

仕様書

御中

品名： 太陽電池モジュール

型式： TSM-PD05

注：仕様等は、予告なく変更する場合があります。製品の仕様については正式に取り交わした押印のある仕様書に基づくものとします。正式な仕様書は、トリナ・ソーラー・ジャパン(株)へ直接お問い合わせください。

トリナ・ソーラー・ジャパン株式会社

承認	作成

トリナソーラー結晶系太陽電池モジュール

1. 総則

本仕様書は トリナソーラー社製の太陽電池モジュール（以下「本モジュール」という）の納入仕様について規定する

2. 適用規格

本モジュールは 以下の国際規格を満たし、第三者認証機関より認証を取得している

IEC 61215:2005	性能認証規格
IEC 61730-1:2004	安全認証規格(構造に対する要求事項)
IEC 61730-2:2004	安全認証規格(試験に対する要求事項)

3. 適用等級及び火災等級

適用等級 本モジュールはIEC61730 3.2項に規定される等級に適合する

火災等級 本モジュールはIEC61730 10.8項に規定される火災等級に適合する

4. モジュール最大定格

項目	単位	最大定格値	備考
動作温度	℃	-40～+85	
保管温度	℃	-20～+50	
動作湿度	%RH	85	
静荷重	Pa	5400	
最大システム電圧	VDC	1000	
風圧荷重	Pa	2400	
降雹		直径35mmの雹	落下速度97km/h
耐電圧	V	DC3600	

5. モジュールの納入仕様

5.1 モジュールに使用する材料

本モジュールに使用する材料は、下記の内容と規定し、特に規定がないものについてはこの仕様書の性能を十分に満たす材料を選定し使用する

部材仕様

セル	多結晶156×156mm (6インチ)
セル枚数	60セル
モジュール寸法	(1650±2)×(992±2)×(35±1)mm
重量	18.6kg
ガラス	高透過・反射防止強化ガラス3.2mm
バックシート	ホワイト
フレーム	アルマイト処理アルミ合金
端子ボックス	IP68定格
ケーブル	PVケーブル4.0mm ² 、1000mm
コネクタ	MC4互換品

5.2 モジュールの出力特性

モジュールの出力特性は、標準試験条件（STC）で測定したものとする
（モジュール温度25℃、AM1.5、日射強度：1000w/m²）

TSM-265PD05

型 式	TSM-265PD05
最大出力 (Pmax)	265W
最大動作電圧 (Vmax)	30.8V
最大動作電流 (Imp)	8.61A
開放電圧 (Voc)	38.3V
短絡電流 (Isc)	9.10A
モジュール変換効率	16.2%

TSM-270PD05

型 式	TSM-270PD05
最大出力 (Pmax)	270W
最大動作電圧 (Vmax)	30.8V
最大動作電流 (Imp)	8.73A
開放電圧 (Voc)	38.4V
短絡電流 (Isc)	9.1A
モジュール変換効率	16.5%

温度係数 (%/°C)	最大出力 (Pmax)	-0.41
	開放電圧 (Voc)	-0.32
	短絡電流 (Isc)	0.05

出力許容公差	上限値	下限値	単位
	5	公称値	W

5.3 耐電圧

5.4 絶縁抵抗

5.5 出荷検査

5.5.1 フラッシュテスト

5.5.2 ELカメラ検査

5.6 梱包構成

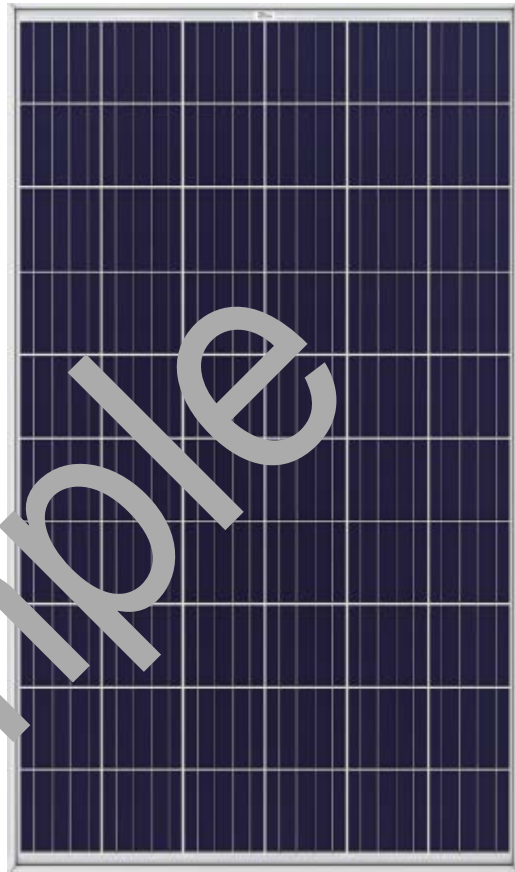
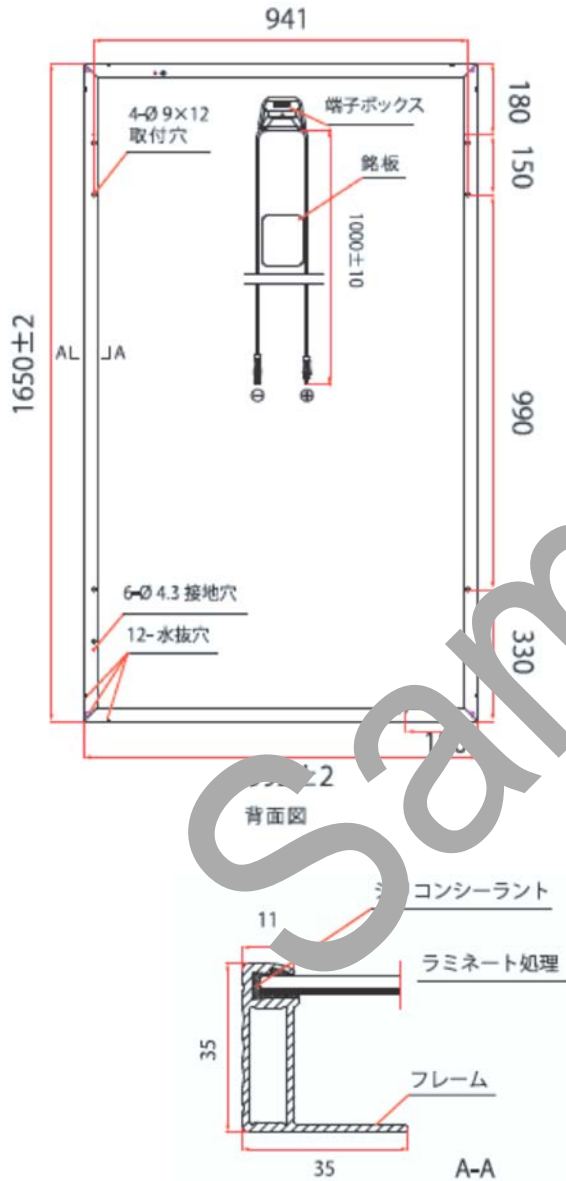
集合梱包

30枚/パレット
840枚/40FTコンテナ

6. 設置上の注意

別途、設置マニュアルを参照のこと

7. 各部寸法



Certificate

Registration No.: PV 50270713

Page 3

Report No.: 15042197.060

License Holder:

Changzhou Trina Solar Energy Co., Ltd.
No.2 Tian He Road, Electronics Park,
New District,
Changzhou, Jiangsu 213031,
P.R. China

Product:

PV Modules

Type:

Continuation of page 2

With 6" poly c-Si cells:

TSM-xxxPD05, TSM-xxxPD05.05, TSM-xxxPD05.08,
TSM-xxxPD05.10, TSM-xxxPD05.15, TSM-xxxPD05.18,
(xxx=215-260, in steps of 5, 60 cells)

TSM-xxxPD05.002, TSM-xxxPD05.008,

TSM-xxxPD05.102, TSM-xxxPD05.108

(xxx=215-260, in steps of 5, 60 cells)

TSM-xxxPD14 (xxx=260-300, in steps of 5, 72 cells)

TSM-xxxPD14.002 (xxx=260-300, in steps of 5, 72 cells)

Continued on page 4

Manufacturing Plant:

Changzhou Trina Solar Energy Co., Ltd.
No.2 Tian He Road, Electronics Park,
New District,
Changzhou, Jiangsu 213031,
P.R. China

Basis:

- IEC 61215:2005**
EN 61215:2005
"Crystalline silicon terrestrial
photovoltaic (PV) modules - Design
qualification and type approval"



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ID 0000024632

- Factory Inspection**
To document the consistent quality of
the product factory inspections
performed periodically

Remarks:

- Valid in conjunction with TÜVRheinland certificate PV 50270736 Page 1 - 3.
- This certificate includes turnover manufacturing plants as listed on Attachment List of Factories.

Conditions:

The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.

The certificate is valid until 01 December 2018.



Certification body


Dipl.-Ing. (TU) Gerd Reimann

02 December 2013

TÜV Rheinland LGA Products GmbH, Tillystrasse 2, 90431 Nürnberg, Germany / Contact: + 49 221 806 2477 email: eneratest@de.tuv.com

Certificate

Registration No.: PV 50270736

Page 3

Report No.: 15042199.063

License Holder:

Changzhou Trina Solar Energy Co., Ltd.
No.2 Tian He Road, Electronics Park,
New District,
Changzhou, Jiangsu 213031,
P.R. China

Product:

PV Modules

Type:

Continuation of page 2
With 6" poly c-Si cells:
TSM-xxxPD05, TSM-xxxPD05.05, TSM-xxxPD05.08,
TSM-xxxPD05.10, TSM-xxxPD05.15, TSM-xxxPD05.18,
(xxx=215-260, in steps of 5, 60 cells)
TSM-xxxPD05.002, TSM-xxxPD05.008,
TSM-xxxPD05.102, TSM-xxxPD05.108,
(xxx=215-260, in steps of 5, 60 cells)
TSM-xxxPD14 (xxx=260-300, in steps of 5, 72 cells)
TSM-xxxPD14.002 (xxx=260-300, in steps of 5, 72 cells)
Continued on page 4

Manufacturing Plant:

Changzhou Trina Solar Energy Co., Ltd.
No.2 Tian He Road, Electronics Park,
New District,
Changzhou, Jiangsu 213031,
P.R. China

Basis:

- IEC 61730-1:2004
IEC 61730-2:2004
EN 61730-1:2007
EN 61730-2:2007
"Photovoltaic (PV) module safety
qualification"



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ID 0000024632

- Factory Inspection**
To document the consistent quality of
the product, factory inspections were
performed periodically.

Remarks:

- Valid in conjunction with TÜVRheinland certificate PV 50270713 Page 1 - 3.
- The above listed PV modules fulfil the requirements of Application Class A (Class II acc. to IEC 61140). They may be used in PV plants at a maximum system voltage (V_{max} at STC) of up to 1000 VDC.
- The fire test (IEC 61730-2 / MST 23) was performed.
- The above listed PV modules fulfil the requirements of fire rating class C.
- This certificate includes further manufacturing plants as listed on Attachment List of Factories.

Conditions:

The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.

The certificate is valid until 01 December 2018.



Certification body


Dipl.-Ing. (TU) Gerd Reimann

02 December 2013

TÜV Rheinland LGA Products GmbH, Tillystrasse 2, 90431 Nürnberg, Germany / Contact: + 49 221 806 2477 email: eneratest@de.tuv.com

Certificate

Registration No.: PV 50270713

Page 21

Report No.: 15042197.106

License Holder:

Changzhou Trina Solar Energy Co., Ltd.
No. 2 Tian He Road
Electronics Park, New District
Changzhou, Jiangsu 213031
P. R. China

Product:

PV Modules

Type:

Same as Page 1 - 7 and Page 9 -14 & Page 17 - 20

In addition:

With 6" poly c-Si cells:

TSM-xxxPC14.05(II), TSM-xxxPC14.05(II)
TSM-xxxPC14.08(II), TSM-xxxPC14.10(II)
TSM-xxxPC14.15(II), TSM-xxxPC14.15(II)
TSM-xxxPC14.50(II)

(xxx=300-360, in steps of 5, in steps of 60 cells)

TSM-xxxPD05, TSM-xxxPD05.05

TSM-xxxPD05.08, TSM-xxxPD05.10

TSM-xxxPD05.15, TSM-xxxPD05.15

TSM-xxxPD05.50, TSM-xxxPD05.002

TSM-xxxPD05.008, TSM-xxxPD05.102

TSM-xxxPD05.108, TSM-xxxPD05.082

TSM-xxxPD05.182, TSM-xxxPD05.052

TSM-xxxPD05.052

(xxx=275, in steps of 60 cells)

Manufacturing Plant:

Changzhou Trina Solar Energy Co., Ltd.
No. 2 Tian He Road
Electronics Park, New District
Changzhou, Jiangsu 213031
P. R. China

Basis:

- IEC 61215:2005
- EN 61215:2005
- "Crystalline silicon terrestrial photovoltaic (PV) modules - Design qualification and type approval"
- Factory Inspection
- To document consistent quality the production factory inspections are performed periodically.



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Remarks:

- Valid in conjunction with TÜV Rheinland certificate PV 50270736 Page 1 - 7 & Page 9 -14 & Page 17 - 21.
- New model names were introduced as above.
- This certificate includes further manufacturing plants as listed on Attachment List of Factories.

Conditions:

The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.

The certificate is valid until 01 December 2018.



Certification body



Dipl.-Ing. (TU) Gerd Reimann

21 September 2015

TÜV Rheinland LGA Products GmbH, Tillystrasse 2, 90431 Nürnberg, Germany / Contact: + 49 221 806 2477 email: eneratest@de.tuv.com

Certificate



Registration No.: PV 50270736

Page 21

Report No.: 15042199.109

License Holder:

Changzhou Trina Solar Energy Co., Ltd.
No. 2 Tian He Road
Electronics Park, New District
Changzhou, Jiangsu 213031
P. R. China

Product:

PV Modules

Type:

Same as Page 1 - 7 and Page 9 -14 & Page 17 - 20

In addition:

With 6" poly c-Si cells:

TSM-xxxPC14(II), TSM-xxxPC14.05(II)
TSM-xxxPC14.08(II), TSM-xxxPC14.10(II)
TSM-xxxPC14.15(II), TSM-xxxPC14.18(II)
TSM-xxxPC14.50(II)
(xxx=300-360, in steps of 5, 72 cells)
TSM-xxxPD05, TSM-xxxPD05.10
TSM-xxxPD05.08, TSM-xxxPD05.10
TSM-xxxPD05.15, TSM-xxxPD05.18
TSM-xxxPD05.50, TSM-xxxPD05.08
TSM-xxxPD05.008, TSM-xxxPD05.102
TSM-xxxPD05.108, TSM-xxxPD05.082
TSM-xxxPD05.102, TSM-xxxPD05.082
TSM-xxxPD05.102
(xxx=265-275, in steps of 5, 72 cells)

Manufacturing Plant:

Changzhou Trina Solar Energy Co., Ltd.
No. 2 Tian He Road
Electronics Park, New District
Changzhou, Jiangsu 213031
P. R. China

Basis:

- IEC 61730-1:2004+A1+A2
 - IEC 61730-2:2004+A1
 - EN 61730-1:2007+A1+A2
 - EN 61730-2:2007+A1
- "Photovoltaic (PV) module safety qualification"

- Factory Inspection**
To document the consistent quality of the product, factory inspections are performed periodically.



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ID 0000024632

Remarks:

- Valid in conjunction with TÜVRheinland certificate PV 50270713 Page 1 - 7 & Page 9 -14 & Page 17 - 21.
- The above listed PV modules fulfill the requirements of Application Class A (Class II acc. to IEC 61140). They may be used in PV plants at a maximum system voltage (U_{max} at STC) of up to 1000 VDC.
- The above listed PV modules fulfill the requirements of fire rating class C.
- New model names were introduced as above.
- This certificate includes further manufacturing plants as listed on Attachment List of Factories.

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