Limited Warranty for Tongwei Solar PV Module

Tongwei Solar

https://www.tw-solar.com/

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Preface

Tongwei Solar (Hefei) Co., Ltd. (hereinafter referred to as "Tongwei") undertakes to provide a limited warranty (hereinafter referred to as "Limited Warranty") as described below to the Buyer or Purchaser (hereinafter referred to as "Buyer") as identified in the sales contract for the purchase of the Modules. (Crystalline silicon half-cell PV modules, hereinafter referred to as "Modules" or "Module").

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01 Definition

The Modules referred to herein means only Grade A modules (not including the downgraded and scrapped modules) produced by Tongwei and its authorized manufacturers and legally marked with the Tongwei trademark.

02 Warranty Start Date

The term of this Limited Warranty shall commence from the earlier of the following dates:

1) The date when the module is delivered to the direct purchaser; or

2) The date six natural months after the factory - out date of the module as queried according to the product serial number of the module (hereinafter referred to as the "Warranty Start Date").

03 Limited Warranty

3.1 Limited Product material and workmanship Warranty (hereinafter referred to as "Limited Product Warranty")

After Tongwei has delivered the Modules to the Buyer, in the event if any defects of the Modules appearance (including but not necessarily limited to abrasions, scratches, stains, mechanical wear, rust, mildew, color difference and optical attenuation, the changes of EL images, normal wear and tear

during use, etc.) or other changes of the Modules shall not be deemed as the defects stipulated under this Limited Warranty (i.e. such defects/changes shall not be covered under the scope of this Limited Warranty).

3.1.1 12 Years Limited Product material and workmanship Warranty

Tongwei warrants that for a period of twelve (12) years since the Warranty Start Date, the following types of Modules will be free from any defect in design, material, workmanship or manufacturing attributed to Tongwei that will materially affect the power generation function or cause any non-operation.

Product	Type
TNC-G12	TWMNF-66 HSxxx, TWMNF-66 HDxxx
TNC-G12R	TWMNH-66 HSxxx, TWMNH-66 HDxxx
TNC-M10	TWMND-78 HSxxx, TWMND-78 HDxxx, TWMND-72 HSxxx, TWMND-72 HDxxx, TWMND-60 HSxxx
TPC-G12	TWMPF-66 HSxxx, TWMPF-66 HDxxx, TWMPF-60 HSxxx, TWMPF-60 HDxxx
TPC-M10	TWMPD-78 HSxxx, TWMPD-78 HDxxx, TWMPD-72 HSxxx, TWMPD-72 HDxxx, TWMPD-66 HDxxx, TWMPD-66 HSxxx, TWMPD-60 HDxxx, TWMPD-60 HSxxx

3.1.2 15 Years Limited Product material and workmanship Product Warranty

Tongwei warrants that for a period of fifteen (15) years since the Warranty Start Date, the following types of the Modules will be free from any defect in design, material, workmanship or manufacturing attributed to Tongwei that will materially affect the power generation function or cause any non-operation.

Product	Type
TNC-G12R	TWMNH-48 HDxxx, TWMNH-48 HCxxx, TWMNH-54 HDxxx, TWMNH-48 HWxxx, TWMNH-48 HExxx
TNC-M10	TWMND-54 HSxxx, TWMND-54 HBxxx
THC-G12	TWMHF-66 HDxxx
TPC-M10	TWMPD-54 HSxxx, TWMPD-54 HBxxx

3.2 Limited Peak Power Warranty (hereinafter referred to as "Limited Peak Power Warranty")

Tongwei warrants the loss of module power output during the corresponding Limited Product Warranty period as stipulated under Article 3.1.1 or Article 3.1.2 (as the case maybe), and such is based on a comparison of the minimum value of the nominal power tolerance of the Module specified on the Module nameplate and the maximum peak output power of the actual Module measured under standard test conditions (STC).

"Peak Power" refers to the power at the maximum power point on the output characteristic curve obtained through testing under standard test conditions in accordance with standard IEC61215, excluding test uncertainties, within the corresponding warranty period after the Warranty Start Date of the module product.

Note: The limited warranty for the peak power of the double glass series of module products only applies to the output power of the front side of the module products in this series.

The "Attenuation Rate" is the positive ratio of the attenuation of the Modules calculated

according to the following formula: Attenuation Rate = 100% * (Nominal Power – Peak Power)/Nominal Power. For the avoidance of disputes, it is hereby declared that the Attenuation Rate under this Limited Warranty refers to the annual attenuation rate from the Warranty Start Date, and the Attenuation Rate of less than 1 year is calculated for the full year.

3.2.1 Single Glass Module

- TPC Single Glass Module:

Tongwei warrants that the Attenuation Rate of the following types of Modules over a period of 25 years since the Warranty Start Date is:

The first year of power loss will be within 2%, and the loss from the 2nd to the 25th year shall be within 0.55% annually. The power output of the last year is not less than 84.8%.

Product	Type
TPC-G12	TWMPF-66 HSxxx, TWMPF-60 HSxxx
TPC-M10	TWMPD-78 HSxxx, TWMPD-72 HSxxx, TWMPD-66 HSxxx, TWMPD-60 HSxxx, TWMPD-54 HSxxx, TWMPD-54 HBxxx

- TNC Single Glass Module:

Tongwei warrants that the Attenuation Rate of the following types of Modules over a period of 30 years since the Warranty Start Date is:

The first year of power loss will be within 1%, and the loss from the 2nd to the 30th year shall be within 0.4% annually. The power output of the last year is

not less than 87.4%.

Product	Type
TNC-G12	TWMNF-66 HSxxx
TNC-G12R	TWMNH-66 HSxxx
TNC-M10	TWMND-78 HSxxx, TWMND-72 HSxxx, TWMND-60 HSxxx, WMND-54 HSxxx, TWMND-54 HBxxx

3.2.2 Double Glass Module

- TPC Double Glass Module:

Tongwei warrants that the Attenuation Rate of the following types of Modules over a period of 30 years since the Warranty Start Date is:

The first year of power loss will be within 2%, and the loss from the 2nd to the 30th year shall be within 0.45% annually . The power output of the last year is not less than 84.95%.

Product	Type
TPC-M10	TWMPD-78 HDxxx, TWMPD-72 HDxxx, TWMPD-66 HDxxx, TWMPD-60 HDxxx
TPC-G12	TWMPF-66 HDxxx, TWMPF-60 HDxxx

- TNC Double Glass Module:

Tongwei warrants that the Attenuation Rate of the following types of Modules over a period of 30 years since the Warranty Start Date is:

The first year of power loss will be within 1%, and the loss from the 2nd to the 30th year shall be within 0.4% annually. The power output of the last year is not less than 87.4%.

Product	Type
TNC-G12	TWMNF-66 HDxxx
TNC-G12R	TWMNH-66 HDxxx, TWMNH-48 HDxxx, TWMNH-48 HCxxx, TWMNH-54 HDxxx， TWMNH-48 HWxxx, TWMNH-48 HExxx
TNC-M10	TWMND-78 HDxxx, TWMND-72 HDxxx

- THC Double Glass Module:

Tongwei warrants that the Attenuation Rate of the following types of Module over a period of 30 years since the Warranty Start Date is:

The first year of power loss will be within 1%, and the loss from the 2nd to the 30th year shall be within 0.375% annually. The power output of the last year is not less than 88.12%.

Product	Type
THC-G12	TWMHF-66 HDxxx

04 Repair, Replacement or Refund

➢ If, during the term of the Limited Product Warranty or Limited Power Warranty, a Module incurs a power loss exceeding the guaranteed value, and:

(i) Such defect is caused by reasons solely attributable to Tongwei as analyzed and determined by Tongwei; or

(ii) If reasonably required by the Buyer, is confirmed to be caused by reasons solely attributable to Tongwei by the reputable domestic or international third-party testing organization (which is selected by both the Buyer and Tongwei)(the cost shall be borne by the party with more deviation in results, and the decision in this regard shall be final and binding of both the Buyer and Tongwei) (hereinafter referred to as "Defected Module"), Tongwei will, at its sole discretion, select one of the remedies set forth hereunder:

✧ 1) Repair the defective solar modules. In such case, Tongwei shall prepare the repair project plan and carry out the repair project for the affected modules, or

✧ 2) Replace the defective modules or provide additional module(s) to make up for the output gap between the guaranteed output and the actual power output of the defective module(s), or

✧ 3) Power Compensation: Provide customers with additional new module products free of charge to compensate for the loss of peak power of the claimed module products. (The formula for calculating the total power of

the additional module products is: (Committed peak power - Average peak power of the sampled and tested module products) * Quantity of the claimed module products).

- ✧ 4） Refund: Repay the remaining value of the defective product or the value difference corresponding to the power difference between the actual output power of the defective product and the guaranteed power through the refund.

  a. Remaining value = Market price of the product (per watt) at the time of claim recognition * Nominal power * Remaining warranty period / Promised warranty period.

  b. Value difference = Market price of the product (per watt) at the time of claim recognition * (Total remaining theoretical guaranteed power - Total actual output power) * Remaining warranty period / Promised warranty period.

- ➢ If Tongwei chooses to take the remedy of free repair or free replacement of the defective module or power compensation, Tongwei shall bear the direct cost of repairing, replacement and the freight charges incurred in shipping the additional products to the Buyer, but excluding insurance, air freight, customs clearance, tariffs, and other additional costs not caused by Tongwei (e.g.,demurrage, warehousing, etc. due to the Buyer's or the end-user's negligence). Costs incurred due to dismantling, repacking,installation or re-installation the module(s), during the process of power compensation and

other related expenses shall be borne by the Buyer.

- If Tongwei opts for remedies such as product replacement or power compensation, and in case the claimed module products are no longer manufactured, unavailable for supply, or have been withdrawn from the market, Tongwei shall have the right to provide new - technology circuit products to replace the claimed module products. The total power of these replacement products shall not be less than the total reasonable claimed power of the customer's original products.
- If the residual value refund program is selected and implemented, the limited product warranty ends immediately.
- Unless instructed by Tongwei or required by law, the Buyer shall dispose of out-of-use module(s) in accordance with applicable regulations on electronic waste treatment and disposal at its own cost. If Tongwei decides or is required by law to retrieve these defective modules, the ownership of the relevant module(s) belong to Tongwei (The buyer shall cooperate with Tongwei to retrieve the products within 10 natural days as of the date of receipt of the notice from Tongwei). In the event the Buyer returns the Solar Modules to the Tongwei without the prior written consent of Tongwei, the risks (including but not limited to damage or loss of the Solar Modules) and expenses related to the Solar Modules shall be borne by the Buyer, and Tongwei is entitled to refuse to deal with the related claims and demands without any liability therefrom. Unless with written authorization from Tongwei, any replaced

module(s) shall not be resold, reworked or reused in any way.

- If Tongwei opts to repair, replace defective modules or provide power compensation for them, the limited product warranty and the limited power output warranty applicable to the modules after repair, replacement or power compensation shall not be extended or renewed. In other words, the warranty period of the modules after repair, replacement or power compensation shall be the remaining warranty period of the original product.

The above remedies are the sole and exclusive available remedies provided by Tongwei to the Buyer under the Limited Warranty, and Tongwei shall not be liable for any special, indirect, consequential, or incidental losses (including any loss of production, loss of profit, loss of goodwill, loss of business reputation, or loss of delay), etc., regardless of whether the relevant claim for losses is based on a claim of contract, warranty, tort, or strict liability.

Buyer has the right to make claims in accordance with the terms of this Limited Warranty. If the Buyer raises multiple claims in connection with the same issue/subject matter, Tongwei shall be deemed to have settled all applicable claims arising from such issue/subject matter after Tongwei has indemnified the Buyer regarding such issue/subject matter in accordance with the above provisions as stipulated under this Limited Warranty (i.e. the Buyer shall not be entitled to repeated indemnification in connection with the same issue/subject matter).

05 Warranty Exclusion and Limitations

Tongwei and Buyer shall hereby expressly agree that this Limited Warranty shall not apply to any of the following Modules or circumstance:

- The Buyer has not made the full amount of payment to Tongwei in accordance with the contract or purchase order entered into between Tongwei and the Buyer regarding the Module;
- The quality class of the module is not Tongwei Grade A (e.g. downgraded and scrapped module) ;
- The Buyer fails to comply with all the requirements of the Tongwei Installation Manual;
- The type, nameplate or barcode of the Module has been altered, erased or unable to be recognized (except proven that such alterations or variations are caused by any act or omission of Tongwei);
- Modules which have been installed near extreme heat or in extreme or volatile environmental conditions, causing the module(s) to corrode, oxidize, or to suffer from chemical materials in the environment;
- Modules which have been installed on mobile equipment (except for photovoltaic tracking systems) such as vehicles, ships, etc.;
- The building where the Module is placed is defective;
- The Module is damaged due to any of the following: intentional damage, unauthorized modification or connection, unauthorized commencement, repair with unauthorized spare parts,accidents, effects of chemical products,

and other acts beyond the reasonable control of Tongwei;

- Although the Module is affected by the thermal expansion of the physical properties of the materials and may be warped to some extent or sunk after installation, it does not affect the installation, use and reliability of the Module;
- Modules which have been subject to system voltage over the rated maximum system voltage or surges ;
- The use or parallel import of the Modules in a way that infringes intellectual property rights (such as patents rights of inventions,trademarks) of Tongwei or third party;
- The service technician servicing the Module is not a qualified person according to the relevant laws and regulations of the place of installation;
- Other damages or non-use of the Modules caused by reasons not attributable to Tongwei.
- Remove the module products (including those modules that are repaired, replaced, or power - compensated by Tongwei after fulfilling its obligations under the Limited Warranty) from their initial installation location after the first installation, and reinstall them at other locations.

06 Procedures for Warranty Claims

6.1 When the Buyer makes any claim against Tongwei under this Limited Warranty ("Claim"), the Buyer shall first give written notice to Tongwei or its authorized distributor(s), together with the:

(a) The claimant;

(b) A detailed description of the situation;

(c) Supporting materials, including photos or data;

(d) The serial numbers of the relevant modules;

(e) Purchase vouchers;

(f) Modules models;

(g) The location of the modules;

(h) Other supplementary supporting materials required by the supplier.

After receiving the customer's claim request and complete information materials, the supplier will review and evaluate the relevant claim. During the problem - acceptance stage, if the supplier deems it necessary, the supplier will provide the customer with a Return Merchandise Authorization (RMA). The customer is obliged to cooperate with the supplier in arranging the return of the defective parts to the factory or a third - party institution. If the customer fails to notify the supplier within the time required as and provide the relevant information in (a) - (h) as, or fails to cooperate with the supplier in returning the product for necessary inspection, the supplier has the right to reject the relevant claim request and shall not bear any liability therefor.

Tongwei customer service center: Tongwei Solar (Hefei) Co., Ltd

Address: No.888, Changning Avenue Street, High-tech District, Hefei City, Anhui Province, China

Post Code: 230088

Customer Service Telephone Number: 4000566888

After-Sales E-mail: twcustomerservice01@tongwei.com

Web: https://www.tw-solar.com/

6.2 Any Claim shall be raised within 30 days (natural day) from the date on which the breach is found.

6.3 In the event of a dispute over the technical facts of the Claim, the Buyer and Tongwei shall jointly confirm the selection of a reputable domestic or international third-party testing institution to make the ruling.During the I-V testing process, the modules must be in a non - metastable state. For specific procedures, please refer to the "NIM-ZY-GX-GF-106 Stabilization Treatment Method for Tunnel Oxide Passivated Contact (TOPCon) Photovoltaic Modules" released by the National Institute of Metrology, China. The third - party institution shall declare the measurement uncertainty of the test to both Tongwei and the customer, and this shall be reflected in the test report. All costs and expenses incurred in the adjudication process shall be borne by the losing party, unless otherwise provided in the judgment. For the avoidance of

doubt, Tongwei and the Buyer confirm and agree that the parties shall not apply this Article 6.3 in respect of the same matter if the relevant matter has already been decided by the third party under Article 4.

6.4 If it is determined in accordance with Article 6.3 that the defect of the Tongwei Module falls within the scope of this Limited Warranty, then Tongwei will make the compensation in accordance with Article 4. If it is determined that the defects of the Tongwei Module are not covered by this Limited Warranty, Tongwei shall not be liable for any compensation, including but not limited to insurance, transportation, customs clearance and any other cost incurred in the return of defective Modules, and Tongwei shall not be obligated to repair, replace or refund Defective Module.

6.5 The Buyer may contact the Tongwei Customer Service Center to inquire about the cost of the Module and related maintenance services in the event that (i) the Module is defective due to reasons other than Tongwei during the relevant warranty period as stipulated herein or (ii) the Module needs to be repaired or replaced after the expiry of the relevant warranty period.

07 Warranty Assignment

This Limited Warranty applies to the Buyer and its lawful successors or assignees (and the Buyer shall provide proof to the reasonable satisfaction of Tongwei), in which Buyer shall satisfy the following conditions of assignment before assigning its rights under this Limited Warranty to any third party:

- The Modules remains intact and unchanged at the initial installation site;
- There are no remaining arrears or other payables (e.g. liquidated damages) of the Module based on the sales contract or purchase order entered between the Buyer and Tongwei;
- The Buyer shall assign all (but not part) of its rights and obligations;
- The proposed assignee agrees to be bound by all of the terms of this Limited Warranty;

If required by Tongwei, the Buyer shall provide reasonable evidence to prove the corresponding succession or assignment of the ownership within 15 working days from the date of receipt of the Tongwei's notice, otherwise Tongwei shall be entitled to refuse to process the relevant claims raised by any successor or assignee of the Buyer without any liability, and the Buyer shall indemnify Tongwei for all losses incurred thereby.

Except as set out above, this Limited Warranty shall not be assigned. Any assignment that does not comply with this Article shall not be binding on Tongwei, and Tongwei shall be entitled to refuse to process the relevant claims raised by the assignee of the Buyer without any liability, and the Buyer shall indemnify Tongwei for all losses incurred thereby.

08 Severability

If any part of this Limited Warranty is deemed to be invalid, void or unenforceable, or if the application of this Limited Warranty to certain person or under certain circumstances is deemed to be invalid, void or unenforceable, such shall not affect the validity of any other parts of the Limited Warranty. The unaffected part of this Limited Warranty or this Limited Warranty shall be deemed to be independent and valid..

09 Disputes

Any disputes relating to this Limited Warranty (including but not limited to the disputes regarding the survival, validity, breach or termination of it) shall be resolved in accordance with the dispute settlement as stipulated under the contract entered between Tongwei and Buyer. Tongwei reserves the right of final interpretation of the Limited Warranty.

10 Force Majeure

In the event of force majeure caused by fire, flood, blizzard, hurricane, lightning, changes in public policy, terrorism, war, riots, strikes, lack of appropriate or sufficient labor, materials or production capacity, technical or

physical events, epidemic and any unforeseen events beyond the reasonable control of Tongwei, Tongwei shall not be liable in any way to Buyer or any third party for any failure or delay in the performance of its obligations under this Limited Warranty.

11 Miscellaneous

In accordance with PRC laws and regulations and relevant policies, Tongwei may update the above product warranty terms and policies from time to time and the relevant updates shall be considered as part of this Limited Warranty. This Limited Warranty is the sole valid document for Tongwei to assume warranty liability externally. Any oral commitments, unilateral statements, or other documents that have not been approved in writing by Tongwei shall not be legally binding on Tongwei. Tongwei shall only assume warranty liability within the scope specified in this Limited Warranty.

To obtain the latest version, please visit Tongwei's official website:

https://www.tw-solar.com/.

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