



LIMITED WARRANTY CERTIFICATE FOR TALESUN N-type TOPCon SINGLE GLASS SOLAR PHOTOVOLTAIC MODULE

SPEC. NO.: TS-ET-176

REVISION: A4

EFFECTIVE DATE: 07-2024

Talesun Solar reserves the right to change this Limited Warranty without prior notice.

Please visit TALESUN's official website for the latest version of the Global Limited Warranty:

<https://www.talesun.com/en>



SuZhou Talesun Solar Technologies Co., Ltd. (“TALESUN”), hereby provides the limited warranty as below (“Limited Warranty”) to the initial owner of such Modules (the “Buyer”). This Limited Warranty applies exclusively to the new modules purchased from TALESUN. TALESUN reserves the right to amend the terms of this Limited Warranty as needed from time to time.

Modules defined in this Limited Warranty are photovoltaic solar modules manufactured by TALESUN or manufacturers authorized by TALESUN to legally use TALESUN’s brand. The product types are as follows:

**TN7F54M-XXX/TN7F54M(H)-XXX; TN7F60M-XXX/TN7F60M(H)-XXX;
TN7F66M-XXX/TN7F66M(H)-XXX; TN7F72M-XXX/TN7F72M(H)-XXX;
TN7F78M-XXX/TN7F78M(H)-XXX; TN9F54M-XXX/TN9F54M(H)-XXX;
TN9F72M-XXX/TN9F72M(H)-XXX; TN8F60M-XXX/TN8F60M(H)-XXX;
TN8F66M-XXX/TN8F66M(H)-XXX; TN3F48M-XXX/TN3F48M(H)-XXX;
TN3F66M-XXX/TN3F66M(H)-XXX; TN7G54M-XXX/TN7G54M(H)-XXX;
TN7G60M-XXX/TN7G60M(H)-XXX; TN7G66M-XXX/TN7G66M(H)-XXX;
TN7G72M-XXX/TN7G72M(H)-XXX; TN7G78M-XXX/TN7G78M(H)-XXX;
TN9G54M-XXX/TN9G54M(H)-XXX; TN9G72M-XXX/TN9G72M(H)-XXX;
TN8G60M-XXX/TN8G60M(H)-XXX; TN8G66M-XXX/TN8G66M(H)-XXX;
TN3G48M-XXX/TN3G48M(H)-XXX; TN3G66M-XXX/TN3G66M(H)-XXX;**



The product models include but are not limited to the above models and shall be subject to the specific model purchased by the customer.

TALESUN warrants that the above mentioned MODULES are free from any major defects in materials and workmanship under normal application, installation, utilization and service conditions. Should TALESUN confirm that the Modules are indeed not in conformity with the Limited Product Warranty, it shall be at its sole discretion within a reasonable time period.

TALESUN shall, during the prescribed period of time of this Limited Warranty, repair or replace such products or components therein that have major appearance defects and/or appearance defects caused by abnormal power in accordance with the definitions in IEC61215, IEC61730 standards. If TALASUN fails to repair or replace any such defective Modules within a reasonable repair period, TALASUN will, upon the Buyer's written request, provide refund of the applicable Purchase Order price of the relevant Modules.

The warranty shall not apply to the damage caused by any person or entity who is not under TALESUN's direct or indirect control, including but not limited to any damage or defacement on appearance caused by misuse, unreasonable use or non-standard maintenance or damage caused by unauthorized modification in design structure.



1. Warranty Effective Date

The effective date of the warranty shall be defined as the date on which the product is delivered to the Buyer or the 180th day from the date on which the product is manufactured, whichever is the earlier.

The limited warranty set forth in this warranty is a supplement to any implied warranty granted to the Buyer by law. All implied warranties (including warranties of merchantability and fitness for purpose) are limited to the period commencing on the above delivery date. Except for the warranty terms and duration set forth in this warranty, neither the sales personnel of TALESUN nor any other personnel are authorized to make any warranties, or to extend the duration of any warranties beyond the time period described below on behalf of TALESUN.

The warranties described herein shall be sole and exclusive warranties granted by TALESUN and shall be the sole and exclusive remedy available to the Buyer. Correction of defects or deficiencies in the prescribed manner within the period of time described herein shall constitute complete fulfillment of all liabilities and obligations of TALESUN to the Buyer with respect to the Products and shall constitute full settlement of all claims made under contract, negligence and other strict liability. Under any circumstances, TALESUN is not responsible or liable for any damage or defect to the Product resulting from repair or attempted repair by any person other than TALESUN or its authorized service provider. TALESUN is not responsible or liable for any incidental or consequential economic or property losses. TALESUN's cumulative liability (if any) for damage or other losses of PV modules shall not exceed the invoice value paid by the Buyer.



2. 12-year /15-year Limited Product Warranty

Subject to the terms and conditions of this Limited Warranty, TALESUN guarantees to the Buyer that the whole of the Modules supplied by TALESUN are free from defects in materials of workmanship which affects the normal installation and utilization within 12 years or 15 years from the Start Date of this Warranty, provided that the Modules are installed, utilized, operated and maintained in accordance with the stipulations of TALESUN's installation manual. The 15-year Product Limited Warranty applies to the following Module types only:

TN7F54M-XXX/TN7F54M(H)-XXX; TN7G54M-XXX/TN7G54M(H)-XXX; TN9F54M-XXX/
TN9F54M(H)-XXX; TN9G54M-XXX/TN9G54M(H)-XXX; TN3F48M-XXX/TN3F48M(H)-XXX;
TN3G48M-XXX/TN3G48M(H)-XXX. The foregoing defects do not include changes in the product appearance or normal wear and tear of the product after installation. This "Product Limited Warranty" does not guarantee the power output of the Module, which is specifically described in the "Limited Performance Warranty" section below.

3. 25-Year Limited Performance Warranty

The supplier provides a power output warranty with a total of up to 25 years from the Start Date of this Warranty for its single-glass Module products. For the avoidance of doubt, this Limited Performance Warranty only applies to the power generation of the front-side of the single-glass modules. During the first year of the Performance Warranty Period, the actual power output of the



Modules is not less than 99% of the nameplate power. From year 2 to year 25, the annual attenuation of actual power will be no more than 0.4%. By the end of year 25, the actual power output is not less than 89.4% of the nameplate power. Actual Output Power (Year 1) \geq Nameplate Power * (1 - 1%); Actual Output Power (Year N, $2 \leq N \leq 25$) \geq Nameplate Power * (1 - (1% + 0.4% *(N-1)))

Description: the output power is the power of the PV module under standard test conditions (STC). The standard test conditions (STC) are as follows: (a) spectral AM1.5, (b) light intensity 1000W/m², (c) temperature 25 \pm 2°C. The test is based on the IEC61215 and IEC61836, the actual output power measurement of the Module is carried out in the TALESUN factory or by TALESUN approved third party inspection agency, the test uncertainty of 2 sigma (Pmpp) is less than or equal to \pm 2.5%.

4. Remedy - repair, replacement or compensation

If the Module does not meet the Limited Warranty requirements, TALESUN reserves the option to provide any of the following remedies:

1) Repair defective Modules. In this case, TALESUN shall plan and implement Modules repairs;

2) Replace defective Modules. In this case, the actual output power of the new Module shall not be lower than the remaining guaranteed output power of the original Module to be replaced.

Remaining Guaranteed Output Power = Nominal Output Power * (1- First Year Attenuation



Rate - Yearly Attenuation Rate * (N-1));

Note: $N, 0 \leq N \text{ Year} \leq \text{Limited Power Warranty Period}$.

3) Refund the remaining value of the defective Module or the value difference;

Note:

(1) Remaining Value = Current Price (price per watt) * Nominal Output Power * (Remaining Limited Power Warranty Period \div Limited Power Warranty Period);

(2) Value Difference = Current Price (price per watt) * (Remaining Guaranteed Output Power - Actual Output Power).

* The current price (price per watt) is determined by TALESUN based on the market prices.

4) Additional Modules are provided to compensate for the loss of power output caused by Modules not meeting the Limited Power Warranty.

5. Limited Warranty does not apply to the modules under the situations as follows:

a) Misuse, abuse, negligence, or accident that may be caused in the course of storage, transportation, handling, installation, application, use or service;

b) Being installed in a mobile location or similar environment such as the ocean etc., excluding fixed floating solar applications (other than single-axis or dual-axis trackers), the product is subjected to improper voltage, current instability or abnormal environmental conditions (such as acid rain or other pollution);

c) the assembly base structural component or installation method of the Module is defective;



- d) Excessive corrosions of the Modules due to its direct contacts with corrosive agents, mildewing and discoloration etc.;
- e) Defects of the Product caused by any of the following circumstances: extreme thermal state or environmental conditions or rapid changes, corrosion, oxidation in such conditions, unauthorized modifications or connections, unauthorized opening or repair, repair by use of unauthorized spare parts, accidents, nature forces (such as lightning strike), influence from chemical products or other acts beyond TALESUN' s reasonable control (including but not limited to the damage caused by fire, flood, etc.);
- f) Personal casualty resulting from any cause other than negligence of TALESUN and its employees or representatives;
- g) Incidental, consequential or special damage such as loss of use, loss of profits, revenues, business, or goodwill, damage to reputation or fees paid to a third party.
- h) Module PID (potential induced degradation) caused by incorrect system design, defective system installation and/or material mismatch of system components.
- i) The Modules have been altered or modified, or used other related products not supplied by TALESUN during the processing in a manner that is not consistent with the written instructions of TALESUN or its affiliates, or without the prior written consent of TALESUN or its affiliates;
- j) The product type, nameplate or serial number of the Modules have been removed, altered, erased or rendered illegible.

Notwithstanding any other provision of this Limited Warranty, including whether TALESUN



is liable to compensate the Buyer, the total compensation paid or payable by TALESUN, and the total liability of TALESUN hereunder, shall not exceed the amount actually received by TALESUN in the original invoice of the Claim Modules. The limitation of liability under this Limited Warranty will not apply to the extent of restrictions or prohibitions of applicable mandatory legal.

6. Others

The repair, replacement or the supply of additional Modules does not result in an extension of the warranty period, and the Module warranty period will still be executed in accordance with the preceding provisions. The ownership of any replaced Modules shall belong to TALESUN and at TALESUN' s disposal. If the model of complained Module is no longer manufactured during the complaint, the Company has the right to provide Modules of other size, type, color and/or power to substitute.

7. Force Majeure

TALESUN shall not be responsible for any inability or delay in fulfilling any terms and conditions of sales, including this "Standard Photovoltaic Module Limited Warranty", nor be liable to the Buyer or any third party, due to natural disasters, war, riots, strike, no appropriate or sufficient labor, lack of raw materials, technology and production negligence and any unforeseen events beyond TALESUN' s control, including but not limited to any technology or natural conditions,



status that go beyond TALESUN' s reasonable knowledge or understanding during the sale of Modules or the claim.

8. How to Obtain Warranty

If the Buyer considers that a legitimate claim can be made in accordance with the “Standard Photovoltaic Module Limited Warranty” , which falls within the scope of this warranty, the Buyer shall immediately notify TALESUN such complaint in writing to the following address or email to the email address below. The Buyer shall enclose the warranty certificate issued by TALESUN, the corresponding Module serial number and the applicable purchase date along with the notice. Meanwhile the Buyer shall also provide invoices that can clearly display the purchase date, purchase price, Module model, the seal or signature of TALESUN or its distributor as evidence. Any returned PV Modules will not be accepted before TALESUN issues a written authorization and confirmation.

The Limited Warranty does not cover the relevant transportation costs of Module return and reshipment due to repair or replacement, nor the cost of installation, disassembly or reinstallation of such Modules.

Any dispute arising from the warranty claim shall be subject to the agreement signed by both parties or the testing agency agreed upon by both parties to make the final decision. Unless otherwise stipulated in the verdict, all costs shall be borne by the losing party. The ultimate option of the aforementioned institutions belongs to TALESUN.



9. Severability

If any part or clause of this Limited Warranty is deemed to be void, invalid or unenforceable, or the applicability of certain parts and clauses to certain persons or certain circumstances is deemed to be void, invalid or unenforceable, such determination shall not affect the validity of all other parts, clauses or the applicability of this warranty. Therefore, the other parts, provisions, clauses or the applicability of this warranty shall remain in force and effect independently.

Note: If this warranty statement is available in multiple language versions, in the case of inconsistent understanding, the English version shall prevail.



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*The right of interpretation belongs to SuZhou Talesun Solar Technologies Co., Ltd.