 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHNICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 2 of 9

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

Modules are defined in this Limited Warranty as photovoltaic solar modules manufactured by TALESUN or its authorized manufacturers, legitimately bearing “Talesun” brand, that are of the following product types:

A: P type-Polycrystalline Solar Cell Modules:

TP648P-XXX;TP660P-XXX/TP660P(H)-XXX;TP672P-XXX/TP672P(H)-XXX;TP6H60P-XXX/TP6H60P(H)-XXX; TP6H72P-XXX/TP6H72P(H)-XXX;

B: P type-Mono crystalline Solar Cell Modules:

i.

TP572M-XXX;TP596M-XXX;TP648M-XXX; TP660M-XXX/TP660M(H)-XXX; TP672M-XXX/TP672M(H)-XXX; TP6H60M-XXX/TP6H60M (H) -XXX; TP6H72M-XXX/TP6H72M(H)-XXX; TP6G72M-XXX/TP6G72M(H)-XXX;TP6F72M-XXX/TP6F72M(H)-XXX;TP6F60M-XXX/TP6F60M(H)-XXX;TP678M-XXX/ TP678M(H)-XXX;

ii.

TP6L60M-XXX/TP6L60M(H)-XXX; TP6L72M-XXX/TP6L72M(H)-XXX; **TP7G54M-XXX/TP7G54M(H)-XXX; TP7G60M-XXX/TP7G60M(H)-XXX; TP7G72M-XXX/TP7G72M(H)-XXX;TP7F54M-XXX/TP7F54M(H)-XXX; TP7F60M-XXX/TP7F60M(H)-XXX; TP7F66M-XXX/TP7F66M(H)-XXX;TP7F72M-XXX/TP7F72M(H)-XXX; TP7F78M-XXX/TP7F78M(H)-XXX; TP8F54M-XXX/TP8F54M(H)-XXX; TP8F60M-XXX/TP8F60M(H)-XXX; TP8F66M-XXX/TP8F66M(H)-XXX;**

Note:


“X” represents different types of product under different power class.

M -Mono Module,

P -Poly Module,

F-stand for half cutting MBB module

G-stand for half cutting MBB module

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHNICAL SPECIFICATION <div style="border: 2px solid red; padding: 5px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 3 of 9

L- stand for double glass of 166 cells

(H)- stand for 1500V system voltage,

The product model includes but is not limited to the above model and shall be subject to the specific model purchased by the customer.

Talesun warrants that the MODULES together with the factory-assembled DC connectors and cables are free from any defects in materials and workmanship under normal application, usage, installation and service conditions. Should Talesun confirm that the Modules are indeed not in conformity with the Limited Product Warranty, it shall, at its sole discretion, within a reasonable time period, either:

in the event of any defects or deficiencies of such Modules, TALESUN shall, during the prescribed period of time of this Limited Warranty, promptly repair or replace such Modules or components therein that have or have caused the aesthetic defects and/or power generating deficiencies under the IEC61215, IEC61730, UL1703 standards. If TALESUN fails to repair or replace any such defective or deficient Modules within a reasonable cure period, TALESUN will, upon the Buyer's written request, provide refund of the applicable Purchase Order price of the relevant component


The warranty shall not apply should the damage is caused by any non-Talesun person or entity who was not under TALESUN's direct or indirect control or aesthetic appearances of any Module caused by misuse, abuse, neglect or unauthorized maintenance practices implemented by such person or entity.

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 of manufacture of the product, whichever is earlier.

All warranties including the warranties of merchantability and fitness for use are limited to the period(s) from the Warranty Effective Date set forth below. Not contrary to the foregoing, neither the sales personnel of TALESUN nor any other person is authorized to make any warranties other than those described herein, 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 purchaser for TALESUN's breach of its warranty obligations under the Purchase Orders. Timely correction of defects or deficiencies of the applicable Modules, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of TALESUN to the Buyer with respect to the Products and shall constitute full satisfaction of all Buyer's

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHINICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 4 of 9

warranty claims, whether based on contract, negligence, and strict liability otherwise. TALESUN shall not be liable or in any way be responsible for any incidental or consequential damages of the Buyer arising out of TALESUN's breach of warranty. TALESUN's aggregate liability, if any, in damages or otherwise, shall not exceed the mutually agreed controlling limitation of liability set forth in the Master Agreement between Talesun and the Buyer

12 Year Limited Product Warranty

Subject to the terms and conditions of this Limited Warranty, Talesun warrants to the Customer for a period of twelve (12) years following the Warranty Start Date (hereinafter referred to as "Limited Product Warranty Period") that the Modules (together with the factory-assembled DC connectors and cables), when installed, used, and serviced under normal operating conditions and in accordance with the Talesun module installation manual and product technical specifications, to be free from any defects in design, materials, workmanship or manufacturing that have a negative effect on the functioning of the Modules; and, Comply with the design and technical specifications in the product technical specifications provided by Talesun.

Should the Modules are indeed not in conformity with the Limited Product Warranty, Talesun shall, at its sole discretion, within a reasonable time period, either:


- a) repair the Claim Modules at no charge to Customer;
- b) provide Customer with replacement Modules in place of the claimed Modules;
- or c) provide Customer a refund of the purchase price as evidenced by the original supply invoice provided by Customer, subject to an annual 4% for single glass module depreciation rate on the purchase price (if Customer is unable to provide the original supply invoice, monetary compensation will be made based on the then market price of an identical or similar module type).

Any color change on module or any other changes on module appearance do not represent defects, insofar as the change in appearance does not stem from defects in material and/or workmanship, and does not cause degradation of functionality of the module.

25 Year Limited Performance Warranty

Subject to the terms and conditions of this Limited Warranty, TALESUN provides to the Customer a Limited Peak Power Warranty with a term of 25 years for single glass Modules from the Warranty Start Date ("Limited Peak Power Warranty Period"):
 Mono crystalline Solar Cell Modules(B- i):

- 1) From the first year of sale, the nominal output power of the module is not less than 97% of the product of the nameplate output power of the module and the minimum value of the module tolerance .
- 2) From year 2 to year 24, the actual power degradation will be no more than 0.7% in each

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHNICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 5 of 9

year; by the end of year 25, the nominal output power of the module is not less than 80.2% of the nameplate output power of the module's maximum peak output and the minimum of the module tolerance.

Mono crystalline Solar Cell Modules(B- ii):

- 1) From the first year of sale, the nominal output power of the module is not less than 98% of the product of the nameplate output power of the module and the minimum value of the module tolerance .
- 2) From year 2 to year 24, the actual power degradation will be no more than 0.55% in each year; by the end of year 25, the nominal output power of the module is not less than 84.8% of the nameplate output power of the module's maximum peak output and the minimum of the module tolerance.

Polycrystalline Solar Cell Modules(A):

- a) From the first year of sale, the nominal output power of the module is not less than 97.5% of the product of the nameplate output power of the module and the minimum value of the module tolerance.
- b) From year 2 to year 24, the actual power degradation will be no more than 0.7% in each year; by the end of year 25, the nominal output power of the module is not less than 80.7% of the nameplate output power of the module's maximum peak output and the minimum of the module tolerance.

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 ± 2 DEG C. The test condition is based on the IEC61215 and IEC61836 components, the actual output power measurement is in the factory or by Talesun approved third party inspection agency, the test uncertainty of 2 sigma (Pmpp) less than 2.5% which should be added to the actual power test calculation to eliminate the test error between different measuring devices.

If during the warranty period, the power output is lower than the actual module commitment power, by Talesun confirmed, Talesun will provide additional modules to customers in order to compensate for the loss of power, or maintenance and replacement of faulty components to eliminate power loss, or loss of power to customers of the corresponding economic compensation, the specific way by Talesun to decide. but the attenuated power during the period used will be deducted

Compensation for insufficient component power (see below):

$$P_{nc} = P_{nt} - P_{na}$$


Type 1: P_{nc} - compensation for insufficient module power in N;

P_{nt} - module theoretic minimum output power of N;

P_{na} - actual output power of modules for year N;

- (a) for polycrystalline components(A), the P_{nt} uses the following formula

$$P_{nt} = [97.5\% - 0.7\% * (N - 1)] * P_m * (1 - \Delta t)$$

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHINICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 6 of 9

(b) for Monocrystalline modules, the Pnt uses the following formula

- 1) B- i

$$Pnt = [97\% - 0.7\% * (N-1)] * Pm * (1 - \Delta t)$$
- 2) B- ii

$$Pnt = [98\% - 0.55\% * (N-1)] * Pm * (1 - \Delta t)$$


Note: Pm is the nominal output power of the product in the Talesun product data sheet,
 Pna is tested under standard test conditions (STC), tested at the Talesun plant or Talesun's
 third party testing organization, to test the actual output power of modules for the years
 N.

Δt - absolute value of minimum tolerance of nameplate;

Additional Item(s) Excluded from Warranty Coverage:

Warranty coverage does not apply when:

- a) subject to misuse, abuse, neglect, or accident except as may be caused by Talesun in the course of storage, transportation, handling, installation, application, use or service;
- b) The Product is installed on unsuitable mobile platforms excluding fixed floating solar applications (other than single- or dual-axis trackers) or in a marine environment,, subjected to improper voltage or power surges or abnormal environmental conditions (such as acid rain or other pollution);the assembly, base, structural component, or installation method of the component is defective;
- c) Excessive corrosions of the Modules due to direct contacts with corrosive agents and mold、discoloration etc.;
- d) Defects caused by the Product being subjected to any of the following: extreme thermal or environmental conditions or rapid changes in such conditions, corrosion, oxidation, unauthorized modifications or connections, unauthorized opening or repair, repair by use of unauthorized spare parts, accident, force of nature (such as lightning strike), influence from chemical product or other acts beyond TALESUN reasonable control (including but not limited to damage by fire, flood, etc.);
- e) Death or injury to persons resulting from any cause other than negligence of TALESUN, its employees or representatives;
- f) Incidental, consequential or special damages such as loss of use, loss of profits, revenues, business, goodwill, damage to reputation or expensed payable to a third party.
- g) Failure of Modules, such as PID (potential induced degradation) caused by incorrect system design, installation or system components mismatch.
- h) The Modules have been altered, repaired or modified, or used in processes or in combination with other products not supplied by Talesun in a manner not consistent with the written instructions of or without the prior written consent of Talesun or its

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHINICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 7 of 9

affiliates.;

- i) removed and re-installed at any location other than the physical location in which it was originally installed following purchase by Customer or receipt from Talesun as a replacement Module
- 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, and including if TALESUN is liable to compensate Customer hereunder, the total compensation paid or payable by TALESUN, and the total liability of TALESUN hereunder, shall not exceed the amount actually received by TALESUN as indicated in the original invoice for the Claim Modules. The limitations of liability under this Limited Warranty will not apply to the extent restricted or prohibited by applicable mandatory law.

Other


The repair or replacement of the Products or the supply of additional Products does not cause the beginning of new warranty terms, nor shall the original terms of this "Limited Warranty for SPV Module" be extended. Any replaced Products shall become the property of TALESUN made for their disposal. TALESUN has the right to deliver another type (different in size, color, shape and/or power) in case TALESUN discontinue producing the replaced Products at the time of the claim.

Force Majeure

TALESUN shall not be responsible or liable in any way to the purchaser or any third-party arising from any non-performance or delay in performance of any terms and conditions of sale, including this "Limited Warranty for SPV Module", due to acts God, 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 limitations, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the Products or the claim.

How to obtain warranty

If the Buyer, in according to "standard PV products limited warranty", can make valid warranty claims, complaints hereunder, TALESUN shall immediately acknowledge and respond in writing to the Buyer regarding its receipt of such complaint via TALESUN electronic mail or email. The Buyer shall enclose the warranty certificate issued by TALESUN, if any, along with the information pertaining to the corresponding Module components, serial number and applicable purchase date. At the same time, invoices for Payment of such Module should be provided which clearly display the purchase date, purchase price,

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHNICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 8 of 9

component type, seal or signature of TALESUN or its distributor as evidence. Any return of the PV Module will not be accepted before TALESUN issues a written return-merchandise authorization and confirmation.

Customer shall only return the Claim Modules in accordance with the written instructions issued by Talesun. Otherwise, Talesun shall have the right to reject the warranty claim and refuse to accept the Claim Modules returned by Customer without authorization, and the related risk of loss and expenses shall be borne by Customer.

Unless specifically agreed otherwise by TALESUN and the Buyer, Costs and expenses associated with removal of the Claim Modules and the reinstallation of the repaired or replacement Modules as well as customs clearance costs incurred by the return of the Claim Modules (if any) shall be borne by Customer. Any dispute on technical facts relating to claims brought under this Limited Warranty shall be finally determined by an independent third-party testing organization. Talesun and Customer shall jointly select a reputable international or Chinese testing organization such as TUV SUD China, VDE product testing technology (Shanghai) co., LTD , TUV Rheinland in Cologne, Germany or Arizona State University, USA.

Severability

If a part, provision or clause of this “Limited Warranty for SPV Module”, or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such holding shall not affect and shall leave all other parts, provisions, clauses or applications of this “Limited Warranty for SPV Module”, and to this end such other parts, provisions, clauses or applications of this “Limited Warranty for SPV Module” shall be treated as severable.

CHINA

1# Talesun Road, Shajiabang, Changshu, Jiangsu Province, P.R. China 215542

Email: sales@talesun.com

Web: www.talesun.com

Sales Hotline: +86 400 885 1098


TEL: +86 512 8235 5888

FAX: +86 512 8235 5588

JAPAN

6F, 3-22-1, Toranomom, Minato-ku, Tokyo, Japan (105-0001)

Email: japan@talesun.com

 苏州腾晖光伏技术有限公司 Suzhou Talesun Solar Technologies Co., Ltd.	TECHINICAL SPECIFICATION <div style="border: 1px solid red; padding: 2px; display: inline-block;">受控文件</div>	
TITLE: LIMITED WARRANTY CERTIFICATE FOR TALESUN BRAND CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE	SPEC. NO.:	TS-ET-058
	REVISION:	B3
	EFFECTIVE DATE:	10-2022
		Page 9 of 9

Web: www.talesun.com/?jp

T: +03 5733 3498

F: +03 34341515

USA

99 S. Almaden Blvd. 6th Floor San Jose, CA 95113 U.S.A.

Email: sales@talesun.com

Web: www.talesun.com

TEL: +86 400 885 1098

FAX: +86 512 8235 5588

UK

Talesun Energy UK Ltd. 42, Upper Berkeley Street, London, W1H5PW United Kingdom

Email: projects@talesunenergy.com

Web: www.talesun-eu.com

Tel: +44 (0)20 3752 6516

GERMANY

Central Tower Munich, Landsberger Strasse 110, 80339 Munich, Germany

Email: info@talesunenergy.com

Web: www.talesun-eu.com

T: +49(0)89- 189 177-0

F: +49(0)89-189-177-499

THAILAND

Thai-China Industrial Park in Rayong,

Email: Marketing.hq@talesun.com

TEL: +86 512 8235 5258

SWITZERLAND

c/o Muheim&Merz Bundesplatz

2 6300 Zug Switzerlan