at no charge (subject to the following paragraph); or
- c) replace the defective Product(s) or part thereof by a new or remanufactured equivalent at no charge (subject of the following paragraph).

In the event that Antaisolar opts for options b) or c), Antaisolar shall bear all insurance and transportation charges (except air freight, courier freight), customs clearance and any other costs for returning the defective Product(s) to Antaisolar and shipping the repaired or replaced Product(s) to Buyer (a Buyer may claim reimbursement by Antaisolar for these charges by contacting Antaisolar and providing proof to Antaisolar that these charges were incurred, e.g. an invoice from the relevant service provider). The costs and expenses for their removal, installation or reinstallation shall remain with Buyer.

2. The warranty period(s) shall not extend or renew upon the repair or replacement of a defective Product by Antaisolar. The warranty period for replaced or repaired Product(s) is the remainder of the warranty on the original new Product(s).

3. All other claims under this Limited Warranty against Antaisolar shall be excluded. Under this Limited Warranty, Antaisolar is not responsible for any special, incidental or consequential damages (including loss of profits, harm to goodwill or business reputation, or delay damages) whether such claims are based in contract, warranty, negligence or strict tort. This exclusion applies to the extent permissible by law, and even if the remedies set forth below herein are deemed to have failed of their essential purpose.

Rights and Remedies against Third Parties

This Limited Warranty shall be construed as a separate warranty and independent from any other contractual arrangement with third parties relating to the Product(s). It shall not affect any rights, obligations and remedies of the Buyer, if any, with regard to third parties for defects or non-conformity or non-compliance of the Products, notwithstanding its legal basis. The rights and remedies provided hereunder are in addition to any other rights and

remedies against third parties to which Buyer may be entitled by agreements with such third parties or by law.

Claims Procedure, Notice Periods, Expiration of Warranty Claims and Limitations

1. Buyer shall notify Antaisolar immediately after discovery of any claim under this Limited Warranty by letter, facsimile or e-mail specifying each alleged claim including evidence of the claims and the serial numbers of the Product(s) at issue.
2. Any claim for breach of this Limited Warranty must be brought within three (1) months after discovery of the breach.
3. The return of any defective Product(s) will not be accepted unless prior written authorization has been given by Antaisolar;

Force Majeure

Antaisolar shall not be responsible or liable in any way to the Buyer for any non-performance or delay in performance under this Limited Warranty due to occurrences of force majeure such as, war, riots, strikes, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective product(s) or the notification of the relevant warranty claim under this Limited Warranty.

Warranty Assignment

This Limited Warranty is only applied when the Products remain installed in their original installation location.

No other Warranty

Unless modified in a writing signed by an officer of Antaisolar, the Limited Warranty set forth herein is the only express warranty (whether written or oral) by Antaisolar applicable to the Products and no one is authorized to restrict, expand or otherwise modify this Limited Warranty.

Miscellaneous

If any provision of this Limited Warranty is held invalid, unenforceable or contrary to law then the validity of the remaining provisions of this Limited Warranty shall remain in full force and effect.

MAINTENANCE AND CLEANING

6005-T6 anodized aluminium is largely maintenance free. Only in highly polluted or marine conditions is rinsing with clean water required, during scheduled panel cleaning.

CONTACT DETAILS:

Fujian Antai New Energy Tech Co., Ltd

Address: 30F, W Square, 1801 Huandao East Road, Siming District, Xiamen, China,
China 361008

Tel: +86 592 5902557

Fax: +86 592 5508270

Email: info@antaisolar.com

APPENDIXES:

- Array Frame Engineering Certificate - Tilt Mount
- Array Frame Engineering Certificate - Tilt Mount with Kliplok Clamps

These Engineering Certificates contain important installation requirements. Please obtain these certification from your distributor.

HEADQUARTERS

FUJIAN ANTAI NEW ENERGY TECH. CO., LTD
30F, W SQUARE, 1801 HUANDAO EAST ROAD,
SIMING DISTRICT, XIAMEN, CHINA

BRANCH

JAPAN
AUSTRALIA

OFFICES

SHANGHAI
VIETNAM
MALAYSIA
PHILIPPINES
BRAZIL

PRODUCTION BASE

FUJIAN ZHANGZHOU
ANTAI ALUMINUM CO., LTD

