

CE Declaration letter

Company: Wuxi Suntech Power Co., Ltd.

Address: No. 16 Xinhua Road, Xinwu District, 214028 Wuxi, Jiangsu, China

Product: Photovoltaic Module (PV)

Date: Nov. 22. 2022

Module type/product list

STPXXX-20/Wfh(m, b) (XXX=275-300)	STPXXX-24/Vfh(m, b) (XXX=325-360)
STPXXXS-A60/Wfh(m, b) (XXX=300-350)	STPXXXS-A72/Vfh(m, b) (XXX=360-420)
STPXXXS-A72/Pfh+ (XXX=370-410)	STPXXXS-B60/Wnh(m, b) (XXX=345-385)
STPXXXS-B72/Vnh(m, b) (XXX=415-465)	STPXXXS-B72/Pnh(m)+ (XXX=425-450)
STPXXXS-C54/Umh(m, b) (XXX=390-435)	STPXXXS-C72/Vmh(m, b) (XXX=525-585)
STPXXXS-C72/Pmh+ (XXX=510-550)	STPXXXS-C54/Nmhm(b)+ (XXX=405-435)
STPXXXS-C72/Nmh+ (XXX=540-580)	STPXXXS-D60/Wmh(b) (XXX=580-600)
STPXXXS-D66/Wmh(b) (XXX=640-665)	STPXXXS-D66/Pmh+ (XXX=640-685)
STPXXXS-C72/Nsh(m,b) (XXX=545-580)	STPXXXS-C54/Nsh(m,b,y) (XXX=405-435)
STPXXXS-D60/Pmh+ (XXX=580-620)	STPXXXS-C72/Nsh+ (XXX=545-580)
STPXXXS-C54/Nshm(b)+ (XXX=405-435)	

We hereby declare that, under our sole responsibility, the aforementioned products manufactured by Wuxi Suntech Power Co., Ltd. at its VDE verified addresses comply with the standards described below, and CE marking has been imprinted.

- EN 61730 -1, 2016
- EN 61730 -2, 2016
- EN 61215 -1, 2016
- EN 61215 -2, 2016
- Directive 2014/35/EU (Low Voltage Directive)

Wuxi Suntech Power Co., Ltd.

Tel: +86 (510) 8531 8888

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本文中所有信息为尚德内部信息，未经书面许可，不得向外提供。

All information in the document belongs to Suntech, any disclosure is forbidden without written permission.

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Wuxi Suntech Power Co., Ltd.

No.16, Xinhua Road, Xinwu District
Wuxi City, Jiangsu Province, 214028
P.R. China

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Double Glass PV Modules with Half-cut Mono-crystalline Silicon Solar Cells



Valid from: 2021-04-21

Valid until: 2026-04-20

Tested according to: P12.4-AA-04 Rev. 00
(IEC 60068-2-68:1994 modified)
Remark: Test Method Lc2;
Dust concentration: 2.4 - 3.0g/m³;
Wind velocity: 8.8 - 9.0m/s;
Test duration: 3 hours each side.
Registered No.: 44 780 21 406749 - 059
Manufacturer: see Annex 1
Test Report No.: 492011621.001
File No.: PVP11129/20P-02



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2021-04-21

Please also pay attention to the information stated overleaf.

Anlage 1 zum Zertifikat Nr.: / Annex 1 to Certificate No.: 44 780 21 406749 - 059

Seite / Page 1 von / of 1

Aktenzeichen: / File reference: PVP11129/20P-02

2021-04-21

Manufacturer:

Manufacturer: **Wuxi Suntech Power Co., Ltd.**
No.16, Xinhua Road, Xinwu District
Wuxi City, Jiangsu Province, 214028, P.R. China

Factory inspection report no.: 862010381.003

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

A handwritten signature in blue ink, appearing to read "Rogin Miao".

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:	Double Glass PV Modules with Half-cut Mono-crystalline Silicon Solar Cells 144 cells: STPXXXS-C72/Pmh+ (XXX = 510-550, in increment of 5) 132 cells: STPXXXS-C66/Pmh+ (XXX = 470-500, in increment of 5) 108 cells: STPXXXS-C54/Pmh+ (XXX = 385-410, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Application class:	Class A
Electrical protection class:	Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



TÜV NORD CERT GmbH
Certification Body
Consumer Products

ZEICHENGENEHMIGUNG MARKS APPROVAL

Wuxi Suntech Power Co., Ltd.
No. 16 Xinhua Road, Xinwu District
214028 Wuxi
Jiangsu
China

ist berechtigt, für ihr Produkt /
is authorized to use for their product

Terrestrische Photovoltaik-Module mit Silizium-Solarzellen
Crystalline silicon terrestrial photovoltaic modules

die hier abgebildeten markenrechtlich geschützten Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.



Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN 61215-1 (VDE 0126-31-1):2017-05; EN 61215-1:2016
DIN EN 61215-1-1 (VDE 0126-31-1-1):2018-06; EN 61215-1-1:2016
DIN EN 61215-2 (VDE 0126-31-2):2019-02; EN 61215-2:2017+AC:2017+AC:2018
DIN EN IEC 61730-1 (VDE 0126-30-1):2018-10; EN IEC 61730-1:2018+AC:2018
DIN EN IEC 61730-2 (VDE 0126-30-2):2018-10; EN IEC 61730-2:2018+AC:2018

Das Produkt erfüllt auch die Anforderungen nach /
The product also fulfills the requirements of

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016

Befristet zum / *valid until*: 2024-03-31

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / *Certification*

J. Richter

VDE Zertifikate sind nur gültig bei Veröffentlichung unter:
VDE certificates are valid only when published on:

Aktenzeichen: 5011404-3972-0001 / 304311

File ref.:

Ausweis-Nr. 40048830

Blatt 1

Certificate No.

Page

Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 2018-09-20

(letzte Änderung / *updated* 2023-02-02)

<http://www.vde.com/zertifikat>

<http://www.vde.com/certificate>

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Wuxi Suntech Power Co., Ltd., No. 16 Xinhua Road, Xinwu District, 214028 WUXI, Jiangsu, CHINA

Aktenzeichen / File ref.

5011404-3972-0001 / 304311 / CB1 / FB

letzte Änderung / updated

2023-02-02

Datum / Date

2018-09-20

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40048830.

This supplement is only valid in conjunction with page 1 of the Certificate No. 40048830.

Terrestrische Photovoltaik-Module mit Silizium-Solarzellen *Crystalline silicon terrestrial photovoltaic modules*

Typ(en) / Type(s)

- A) STPXXX-20/Wfj
- B) STPXXX-24/Vfj
- C) STPXXX-20/Wfk
- D) STPXXX-24/Vfk
- E) STPXXXS-60/Pfd
- F) STPXXXS-72/Pfd
- G) STPXXXS-72/Pfd+
- H) STPXXXS-60/Pfd+
- I) STPXXXS-72/Pfh
- J) STPXXXS-60/Pfh
- K) STPXXXS-72/Pfh+
- L) STPXXXS-60/Pfh+
- M) STPXXXS-72/Nfd+
- N) STPXXXS-60/Nfd+
- O) STPXXXS-72/Nfd
- P) STPXXXS-60/Nfd
- Q) STPXXXS-72/Nfh+
- R) STPXXXS-60/Nfh+
- S) STPXXXS-72/Nfh
- T) STPXXXS-60/Nfh
- U) STPXXXS-A72/Pfh+
- V) STPXXXS-24/Vfk
- W) STPXXXS-20/Wfk
- X) STPXXXS-A24/Vfk+
- Y) STPXXXS-B72/Pnh+
- Y) STPXXXS-B72/Pnhm+
- Z) STPXXXS-B60/Pnh+
- Z) STPXXXS-B60/Pnhm+
- AA) STPXXX-B72/Pnh+
- AA) STPXXX-B72/Pnhm+

Fortsetzung siehe Blatt 3 /
continued on page 3

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Wuxi Suntech Power Co., Ltd., No. 16 Xinhua Road, Xinwu District, 214028 WUXI, Jiangsu, CHINA

Aktenzeichen / File ref.

5011404-3972-0001 / 304311 / CB1 / FB

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Datum / Date

2018-09-20

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This supplement is only valid in conjunction with page 1 of the Certificate No. 40048830.

Terrestrische Photovoltaik-Module mit Silizium-Solarzellen *Crystalline silicon terrestrial photovoltaic modules*

Typ(en) / Type(s)

- AB) STPXXX-B60/Pnh+
- AB) STPXXX-B60/Pnhm+
- AC) STPXXXS-A72/Vfhk+
- AD) STPXXXS-A60/Wfhk+
- AE) STPXXXS-A72/Hnh+
- AF) STPXXXS-C72/Pmh+
- AG) STPXXXS-C66/Pmh+
- AH) STPXXXS-C54/Pmh+
- AI) STPXXXS-A72/Pnh+
- AJ) STPXXXS-C78/Pmh+
- AK) STPXXXS-C72/Nmh+
- AL) STPXXXS-C54/Nmh+b+
- AL) STPXXXS-C54/Nmh+
- AL) STPXXXS-C54/Nmhm+
- AM) STPXXXS-D66/Pmh+
- AN) STPXXXS-D60/Pmh+
- AO) STPXXXS-C72/Nsh+
- AP) STPXXXS-C54/Nshb+
- AP) STPXXXS-C54/Nsh+
- AP) STPXXXS-C54/Nshm+

Weitere Angaben

Further information

siehe Anlage 100 vom 01.02.2023

siehe Anlagen 600 - 603 vom 01.02.2023

see annex 100 dated 2023-02-01

see annexes 600 - 603 dated 2023-02-01

Dieser Zeichengenehmigungsausweis bildet eine Grundlage für die EU-Konformitätserklärung und CE-Kennzeichnung durch den Hersteller oder dessen Bevollmächtigten.

This Marks Approval is a basis for the EU Declaration of Conformity and the CE Marking by the manufacturer or his agent.

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

Wuxi Suntech Power Co., Ltd., No. 16 Xinhua Road, Xinwu District, 214028 WUXI, Jiangsu, CHINA

Aktenzeichen / *File ref.*

5011404-3972-0001 / 304311 / CB1 / FB

letzte Änderung / *updated*

2023-02-02

Datum / *Date*

2018-09-20

Dieses Beiblatt ist Bestandteil des Zeichengenehmigungsausweises Nr. 40048830.

This supplement is part of the Certificate No. 40048830.

Terrestrische Photovoltaik-Module mit Silizium-Solarzellen *Crystalline silicon terrestrial photovoltaic modules*

Fertigungsstätte(n)

Place(s) of manufacture

Referenz/*Reference*

30017172

Wuxi Suntech Power Co., Ltd.
No. 16 Xinhua Road, Xinwu District
214028 WUXI
Jiangsu
CHINA

Referenz/*Reference*

30026294

Changzhou Suntech Power
Co., Ltd.
No.8 Xin dian Rd,
Wu jin Hi-tech Industrial Zone
213164 CHANGZHOU
Jiangsu
CHINA

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Wuxi Suntech Power Co., Ltd., No. 16 Xinhua Road, Xinwu District, 214028 WUXI, Jiangsu, CHINA

Aktenzeichen / File ref.

5011404-3972-0001 / 304311 / CB1 / FB

letzte Änderung / updated

2023-02-02

Datum / Date

2018-09-20

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40048830.

This supplement is only valid in conjunction with page 1 of the Certificate No. 40048830.

Genehmigung zum Benutzen des auf Seite 1 abgebildeten markenrechtlich geschützten Zeichens des VDE:

Grundlage für die Benutzung sind die Allgemeinen Geschäftsbedingungen (AGB) der VDE Prüf- und Zertifizierungsinstitut GmbH (www.vde.com\AGB-Institut). Das Recht zur Benutzung erstreckt sich nur auf die bezeichnete Firma mit den genannten Fertigungsstätten und die oben aufgeführten Produkte mit den zugeordneten Bezeichnungen. Die Fertigungsstätte muss so eingerichtet sein, dass eine gleichmäßige Herstellung der geprüften und zertifizierten Ausführung gewährleistet ist.

Die Genehmigung ist so lange gültig wie die VDE-Bestimmungen gelten, die der Zertifizierung zugrunde gelegen haben, sofern sie nicht auf Grund anderer Bedingungen aus der VDE Prüf- und Zertifizierungsordnung (PM102) zurückgezogen werden muss.

Der Gültigkeitszeitraum einer VDE-GS-Zeichengenehmigung kann auf Antrag verlängert werden. Bei gesetzlichen und / oder normativen Änderungen kann die VDE-GS-Zeichengenehmigung ihre Gültigkeit zu einem früheren als dem angegebenen Datum verlieren.

Produkte, die das Biozid Dimethylfumarat (DMF) enthalten, dürfen gemäß der Kommissionsentscheidung 2009/251/EG nicht mehr in den Verkehr gebracht oder auf dem Markt bereitgestellt werden.

Der VDE-Zeichengenehmigungsausweis wird ausschließlich auf der ersten Seite unterzeichnet.

Approval to use the legally protected Mark of the VDE as shown on the first page:



Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute (www.vde.com\terms-institute). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.

The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).

The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.

Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.

The approval is solely signed on the first page.

Prüfbericht-Nr.: <i>Test Report No.:</i>	CN21T0JG 001	Auftrags-Nr.: <i>Order No.:</i>	244279109	Seite 1 von 12 <i>Page 1 of 12</i>	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	2014517	Auftragsdatum: <i>Order date:</i>	13/11/2020		
Auftraggeber: <i>Client:</i>	Wuxi Suntech Power Co., Ltd. No.16 Xinhua Road, Xinwu District, Wuxi, JiangSu Province, 214000, P. R. China				
Prüfgegenstand: <i>Test item:</i>	Photovoltaic (PV) Module(s)				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	See module type designation list on page 3				
Auftrags-Inhalt: <i>Order content:</i>	Salt mist corrosion testing of photovoltaic (PV) modules				
Prüfgrundlage: <i>Test specification:</i>	IEC 61701:2011, EN 61701:2012 severity 6 Salt mist corrosion testing of photovoltaic (PV) modules				
Wareneingangsdatum: <i>Date of receipt:</i>	14/12/2020	Detaillierte Fotodokumentation siehe Anlage zu diesem Bericht Detailed photo documentation see appendix to this report			
Prüfmuster-Nr.: <i>Test sample No.:</i>	See page 6				
Prüfzeitraum: <i>Testing period:</i>	11/03/2021 – 20/05/2021				
Ort der Prüfung: <i>Place of testing:</i>	Refer to page 4				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von / tested by:		kontrolliert von / reviewed by:			
24/05/2021 Ivan Zhang / Project Engineer 		24/05/2021 Angela Yao / Reviewer 			
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other:					
- As requested by customer, all the tests were performed according to standards as above, and the test results were documented within this test report. - The tests were performed on STP540S-C72/Pmh+ as representative module. - Valid only for the material combinations as listed in bill of materials in appendix of this test report.					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested					
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

Prüfbericht-Nr.: CN21T0JG 001
Test Report No.:

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Page 2 of 12

Liste der verwendeten Prüfmittel
List of used test equipment

Prüfmittel <i>Test equipment</i>	Prüfmittel-Nr. / ID-Nr. <i>Equipment No. / ID-No.</i>	Nächste Kalibrierung <i>Next calibration</i>
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All equipment used for tests, including equipment for subsidiary measurements having a significant effect on the accuracy or validity of the result of the test is calibrated before being put into service.
The laboratory has an established programme and procedure for the calibration of its equipment according to EN ISO/IEC 17025 (Reg. no.: D-PL-11097-02-01).

Prüfbericht-Nr.: CN21T0JG 001
Test Report No.:

Seite 3 von 12
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Produktbeschreibung
Product description

1	<p>Produktdetails <i>Product details</i></p> <p>With mono c-Si cell: Max. System voltage: 1500V STPXXXS-C72/Pmh+ (xxx = 510-550, in steps of 5) STPXXXS-C66/Pmh+ (xxx = 470-500, in steps of 5) STPXXXS-C54/Pmh+ (xxx = 385-410, in steps of 5)</p>										
2	<p>Verwendete Materialien <i>Used materials</i></p> <p>See bill of materials in appendix</p>										
3	<p>Adresse(n) der Fertigungsstätte(n) Address(es) of the manufacturing site(s)</p> <table border="1" style="width: 100%;"> <tr> <td>Name / Description:</td> <td>Wuxi Suntech Power Co., Ltd.</td> </tr> <tr> <td>Street:</td> <td>No.16 Xinhua Road, Xinwu District</td> </tr> <tr> <td>Postcode / City, Country:</td> <td>214000, Wuxi, JiangSu Province, P. R. China</td> </tr> <tr> <td>Type of production:</td> <td>C-Si PV-module production</td> </tr> <tr> <td>Inspection report No. / Date:</td> <td>50139230 003/ 16/12/2020</td> </tr> </table>	Name / Description:	Wuxi Suntech Power Co., Ltd.	Street:	No.16 Xinhua Road, Xinwu District	Postcode / City, Country:	214000, Wuxi, JiangSu Province, P. R. China	Type of production:	C-Si PV-module production	Inspection report No. / Date:	50139230 003/ 16/12/2020
Name / Description:	Wuxi Suntech Power Co., Ltd.										
Street:	No.16 Xinhua Road, Xinwu District										
Postcode / City, Country:	214000, Wuxi, JiangSu Province, P. R. China										
Type of production:	C-Si PV-module production										
Inspection report No. / Date:	50139230 003/ 16/12/2020										

Prüfbericht-Nr.: CN21T0JG 001
Test Report No.:

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Page 4 of 12

Produktbeschreibung
Product description

4 Zusammenfassung der Prüfergebnisse
Summary of test results

According to the inquiry the resistance to salt mist of photovoltaic (PV) modules should be assessed in accordance with IEC 61701:2011, EN 61701:2012 severity 6.

For the qualification of the modules to this tests initial and final control measurements were performed before and after the salt mist corrosion testing. The measurements included relative power measurements, insulation testing and visual inspection. The maximum permissible power degradation of 5% must not be exceeded. Furthermore the minimum requirements for the insulation test and wet leakage test as defined in IEC 61215-1:2016 MQT 03 and MQT 15 have to be met. No major visual defects as defined in IEC 61215-1:2016 shall occur.

The test of the requirements of IEC 61701:2011, EN 61701:2012 were performed on module type STP540S-C72/Pmh+ as representative module and the test results are all fulfilled according to its regulations of the pass criteria.

- This report should be read in conjunction with bill of materials in appendix CN21T0JG 001.

The appendix of this test report includes the following annexes (6 pages):

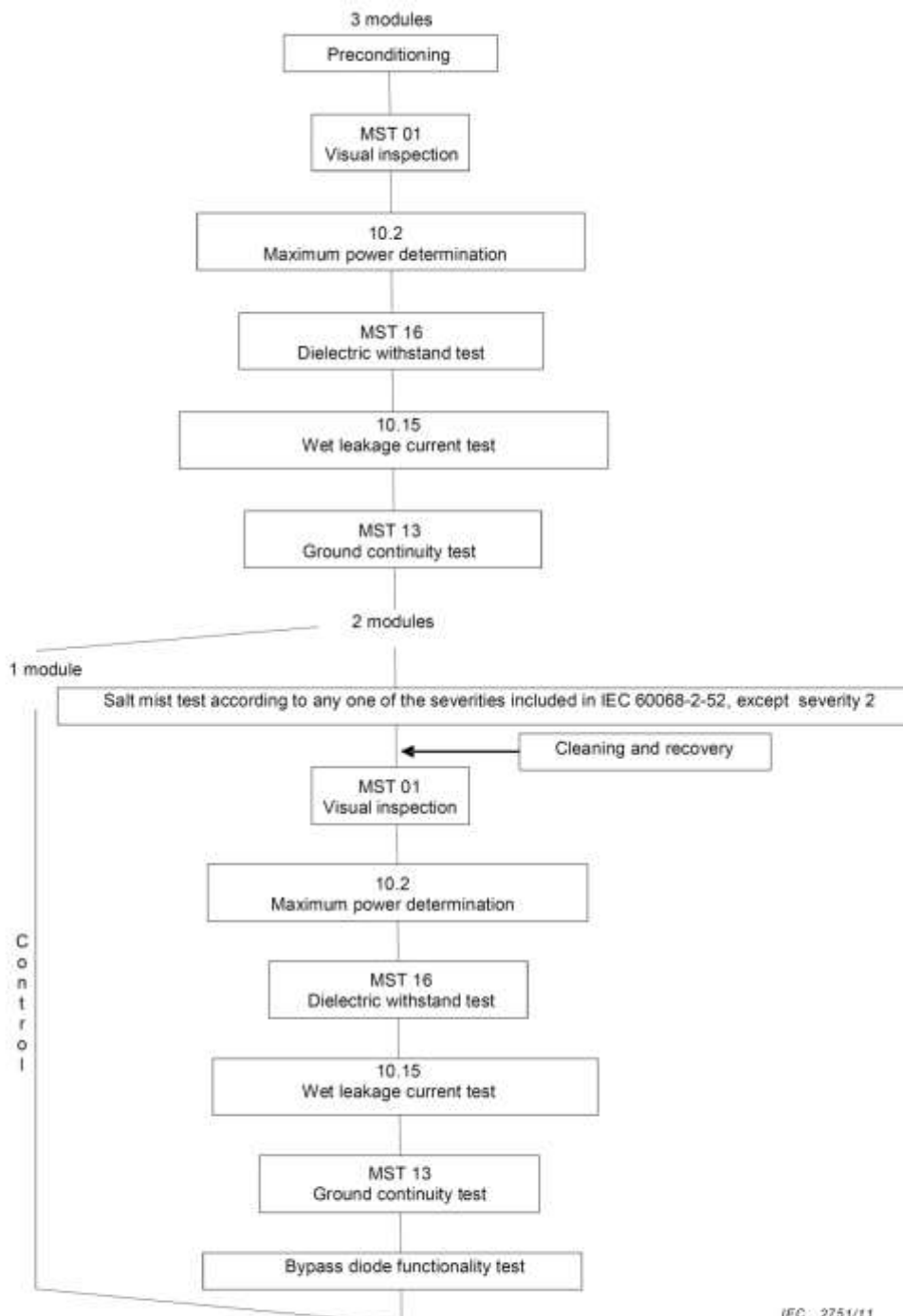
Annex 1: Bill of materials (1 page)

Annex 2: Photos of module (2 pages)

Annex 3: Measurement reports (3 pages)

Prüfbericht-Nr.: 50275112 001 <i>Test Report No.:</i>		Seite 5 von 12 <i>Page 5 of 12</i>	
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

Test Procedures:



IEC: 2751/11

NOTE 1 Preconditioning and tests 10.2 and 10.15 are taken from IEC 61215. Tests MST 01, MST 13 and MST 16 are taken from IEC 61730-2.

NOTE 2 The control module should be used as a check every time the test modules are measured to evaluate the effect of the salt mist test.

Prüfbericht-Nr.: 50275112 001 <i>Test Report No.:</i>		Seite 6 von 12 <i>Page 6 of 12</i>	
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

List of test samples		
Module type: STP540S-C72/Pmh+		
Sample No.	Sample S/N	Remarks / constructional characteristics
1	STP099830028070020321	Front cover: 2.0mm AR coated tempered glass from Wuxi Suntech Power Co.,Ltd Rear cover: 2.0mm High Reflective Ceramic Coated Glass from Wuxi Suntech Power Co.,Ltd Solar cell: 182*91±0.5mm, Thickness=175±17.5um,6" mono c-si, PJ310BF47B2 from Jiangsu Runergy Yueda PV Technology Co.,Ltd EVA: F406PS(Gram weight≥430g/m2) / TF4(Gram weight≥410g/m2) from Hangzhou First PV Material Co.,Ltd
2	STP099830028070030321	Frame: 35mm 6005T6 from Wuxi Suntech Power Co.,Ltd Frame and Junction box adhesive: 1527 from Suzhou Tonsan Adhesive Co., Ltd Cell/String connector: Sn60Pb40 Ø= 0.32/4mm*0.4mm from Wuxi Suntech Power Co.,Ltd Junction box: STP-JBOX07 from Wuxi Suntech Power Co., Ltd.
3	STP099830028070160321	Potting material: 1521 from Suzhou Tonsan Adhesive Co., Ltd. Fluxing agent: AATF9800-MBB from Shenzhen Tongfang Electronic New Materials Co., Ltd. Cable: 62930 IEC 131 from Wuxi Suntech Power Co.,Ltd Connector: TL-Cable01S from Jiangsu Tonglin Electric Co.,Ltd. Bypass diode: 30SQ045 from PANJIT International Inc.
Supplementary information: 10.1- Visual inspection and constructional check have been performed on this sample.		

6.2 c)	Visual inspection (Initial)	
Test Date [DD/MM/YYYY]	14/12/2020	—
Sample No.	Nature and position of initial findings	—
1	No visual defects	P
2	No visual defects	P
3	No visual defects	P
Supplementary information: N/A		

Prüfbericht-Nr.: 50275112 001 Test Report No.:			Seite 7 von 12 Page 7 of 12
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

6.2 a) Maximum power determination (Initial)							
Test Date [DD/MM/YYYY]			03/03/2021			—	
Module temperature [°C]			Corrected to 25 °C				
Irradiance [W/m²]			1000*				
Sample No.	Pmax [W]	Vmpp [V]	Impp [A]	Voc [V]	Isc [A]	FF [%]	
1	538.2	41.89	12.847	49.45	13.700	79.45	—
2	538.3	41.62	12.935	49.49	13.712	79.33	—
3	539.7	42.02	12.843	49.57	13.729	79.29	—
* A pulse solar simulator class AAA conforming to the requirements of IEC-60904-9 is used.							
Supplementary information: N/A							

6.2 e) Dielectric withstand test (Initial)							
Test Date [DD/MM/YYYY]			04/03/2021			—	
Maximum system voltage [V _{DC}]			1500				
High voltage applied [V _{DC}]			8000				
Insulation resistance measured at [V _{DC}]			1500				
Sample No.	Measured	Area	Result*	Dielectric breakdown			
	[GΩ]	[m²]	[GΩ × m²]	Yes (description)	No		
1	5.00	2.59	12.95	-	No	P	
2	5.00	2.59	12.95	-	No	P	
3	5.00	2.59	12.95	-	No	P	
* Minimum requirement acc. to the standard is 0.04 GΩ*m²							
Supplementary information: the insulation tester can measure up to 5.00 GΩ.							

Prüfbericht-Nr.: 50275112 001 Test Report No.:			Seite 8 von 12 Page 8 of 12
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

6.2 b)	Wet leakage current test (Initial)			
Test Date [DD/MM/YYYY]	04/03/2021		—	
Insulation resistance measured at [V _{DC}]	1500		—	
Solution resistivity [Ω cm]	< 3,500		P	
Solution temperature [°C]	22 ± 2		P	
Sample No.	Measured	Area	Result*	
	[M Ω]	[m ²]	[M Ω × m ²]	
1	5000.0	2.59	12950.0	P
2	5000.0	2.59	12950.0	P
3	5000.0	2.59	12950.0	P
* Minimum requirement acc. to the standard is 40 M Ω × m ²				
Supplementary information: N/A				

6.2 d)	Ground continuity test (Initial)			
Test Date [DD/MM/YYYY]	04/03/2021		—	
Maximum over-current protection rating [A]	25			
Current applied [A]	62.5			
Location of designated grounding point	Grounding point of the long edge			
Location of second contacting point	The greatest physical displacement of adjacent side			
Sample No.	Position in test sequence	Voltage [mV]	Resistance [m Ω]	
1	Reference sample	53.7	0.859	P
		56.9	0.910	
		55.8	0.893	
2	Salt mist corrosion test	56.5	0.904	P
		60.1	0.962	
		58.9	0.942	
3	Salt mist corrosion test	49.5	0.792	P
		53.1	0.850	
		56.4	0.902	
Supplementary information: N/A				

Prüfbericht-Nr.: 50275112 001			Seite 9 von 12
Test Report No.:			Page 9 of 12
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

7	Salt mist corrosion test		
Test Date [DD/MM/YYYY] start / end	24/03/2021 to 18/05/2021		—
NaCl - concentration [%]	5		
Course of cycle (7 days)	- Spraying: 2h / 15 - 35°C / reaction of NaCl - Humidity storage: 20-22h / 40°C / RH 93% - After four periods of spraying and humidity storage, one storage period under standard atmosphere: 3 days / 23°C / RH 45%-55%		
Duration	8 cycles = 56 days		
Sample No.	—		—
2	—		—
3	—		—
Supplementary information: N/A			

9.2 c)	Visual inspection after salt mist corrosion test		
Test Date [DD/MM/YYYY]	18/05/2021		
Sample No.	Nature and position of findings		—
2	Nature and position of findings		—
3	Nature and position of findings		—
Supplementary information: N/A			

Prüfbericht-Nr.: 50280361 002 <i>Test Report No.:</i>		Seite 10 von 12 Page 10 of 12	
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

9.2 a)	Maximum power determination after salt mist corrosion test							
Test Date [DD/MM/YYYY]	18/05/2021							—
Module temperature [°C]	Corrected to 25							
Irradiance [W/m ²]	1000							
Sample No.	P _{max} [W]	V _{mpp} [V]	I _{mpp} [A]	V _{oc} [V]	I _{sc} [A]	FF [%]	Degradation [%]	
2	537.2	41.56	12.925	49.66	13.646	79.3	-0.2	P
3	536.8	41.56	12.918	49.69	13.644	79.2	-0.5	P
Supplementary information: The maximum allowable P _{max} degradation after this test is 5%.								

9.2 e)	Dielectric withstand test after salt mist corrosion test							
Test Date [DD/MM/YYYY]	18/05/2021							—
Maximum system voltage [V _{DC}]	1500							
High voltage applied [V _{DC}]	8000							
Insulation resistance measured at [V _{DC}]	1500							
Sample No.	Measured	Area	Result*	Dielectric breakdown				
	[GΩ]	[m ²]	[GΩ × m ²]	Yes (description)	No			
2	2.41	2.59	6.22	-	No		P	
3	3.02	2.59	7.79	-	No		P	
* Minimum requirement acc. to the standard is 0.04 GΩ*m ²								
Supplementary information: the insulation tester can measure up to 5.00 GΩ.								

Prüfbericht-Nr.: 50280361 002 <i>Test Report No.:</i>		Seite 11 von 12 <i>Page 11 of 12</i>	
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

9.2 b)	Wet leakage current test after salt mist corrosion test			
Test Date [DD/MM/YYYY]	18/05/2021			—
Insulation resistance measured at [V _{DC}]	1500			
Solution resistivity [Ω cm]	< 3,500			P
Solution temperature [°C]	22 ± 2			P
Sample No.	Measured	Area	Result*	—
	[M Ω]	[m ²]	[M Ω × m ²]	
2	2287.0	2.59	5900.1	P
3	1918.0	2.59	4948.4	P

9.2 d)	Ground continuity test after salt mist corrosion test			
Test Date [DD/MM/YYYY]	18/05/2021			—
Maximum over-current protection rating [A]	25			
Current applied [A]	62.5			
Location of designated grounding point	Grounding point of the long edge			
Location of second contacting point	The greatest physical displacement of adjacent side			
Sample No.	Position in test sequence	Voltage [mV]	Resistance [m Ω]	
2	Salt mist corrosion test	92.1	1.474	P
		72.2	1.155	
		70.6	1.129	
3	Salt mist corrosion test	86.2	1.379	P
		92.3	1.477	
		56.8	0.909	
Supplementary information: N/A				

Prüfbericht-Nr.: 50280361 002 <i>Test Report No.:</i>			Seite 12 von 12 Page 12 of 12
Absatz	IEC 61701:2011, EN 61701:2012 severity 6	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

9.2 f)	Bypass diode functional test after salt mist corrosion test			
Test Date [DD/MM/YYYY]	19/05/2021			—
Number of diodes in junction box	3			
Diode manufacturer	PANJIT International Inc.			
Diode type designation	30SQ045			
Max. permissible junction temperature T_{jmax} [°C] (according to diode datasheet)	200			
Sample No.	Diode 1	Diode 2	Diode 3	
2	Functional	Functional	Functional	P
3	Functional	Functional	Functional	P
Supplementary information: N/A				



Product Service

Compliance Document

No. D 004313 0004 Rev. 00

Holder of Certificate: **Wuxi Suntech Power Co., Ltd.**
No.16 Xinhua Road, Xinwu District
214000 Wuxi, Jiangsu
PEOPLE'S REPUBLIC OF CHINA

Product: **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**
Mono-Crystalline Silicon Photovoltaic Module

This Compliance document confirms the compliance with the listed standards on a voluntary basis. It refers only to the sample submitted for testing and certification and does not certify the quality or safety of the serial products. For details see: www.tuvsud.com/ps-cert

Test report no.: 704062004709-00

Date, 2021-04-14

(Zhulin Zhang)



Compliance Document

No. D 004313 0004 Rev. 00

Model(s):

STPxxxS-C72/Vmhb (xxx=525-550 in step of 5W)
 STPxxxS-C72/Vmh (xxx=525-550 in step of 5W)
 STPxxxS-C66/Wmh (xxx=480-500 in step of 5W)
 STPxxxS-C54/Umhb (xxx=390-410 in step of 5W)
 STPxxxS-C54/Umh (xxx=390-410 in step of 5W)
 STPxxxS-C54/Umhm (xxx=390-410 in step of 5W)
 STPxxxS-C72/Pmh+ (xxx=510-550 in step of 5W)
 STPxxxS-C66/Pmh+ (xxx=475-500 in step of 5W)
 STPxxxS-C54/Pmh+ (xxx=385-410 in step of 5W)
 xxx is standing for rated output power at STC

Parameters:

Safety Class:	Class II
Max. System Voltage:	1000V DC or 1500V DC
Construction:	Framed, with Junction box, cable and connector.
Fire Safety Class:	Class C according to UL790

Tested according to:

IEC 61215-1:2016
 IEC 61215-1-1:2016
 IEC 61215-2:2016
 IEC 61730-1:2016
 IEC 61730-2:2016
 IEC 62716:2013



TS IEC 62804-1:2015

Photovoltaic (PV) Modules - Test Methods for the detection of potential-induced degradation (PID)

Part 1: Crystalline silicone
Confirmation of test results

VDE Renewables File Ref.: 10011/ET-20210207-021-1

Applicant: Wuxi Suntech Power Co., Ltd.
16 Xin Hua Road, 214028 Wuxi City, China.

Product: Crystalline silicon Photovoltaic (PV)-Modules

Type: A) STPXXXS-C72/Pmh+
B) STPXXXS-C66/Pmh+
C) STPXXXS-C54/Pmh+

XXX in the type replaces the power in watt and can be any number between: 510 - 550 for A), 470 - 500 for B), 385 - 410 for C)

Manufacturer: Wuxi Suntech Power Co., Ltd.

Standard: TS IEC 62804-1:2015

Test conditions

Testing time: 192 h
Chamber temperature: 85°C
Relative Humidity: 85 %
Potential to ground: ± 1500 V

Pass criteria

Power degradation: < 5%
Dry Insulation: > 40 M Ω m²
Wet insulation: > 40 M Ω m²



Summary of test results:

Maximum power degradation:	allowed	max. 5 %
	measured	max. 0.53%

The measured degradation is below the allowed degradation.

Dry insulation resistance:	required	min. 15.5 M Ω
	measured	>500 M Ω

The measured dry insulation resistance is above the limit.

Wet insulation resistance:	required	min. 15.5 M Ω
	measured	>500 M Ω

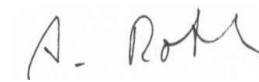
The measured wet insulation resistance is above the limit.

Visual inspection:	No findings
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The complete test results and the relevant bill of materials are given in Test Report No.: TRPVM- ET-20210207-021-1.

VDE Renewables GmbH


Dean Wen


Arnd Roth

63755 Alzenau, 2021-03-15



证书

根据
IEC 62941: 2019
(Edition 1.0 2019-12)

基于满足上述规范，证书授予

无锡尚德太阳能电力有限公司
中国江苏省无锡市新吴区新华路 16 号，邮编：214028

范围

晶体硅太阳能电池组件的设计和制造

经 IEC 61215 或 IEC 61646 认证的光伏组件清单见附件

证书编号. CN-44 101 1688 0003

审核报告编号. 2.5-CN1240/2021

有效期起始日 2021-03-29

证书有效期至 2023-03-09

初次认证日期 2017-03-10



打印于
杭州汉德质量认证服务有限公司
上海分公司

之认证机构
杭州汉德质量认证服务有限公司

签发日期： 2021-03-29

这份证书依据杭州汉德质量认证服务有限公司之规定认证和证明并且是受年度审查的规定。

杭州汉德质量认证服务有限公司

中国浙江省杭州经济技术开发区白杨街道科技园路 57 号 17 幢 217 室，邮编：310018

www.tuv-nord.com.cn

附件

证书编号. CN-44 101 1688 0003

IEC 62941: 2019

(Edition 1.0 2019-12)

经 IEC / EN 61215:2016 认证的光伏组件清单

STPXXX-24/Vem
STPXXX-24/Vfw
STPXXX-24/Vfw-MX
STPXXX-24/Vfb
STPXXX-20/Wem
STPXXX-20/Wfw
STPXXX-20/Wfm
STPXXX-20/Wfw-MX
STPXXX-20/Wfm-MX
STPXXX-20/Wfb
STPXXXS-24/Vem
STPXXXS-24/Vfw
STPXXXS-24/Vfw-MX
STPXXXS-24/Vfb
STPXXXS-24/Vfm
STPXXXS-A24/Vfw
STPXXXS-A24/Vfm
STPXXXS-A24/Vfb
STPXXXS-20/Wem
STPXXXS-20/Wfm
STPXXXS-20/Wew
STPXXXS-20/Wfw
STPXXXS-20/Wfw-MX
STPXXXS-20/Wfm-MX
STPXXXS-20/Wfb
STPXXXS-A20/Wfw
STPXXXS-A20/Wfm
STPXXXS-A20/Wfb
STPXXXS-16/Tem
STPXXXS-16/Tfm
STPXXX-16/Tee+

STPXXX-24/Vfh
STPXXX-20/Wfh
STPXXXS-24/Vfh
STPXXXS-24/Vfhb
STPXXXS-A24/Vfh
STPXXXS-A24/Vfhb
STPXXXS-20/Wfh
STPXXXS-20/Wfhm
STPXXXS-20/Wfhb
STPXXXS-A20/Wfh
STPXXXS-A20/Wfhm
STPXXXS-A20/Wfhb
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STPXXXS-16/Tfm
STPXXX-16/Tee+
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STPXXXS-A66/Wfhb
STPXXXS-66/Wfh

STPXXXS-A66/Wfh
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STPXXXS-A72/Pfh+

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STPxxxS-B60/Wnhb
STPxxxS-B72/Vnh
STPxxxS-B72/Vnhm
STPxxxS-B72/Vnhb
STPxxxS-B72/Pnh+
STPxxxS-B72/Pnhg
STPxxxS-C54/Umh

STPxxxS-C54/Umhm
STPxxxS-C54/Umhb
STPxxxS-C72/Vmh
STPxxxS-C72/Vmhm
STPxxxS-C72/Vmhb
STPxxxS-C72/Pmh+
STPxxxS-C72/Pmhg
STPxxxS-D60/Wmh
STPxxxS-D60/Wmhm
STPxxxS-D60/Wmhb
STPxxxS-D60/Pmh+
STPxxxS-D60/Pmhg

列表完



之认证机构
杭州汉德质量认证服务有限公司

杭州汉德质量认证服务有限公司
中国浙江省杭州经济技术开发区白杨街道科技园路 57 号 17 幢 217 室，邮编：310018
www.tuv-nord.com.cn

打印于：
杭州汉德质量认证服务有限公司上海分公司
签发日期：2021-03-29

CERTIFICATE

According to

IEC 62941: 2019
(Edition 1.0 2019-12)

Evidence of conformity with the above specification has been furnished and is certified for

Wuxi Suntech Power Co., Ltd.
No.16, Xinhua Road, NewWu District, Wuxi City, Jiangsu Province,
214028, P.R. China

Scope

Design and Manufacture of Crystalline Silicon Solar Cells
Modules

With the attached list of photovoltaic (PV) modules certified to IEC 61215 or IEC 61646

Certificate Registration No. CN-44 101 1688 0003
Audit Report No. 2.5-CN1240/2021

Valid from 2021-03-29
Valid until 2023-03-09
Initial Certification 2017-03-10



Printing at
TUV NORD Hangzhou Co., Ltd.
Shanghai Branch

Certification Body
at TÜV NORD (Hangzhou) Co., Ltd.

Issue Date: 2021-03-29

This certification was conducted in accordance with the TÜV NORD (Hangzhou) Co., Ltd. auditing and certification procedures and is subject to regular surveillance audits.

TÜV NORD (Hangzhou) Co., Ltd.
Room 217, Building 17, No. 57, Science Park Road, Baiyang Street, Hangzhou Economic and Technological Development
Zone, 310018 Zhejiang Province, China
www.tuv-nord.com.cn

ANNEX

Appendix to Certificate Registration No. CN-44 101 1688 0003

IEC 62941: 2019 (Edition 1.0 2019-12)

List of photovoltaic (PV) modules certified to: IEC / EN 61215:2016;

STPXXX-24/Vem	STPXXX-24/Vfh
STPXXX-24/Vfw	STPXXX-20/Wfh
STPXXX-24/Vfw-MX	STPXXXS-24/Vfh
STPXXX-24/Vfb	STPXXXS-24/Vfhb
STPXXX-20/Wem	STPXXXS-A24/Vfh
STPXXX-20/Wfw	STPXXXS-A24/Vfhb
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STPXXX-16/Tee+	STPXXXS-20/Wfw

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STPxxxS-D60/Wmhm
STPxxxS-D60/Wmhb
STPxxxS-D60/Pmh+
STPxxxS-D60/Pmhg

End of the list



Certification Body
at TÜV NORD (Hangzhou) Co., Ltd.

Printing at
TUV NORD Hangzhou Co., Ltd. Shanghai Branch
Issue Date: 2021-03-29

This certification was conducted in accordance with the TÜV NORD (Hangzhou) Co., Ltd. auditing and certification procedures and is subject to regular surveillance audits.

TÜV NORD (Hangzhou) Co., Ltd.
Room 217, Building 17, No. 57, Science Park Road, Baiyang Street, Hangzhou Economic and Technological Development Zone, 310018 Zhejiang Province, China
www.tuv-nord.com.cn



此为证书 CN09/32341 译本

下述组织

无锡尚德太阳能电力有限公司

注册地址: 无锡市新吴区新华路 9 号、16 号

经营地址: 中国江苏省无锡市新吴区新华路 9 号、16 号

统一社会信用代码 9132021372655423XN

的管理体系已经过审核, 并被证明符合下述要求

ISO 9001:2015

所涉及的活动范围覆盖

晶硅太阳能电池组件的设计和制造

该证书的有效有效期自 2021 年 08 月 17 日至 2024 年 08 月 16 日
组织必须定期接受监督审核并经审核合格此证书方继续有效
持续认证至少在证书失效前 60 天执行
版本号 1. 初始注册日期 2009 年 08 月 17 日



签署



0005

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本证书信息可在国家认证认可监督管理委员会官方网站www.cnca.gov.cn上查询

HC SGS 9001 2015 0118

第 1 页 共 1 页



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Certificate CN09/32341

The management system of

Wuxi Suntech Power Co., Ltd.

Business Registration Address: No. 9, 16, Xinhua Road,
Xinwu District, Wuxi City

Business Operation Address: No. 9, 16, Xinhua Road,
Xinwu District, Wuxi City, Jiangsu Province, P.R. China

Unified Social Credit Code 913202137265423XN

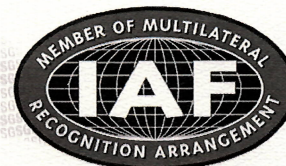
has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Design and manufacture of crystalline silicon solar cells modules

This certificate is valid from 17 August 2021 until 16 August 2024
and remains valid subject to satisfactory surveillance audits.
Recertification audit due a minimum of 60 days before the expiration date.
Issue 1. Certified since 17 August 2009



Authorised by

SGS United Kingdom Ltd
Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK
t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com

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此为证书 CN09/21487 译本

下述组织

无锡尚德太阳能电力有限公司

注册地址: 无锡市新吴区新华路 9 号、16 号

经营地址: 中国江苏省无锡市新吴区新华路 9 号、16 号



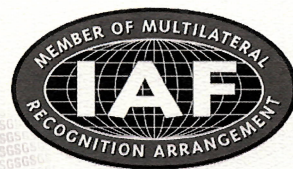
的管理体系已经过审核, 并被证明符合下述要求

ISO 14001:2015

所涉及的活动范围覆盖

晶体硅太阳能电池组件的设计和制造

该证书的有效期自 2021 年 08 月 06 日至 2024 年 08 月 05 日
并须经过符合要求的监督审核保持有效
持续认证至少在证书失效前 60 天执行
版本号 7. 初始注册日期 2009 年 08 月 06 日



签署



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HC SGS 14001 2015 0118

第 1 页 共 1 页





Certificate CN09/21487

The management system of

Wuxi Suntech Power Co., Ltd.

Business Registration Address: No. 9, 16, Xinhua Road,
Xinwu District, Wuxi City

Business Operation Address: No. 9, 16, Xinhua Road,
Xinwu District, Wuxi City, Jiangsu Province, P.R. China



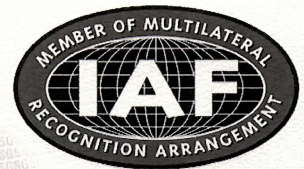
has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

Design and manufacture of crystalline silicon solar cells modules

This certificate is valid from 6 August 2021 until 5 August 2024
and remains valid subject to satisfactory surveillance audits.
Recertification audit due a minimum of 60 days before the expiration date
Issue 7. Certified since 6 August 2009



Authorised by

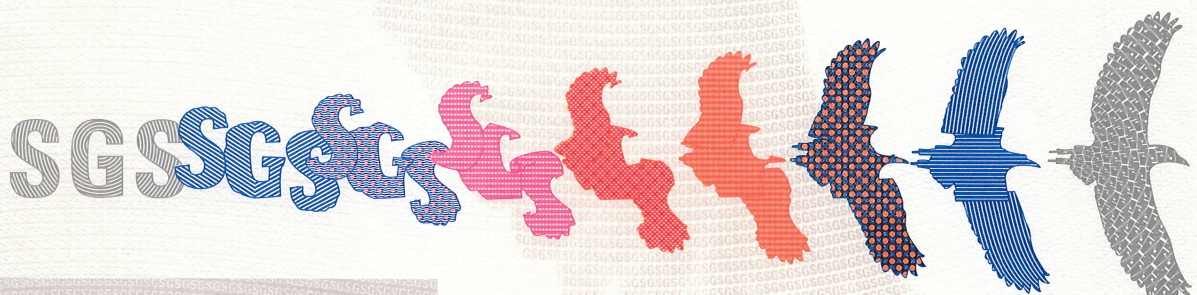
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Certificate CN19/21424.00



The management system of

Wuxi Suntech Power Co., Ltd.

Unified Social Credit Code: 9132021372655423XN

Business Registration Address: No. 9, 16, Xinhua Road, Xinwu District, Wuxi City

Business Operation Address: No. 9, 16, Xinhua Road, Xinwu District, Wuxi City, Jiangsu Province, P.R. China

has been assessed and certified as meeting the requirements of
ISO 45001:2018

For the following activities

Design and manufacture of crystalline silicon solar cells modules

This certificate is valid from 28 October 2022 until 10 October 2025 and remains valid subject to satisfactory surveillance audits.
Issue 3. Certified since 11 October 2019

Last certificate expiry date 10 October 2022
Recertification audit date 31 August 2022

Authorised by
Jonathan Hall
Global Head - Certification Services

SGS United Kingdom Ltd
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
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此为证书 CN19/21424.00 译本

SGS

下述组织

无锡尚德太阳能电力有限公司

统一社会信用代码: 9132021372655423XN
注册地址: 无锡市新吴区新华路9号、16号
经营地址: 中国江苏省无锡市新吴区新华路9号、16号

的管理体系已经过审核, 并被证明符合下述要求
ISO 45001:2018

所涉及的活动范围覆盖

晶体硅太阳能电池组件的设计和制造

该证书的有效期自 2022 年 10 月 28 日 至 2025 年 10 月 10 日 并须经过符合要求的监督审核保持有效
版本号 3. 初始注册日期 2019 年 10 月 11 日

上一次证书有效期截止日期 2022 年 10 月 10 日
再认证审核日期 2022 年 08 月 31 日

Jonathan M. Hall

签署
Jonathan Hall
Global Head -
Certification Services

SGS United Kingdom Ltd
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
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此为证书 CN22/00003932 译本



下述组织

无锡尚德太阳能电力有限公司

中国江苏省无锡市新吴区新华路9号

的管理体系已经过审核，并被证明符合下述要求

SA8000:2014

所涉及的活动范围覆盖

晶体硅太阳能电池和太阳能电池组件的设计和制造（主要过程包括制绒、扩散、退火、清洗、等离子化学气相沉积、丝网印刷、裁切、焊接、层叠、装框、终测）

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该证书的有效有效期自 2022 年 11 月 16 日至 2025 年 11 月 15 日 并须经过符合要求的监督审核保持有效

版本号 1. 初始注册日期 2022 年 11 月 16 日
在其它场所实施的认证活动在后续页面上列出

签署
Nilesh Jadhav

SGS India Private Ltd.
4B Adi Shankaracharya Marge, Vikhroli (West), Mumbai- 400 083. India
t +91 22 604 08888 - www.sgs.com



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无锡尚德太阳能电力有限公司



SA8000:2014

版本号 1
场所
无锡尚德太阳能电力有限公司 中国江苏省无锡市新吴区新华路 9 号
晶体硅太阳能电池的设计和制造 (主要过程包括制绒、扩散、退火、清洗、等离子化学气相沉积、丝网印刷)
无锡尚德太阳能电力有限公司 中国江苏省无锡市新吴区新华路 16 号
晶体硅太阳能电池组件的设计和制造 (主要过程包括裁切、焊接、层叠、装框、终测)



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Certificate CN22/00003932



The management system of

Wuxi Suntech Power Co., Ltd.

No. 9, Xinhua Road, Xinwu District, Wuxi City, Jiangsu Province, P.R. China

has been assessed and certified as meeting the requirements of
SA8000:2014

For the following activities

Design and manufacture of crystalline silicon solar cells and silicon solar cell modules (with primary processes of texturizing, diffusing, annealing, cleaning, plasma enhanced chemical vapor depositing, screen printing, cutting, welding, laminating, framing, final testing)

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This certificate is valid from 16 November 2022 until 15 November 2025 and remains valid subject to satisfactory surveillance audits.

Issue 1. Certified since 16 November 2022

Certified activities performed by additional sites are listed on subsequent pages.

Authorised by
Nilesh Jadhav

SGS India Private Ltd.
4B Adi Shankaracharya Marge, Vikhroli (West), Mumbai- 400 083. India
t +91 22 604 08888 - www.sgs.com



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SA8000:2014

Issue 1
Sites
Wuxi Suntech Power Co., Ltd. No. 9, Xinhua Road, Xinwu District, Wuxi City, Jiangsu Province, P.R. China Design and manufacture of crystalline silicon solar cells (with primary processes of texturizing, diffusing, annealing, cleaning, plasma enhanced chemical vapor depositing, screen printing)
Wuxi Suntech Power Co., Ltd. No. 16, Xinhua Road, Xinwu District, Wuxi City, Jiangsu Province, P.R. China Design and manufacture of crystalline silicon solar cell modules (with primary processes of cutting, welding, laminating, framing, final testing)



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C E R T I F I C A T E
of Conformity



Registration No.: AK 50500199 0001

Report No.: CN21XI7M 001

Holder: Wuxi Suntech Power Co., Ltd.
No.16 Xinhua Road,
Xinwu District Wuxi,
214000 Jiangsu
P.R. China

Product: PV Module

Identification: Type Designations:
With mono c-Si cell:
Max. System voltage: 1500V
STPxxxS-C72/Pmh+ (xxx = 510-550, in steps of 5)
STPxxxS-C66/Pmh+ (xxx = 470-500, in steps of 5)
STPxxxS-C54/Pmh+ (xxx = 385-410, in steps of 5)
See Remarks in attachment 1.1

Tested acc. to: 2 PFG 2689/04.19

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date 09.04.2021

Certification Body
A circular blue stamp with the TÜV Rheinland logo in the center. The text around the logo reads "TÜV Rheinland LGA Products GmbH" and "Zertifizierungsstelle". A signature is written across the stamp.
Dipl.-Ing. (FH) F. He

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

TÜV Rheinland
LGA Products GmbH
Tillystraße 2, 90431 Nürnberg

Attachment to
Registration No.: AK 50500199 0001
Report No.: CN21X17M 001

Manufacturer: Wuxi Suntech Power Co., Ltd.
No.16 Xinhua Road,
Xinwu District Wuxi,
214000 Jiangsu
P.R. China

Scope:

Remarks:

- The above listed PV modules may be used in PV plants at a maximum system voltage (Voc at STC) of up to 1500 VDC.
- Module types listed above fulfill the requirements of Light and Elevated Temperature Induced Degradation (LeTID) : Detection

Date: 2021-04-09

Certification Body

Dipl.-Ing. (FH) F. He

Wuxi Suntech Power Co., Ltd.
Jing Li

Date : 09/04/2021
Our ref. : CLI 01
Your ref.: J.L.

No.16 Xinhua Road,
Xinwu District Wuxi,
214000 Jiangsu
P.R. China

Ref : AK Certificate of Conformity

Type of Equipment : PV Module
Model Designation : See Certificate
Certificate No. : AK 50500199 0001
Report No. : CN21XI7M 001

Dear Jing Li,

Thank you very much for your interest in our services.

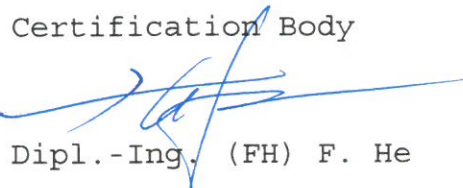
Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body



Dipl.-Ing. (FH) F. He

CC: Wuxi Suntech Power Co., Ltd.

Enclosure

证书的详细资料请登陆 www.tuvdotcom.com 查阅, 或拨打我司客服热线 800 999 3668 / 400 883 1300 咨询

CERTIFICATO DI PROVA

CSI/0028/23/RF

Pratica n.036/23

emesso per materiali di limitata produzione di cui alla lett. c, co. 1 dell'art. 10 del decreto del Ministero dell'Interno del 26 giugno 1984 recante "Classificazione di reazione al fuoco ed omologazione dei materiali ai fini della prevenzione incendi" e ss.mm. di cui al Decreto del Ministero dell'Interno del 3 settembre 2001 e di cui all'art. 5 del Decreto del Ministero dell'Interno del 14 ottobre 2022 (S.O. alla G.U. n° 234 del 25 agosto 84 - S.O. alla G.U. n° 242 del 17 ottobre 2001 - S.O. alla G.U. n° 251 del 26 ottobre 2022).

Visto l'esito degli accertamenti effettuati, si certifica che al manufatto rientrante nell'elenco di cui all'allegato A.2.1 al D.M. 26/06/1984 e s.m.i. con la

codifica alfanumerica Risoluzione 40,
prodotto da: Suntech Deutschland GmbH – 65760 Eschborn (Germania),
denominato: STPXXXS-C72/Nmh+,
impiegato come: Pannello fotovoltaico,
posto in opera: //

è attribuita in conformità a UNI 8457 (1987) e UNI 8457/A1:1994 - UNI 9174 (1987) e UNI 9174/A1:1994

la **CLASSE DI REAZIONE AL FUOCO: 1 (UNO)**

Costituiscono parte integrante del presente certificato gli allegati costituiti da facciate scritte n. 8, tra i quali sono presenti i seguenti rapporti tecnici di prova:

CSI/0028/23/RF pagine 1/8 e 2/8 redatto in conformità a UNI 8457 (1987) e UNI 8457/A1:1994

CSI/0028/23/RF pagine 3/8, 4/8, 5/8 e 6/8 redatto in conformità a UNI 9174 (1987) e UNI 9174/A1:1994

Il presente certificato è valido unicamente per la campionatura sottoposta a prova.

Il prodotto "STPXXXS-C72/Nmh+" non ricade nel campo di applicazione di norme armonizzate CPR e per il prodotto medesimo della Ditta "Suntech Deutschland GmbH" non risulta ottenuto il rilascio di ETA (European Technical Assessment), ai sensi dell'Allegato IV del CPR né ricade nella procedura di cui alla lett. a, co. 4, art. 5 del decreto del Ministro dell'Interno del 14 ottobre 2022 (G.U. n° 251 del 26 ottobre 2022)..

Data 03/02/2023

Il Direttore del Laboratorio
(Ing. P. Fumagalli)



MI02RF02

CSI S.p.A. A SOCIO UNICO
SOGGETTA AD ATTIVITÀ DI DIREZIONE
E COORDINAMENTO DI IMQ GROUP S.R.L.


Sede legale


Italia 20030 Senago (MI)
Cascina Traversagna 21
direzione-csi@legalmail.it
info@csi-spa.com
www.csi-spa.com

Sedi operative

20021 Bollate (MI)
viale Lombardia 20/B
tel. (+39) 02 38330 1
fax (+39) 02 35039 40

10028 Trofarello (TO)
via Cuneo 12
tel. (+39) 011 6493 311
fax (+39) 011 6496 041

RAPPORTO DI PROVA n. CSI/0028/23/RF					PRATICA n. 036/23			
Pannello fotovoltaico					STPXXXS-C72/Nmh+			
D.M. 26/06/1984 - METODO DI PROVA: UNI 8457 (1987) e UNI 8457 / A1 (maggio 1996)								
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato anteriore Posizione: -Verticale senza supporto incombustibile Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)								
Provetta n°	Tempo post-combustione		Tempo post-incandescenza		Zona danneggiata		Gocciolamento	
	sec.	livello	sec.	livello	mm	livello	rilevazione	livello
1	0	1	0	1	0	1	assente	1
2	0	1	0	1	0	1	assente	1
3	0	1	0	1	0	1	assente	1
4	0	1	0	1	0	1	assente	1
5	0	1	0	1	0	1	assente	1
6	0	1	0	1	0	1	assente	1
7	0	1	0	1	0	1	assente	1
8	0	1	0	1	0	1	assente	1
9	0	1	0	1	0	1	assente	1
10	0	1	0	1	0	1	assente	1
PARAMETRI				Livello attribuito	CATEGORIA			
Tempo di post-combustione				1	I			
Tempo di post-incandescenza				1				
Zona danneggiata				1				
Gocciolamento				1				
NOTE: - Provette da n.1 a n.5 senso longitudinale - Provette da n.6 a n.10 senso trasversale								
DATA 03/02/2023 <div style="float: right; text-align: right;">  <p>CSI S.p.A. Viale Lombardia, 20/B 20021 BOLLATE (MI)</p> </div>								

RAPPORTO DI PROVA n. CSI/0028/23/RF					PRATICA n. 036/23			
Pannello fotovoltaico					STPXXXS-C72/Nmh+			
D.M. 26/06/1984 - METODO DI PROVA: UNI 8457 (1987) e UNI 8457 / A1 (maggio 1996)								
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato posteriore Posizione: -Verticale senza supporto incombustibile Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)								
Provetta n°	Tempo post-combustione		Tempo post-incandescenza		Zona danneggiata		Gocciolamento	
	sec.	livello	sec.	livello	mm	livello	rilevazione	livello
1	0	1	0	1	0	1	assente	1
2	0	1	0	1	0	1	assente	1
3	0	1	0	1	0	1	assente	1
4	0	1	0	1	0	1	assente	1
5	0	1	0	1	0	1	assente	1
6	0	1	0	1	0	1	assente	1
7	0	1	0	1	0	1	assente	1
8	0	1	0	1	0	1	assente	1
9	0	1	0	1	0	1	assente	1
10	0	1	0	1	0	1	assente	1
PARAMETRI				Livello attribuito	CATEGORIA			
Tempo di post-combustione				1	I			
Tempo di post-incandescenza				1				
Zona danneggiata				1				
Gocciolamento				1				
NOTE: - Provette da n.1 a n.5 senso longitudinale - Provette da n.6 a n.10 senso trasversale								
DATA 03/02/2023 <div style="float: right; text-align: right;">  <p>CSI S.p.A. Viale Leonardo da Vinci, 20/B 20072 BOLLATE (MI)</p> </div>								



RAPPORTO DI PROVA n. CSI/0028/23/RF				PRATICA n. 036/23			
Pannello fotovoltaico				STPXXXS-C72/Nmh+			
D.M. 26/06/84 - METODO DI PROVA: UNI 9174 (ottobre 1987) e UNI 9174 / A1 (maggio 1996)							
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato anteriore, senso longitudinale Posizione: - A parete senza supporto incombustibile				Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)			
Tempi (sec) impiegati dal fronte di fiamma per coprire la distanza di 50 mm tra due traguardi consecutivi				Velocità media (mm/s) di propagazione del fronte di fiamma tra due traguardi consecutivi			
mm	Provetta n.			mm	Provetta n.		
	1	2	3		1	2	3
50	462	441	509	50			
100				100			
150				150			
200				200			
250				250			
300				300			
350				350			
400				400			
450				450			
500				500			
550				550			
600				600			
650				650			
700				700			
750				750			
800				800			
Tempo di post-incand. (sec)	0	0	0	Media delle velocità (mm/min)	/	/	/
Zona danneggiata (mm)	50	50	50	Gocciolamento	assente	assente	assente
PARAMETRI	LIVELLI			Livello attribuito	CATEGORIA		
	Provetta n.1	Provetta n.2	Provetta n.3				
Velocità di propagazione del fronte di fiamma	1	1	1	1	I		
Zona danneggiata	1	1	1	1			
Tempo di post-incandescenza	1	1	1	1			
Gocciolamento	1	1	1	1			
NOTE: -							
DATA 03/02/2023							
CSI S.p.A. Viale Lombardia, 20/B 20022 BOLLATE (MI)							



RAPPORTO DI PROVA n. CSI/0028/23/RF				PRATICA n. 036/23			
Pannello fotovoltaico				STPXXS-C72/Nmh+			
D.M. 26/06/84 - METODO DI PROVA: UNI 9174 (ottobre 1987) e UNI 9174 / A1 (maggio 1996)							
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato anteriore, senso trasversale Posizione: - A parete senza supporto incombustibile				Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)			
Tempi (sec) impiegati dal fronte di fiamma per coprire la distanza di 50 mm tra due traguardi consecutivi				Velocità media (mm/s) di propagazione del fronte di fiamma tra due traguardi consecutivi			
mm	Provetta n.			mm	Provetta n.		
	1	2	3		1	2	3
50	305	279	321	50			
100				100			
150				150			
200				200			
250				250			
300				300			
350				350			
400				400			
450				450			
500				500			
550				550			
600				600			
650				650			
700				700			
750				750			
800				800			
Tempo di post-incand. (sec)	0	0	0	Media delle velocità (mm/min)	/	/	/
Zona danneggiata (mm)	50	50	50	Gocciolamento	assente	assente	assente
PARAMETRI	LIVELLI			Livello attribuito	CATEGORIA		
	Provetta n.1	Provetta n.2	Provetta n.3				
Velocità di propagazione del fronte di fiamma	1	1	1	1	I		
Zona danneggiata	1	1	1	1			
Tempo di post-incandescenza	1	1	1	1			
Gocciolamento	1	1	1	1			
NOTE: -							
DATA 03/02/2023							
 CSI S.p.A. Via ... boardia, 20/B BOLLATE (MI)							



RAPPORTO DI PROVA n. CSI/0028/23/RF				PRATICA n. 036/23			
Pannello fotovoltaico				STPXXXS-C72/Nmh+			
D.M. 26/06/84 - METODO DI PROVA: UNI 9174 (ottobre 1987) e UNI 9174 / A1 (maggio 1996)							
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato posteriore, senso longitudinale Posizione : - A parete senza supporto incombustibile				Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)			
Tempi (sec) impiegati dal fronte di fiamma per coprire la distanza di 50 mm tra due traguardi consecutivi				Velocità media (mm/s) di propagazione del fronte di fiamma tra due traguardi consecutivi			
mm	Provetta n.			mm	Provetta n.		
	1	2	3		1	2	3
50	541	498	362	50			
100				100			
150				150			
200				200			
250				250			
300				300			
350				350			
400				400			
450				450			
500				500			
550				550			
600				600			
650				650			
700				700			
750				750			
800				800			
Tempo di post-incand. (sec)	0	0	0	Media delle velocità (mm/min)	/	/	/
Zona danneggiata (mm)	50	50	50	Gocciolamento	assente	assente	assente
PARAMETRI	LIVELLI			Livello attribuito	CATEGORIA		
	Provetta n.1	Provetta n.2	Provetta n.3				
Velocità di propagazione del fronte di fiamma	1	1	1	1	I		
Zona danneggiata	1	1	1	1			
Tempo di post-incandescenza	1	1	1	1			
Gocciolamento	1	1	1	1			
NOTE: -							
DATA 03/02/2023							
 CSI S.p.A. Viale Libertà, 20/B 20102 SOLLATE (MI)							



RAPPORTO DI PROVA n. CSI/0028/23/RF				PRATICA n. 036/23					
Pannello fotovoltaico				STPXXS-C72/Nmh+					
D.M. 26/06/84 - METODO DI PROVA: UNI 9174 (ottobre 1987) e UNI 9174 / A1 (maggio 1996)									
Descrizione: - Pannello fotovoltaico Superficie esposta: - Lato posteriore, senso trasversale Posizione: - A parete senza supporto incombustibile				Risoluzioni applicate: 40 Preparazione: - D come da UNI 9176 (1998)					
Tempi (sec) impiegati dal fronte di fiamma per coprire la distanza di 50 mm tra due traguardi consecutivi				Velocità media (mm/s) di propagazione del fronte di fiamma tra due traguardi consecutivi					
	mm	Provetta n.				mm	Provetta n.		
		1	2	3			1	2	3
	50	395	463	372		50			
	100					100			
	150					150			
	200					200			
	250					250			
	300					300			
	350					350			
	400					400			
	450					450			
	500					500			
	550					550			
	600					600			
	650					650			
	700					700			
	750					750			
	800					800			
Tempo di post-incand. (sec)		0	0	0	Media delle velocità (mm/min)	/	/	/	
Zona danneggiata (mm)		50	50	50	Gocciolamento	assente	assente	assente	
PARAMETRI	LIVELLI			Livello attribuito	CATEGORIA				
	Provetta n.1	Provetta n.2	Provetta n.3						
Velocità di propagazione del fronte di fiamma	1	1	1	1	I				
Zona danneggiata	1	1	1	1					
Tempo di post-incandescenza	1	1	1	1					
Gocciolamento	1	1	1	1					
NOTE: -									
DATA 03/02/2023									
 CSI S.p.A. Via Leobardia, 20/B 20138 BOLLATE (MI)									

**SUNTECH DEUTSCHLAND GMBH**

Alfred-Herrhausen-Allee 3-5, 65760 Eschborn

Registered in Eschborn: HRB 113050, VAT: DE310680559

Modello C

- A) AZIENDA PRODUTTRICE: SUNTECH DEUTSCHLAND GMBH
- B) DENOMINAZIONE COMMERCIALE DEL MATERIALE:
STPXXXS-C72/Nmh+
- C) DESCRIZIONE: Pannello fotovoltaico cristallino
- C. 1) Natura dei componenti
1. Vetro: spessore 2.0mm, peso 5000g/m²
 2. Pellicola in POE: spessore 0.50 mm, peso 430 g/m²
 3. Celle in silicio monocristallino: spessore 0,17 mm, peso 406 g/m²
 4. Pellicola in EVA: spessore 0.45 mm, peso 410 g/m²
 4. Vetro: spessore 2.0mm, peso 5000g/m²
- C. 2) Formato: lunghezza 2278mm, larghezza 1134mm, spessore 5,12 mm; Peso: 11246 g/m²;
Lavorazione: Laminazione e taglio
- D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: Laminazione
- F) IMPIEGO: PANNELLO FOTOVOLTAICO.
- G) MANUTENZIONE: METODO "D" COME DA UNI 9176:1998

Date 29/11/2022

Signature + Stamps

Suntech Deutschland GmbH
Alfred-Herrhausen-Allee 3-5
65760 Eschborn, Germany

CSI S.p.A.
Via Lombardia, 2
20020 BOLLATE (MI)



SUNTECH DEUTSCHLAND GMBH

Alfred-Herrhausen-Allee 3-5, 65760 Eschborn

Registered in Eschborn: HRB 113050, VAT: DE310680559

Modello D.20

Il sottoscritto Yuan Fei residente in China Documento di identità EB3917710 rilasciato dalla Repubblica Chinese il 20/11/1988., in qualità di Rappresentante Legale della ditta Suntech Deutschland GmbH

DICHIARA

sotto la propria responsabilità civile e penale, che i pannelli fotovoltaici di seguito elencati:

STPXXXS-C72/Pmh+
 STPXXXS-C66/Pmh+
 STPXXXS-C54/Pmh+
 STPXXXS-C78/Pmh+
 STPXXXS-C72/Nmh+
 STPXXXS-C54/Nmhb+
 STPXXXS-C54/Nmh+
 STPXXXS-C54/Nmhm+
 STPXXXS-D66/Pmh+
 STPXXXS-D60/Pmh+
 STPXXXS-C72/Nsh+
 STPXXXS-C54/Nshb+
 STPXXXS-C54/Nsh+
 STPXXXS-C54/Nshm+

Sono realizzati con i medesimi componenti, danno luogo alla medesima campoinatura di prova e differiscono tra loro unicamente per forma e/o dimensione e/o colore.

Suntech Deutschland GmbH

Alfred-Herrhausen-Allee 3-5

65760 Eschborn, Germany

Date 29/11/2022

Signature + Stamps

Yuan Fei

Yuan Fei
 S.p.A.
 Guardia, 20
 COLLEATE (NA)