



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 12

Holder of Certificate: **Risen Energy Co.,Ltd**
 Meilin, Ninghai,
 315609 Ningbo, Zhejiang
 PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061704311-16

Valid until: 2025-02-26

Date, 2020-02-28 (Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 12

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5
 RSM60-6-xxxM, xxx=275 to 340 in step of 5
 RSM156-6-xxxM, xxx=410 to 445 in step of 5
 RSM144-6-xxxM, xxx=350 to 415 in step of 5
 RSM144-6-xxxM, xxx=425 to 450 in step of 5
 RSM144-7-xxxM, xxx=425 to 450 in step of 5
 RSM132-6-xxxM, xxx=320 to 380 in step of 5
 RSM120-6-xxxM, xxx=295 to 350 in step of 5
 RSM120-6-xxxM, xxx=355 to 375 in step of 5
 RSM120-7-xxxM, xxx=355 to 375 in step of 5
 xxx is standing for rated output power at STC

Parameters:

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction: | Framed, with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire Safety Class: | Class C according to UL790 Yangzhou Opto-Electrical Products Testing Institute, No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China. |
| Test Laboratory: | |

Tested according to:

IEC 61215-1:2016
 IEC 61215-1-1:2016
 IEC 61215-2:2016
 IEC 61730-1:2016
 IEC 61730-2:2016
 EN 61215-1:2016
 EN 61215-1-1:2016
 EN 61215-2:2017
 EN IEC 61730-1:2018
 EN IEC 61730-1:2018/AC:2018-06
 EN IEC 61730-2:2018
 EN IEC 61730-2:2018/AC:2018-06

Production Facility(ies):

082429, 101449, 094163, 083073, 106291

TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD TÜV SÜD
 ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



Product Service

Attestation of Conformity

No. N8A 082429 0148 Rev. 14

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

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

This Attestation of Conformity is issued on a voluntary basis according to the Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. It confirms that the listed equipment complies with the principal protection requirements of the directive and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061704311-23

Date, 2021-04-06

(Zhulin Zhang)

Page 1 of 3

After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.



Attestation of Conformity

No. N8A 082429 0148 Rev. 14

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5,
 RSM60-6-xxxM, xxx=275 to 340 in step of 5,
 RSM156-6-xxxM, xxx=410 to 455 in step of 5,
 RSM156-6-xxxMB, xxx=410 to 455 in step of 5,
 RSM144-6-xxxM, xxx=350 to 420 in step of 5,
 RSM144-6-xxxMB, xxx=350 to 420 in step of 5,
 RSM144-6-xxxM, xxx=425 to 450 in step of 5,
 RSM144-7-xxxM, xxx=425 to 450 in step of 5,
 RSM144-7-xxxMB, xxx=425 to 450 in step of 5,
 RSM132-6-xxxM, xxx=320 to 385 in step of 5,
 RSM132-6-xxxMB, xxx=320 to 385 in step of 5,
 RSM120-6-xxxM, xxx=295 to 350 in step of 5,
 RSM120-6-xxxMB, xxx=295 to 350 in step of 5,
 RSM120-6-xxxM, xxx=355 to 375 in step of 5,
 RSM120-7-xxxM, xxx=355 to 375 in step of 5,
 RSM120-7-xxxMB, xxx=355 to 375 in step of 5,
 RSM150-8-xxxM, xxx=465 to 515 in step of 5,
 RSM150-8-xxxMB, xxx=465 to 515 in step of 5,
 RSM40-8-xxxM, xxx=385 to 415 in step of 5,
 RSM40-8-xxxMB, xxx=385 to 415 in step of 5,
 RSM144-9-xxxM, xxx=525 to 555 in step of 5,
 RSM144-9-xxxMB, xxx=525 to 555 in step of 5,
 RSM132-9-xxxM, xxx=485 to 510 in step of 5,
 RSM132-9-xxxMB, xxx=485 to 510 in step of 5,
 RSM120-9-xxxM, xxx=440 to 465 in step of 5,
 RSM120-9-xxxMB, xxx=440 to 465 in step of 5,
 RSM120-8-xxxM, xxx=580 to 610 in step of 5,
 RSM120-8-xxxMB, xxx=580 to 610 in step of 5,
 RSM110-8-xxxM, xxx=530 to 560 in step of 5,
 RSM110-8-xxxMB, xxx=530 to 560 in step of 5,
 RSM156-6-xxxBMTG, xxx=410 to 455 in step of 5,
 RSM144-6-xxxBMTG, xxx=350 to 420 in step of 5,
 RSM132-6-xxxBMTG, xxx=320 to 385 in step of 5,
 RSM120-6-xxxBMTG, xxx=295 to 350 in step of 5,
 RSM120-6-xxxBMTG, xxx=355 to 375 in step of 5,
 RSM150-8-xxxBMTG, xxx=465 to 515 in step of 5,
 RSM144-9-xxxBMTG, xxx=525 to 555 in step of 5,
 RSM132-9-xxxBMTG, xxx=485 to 510 in step of 5,
 RSM120-9-xxxBMTG, xxx=440 to 465 in step of 5,
 RSM120-8-xxxBMTG, xxx=580 to 610 in step of 5,
 RSM110-8-xxxBMTG, xxx=530 to 560 in step of 5,
 RSM144-6-xxxBMTG, xxx=425 to 450 in step of 5,
 RSM144-7-xxxBMTG, xxx=425 to 450 in step of 5,
 RSM120-7-xxxBMTG, xxx=355 to 375 in step of 5,
 RSM40-8-xxxBMTG, xxx= 385 to 415 in step of 5
 xxx is standing for rated output power at STC

Page 2 of 3

After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.



Product Service

Attestation of Conformity

No. N8A 082429 0148 Rev. 14

Parameters:

| | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| Construction: | Framed with Junction box, Cable and Connectors. |
| Test Laboratory: | Yangzhou Opto-Electrical Products Testing Institute No. 10 West Kaifa Road, Yangzhou 225009 Jiangsu, P. R. China |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire Safety Class: | Class C according to UL790 |

Tested according to:

EN IEC 61730-1:2018
 EN IEC 61730-1:2018/AC:2018-06
 EN IEC 61730-2:2018
 EN IEC 61730-2:2018/AC:2018-06



Product Service

CERTIFICATE

No. Z2 082429 0163 Rev. 02

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061900406-02

Valid until: 2025-07-06

Date, 2020-07-08

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 082429 0163 Rev. 02

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5;
RSM60-6-xxxM, xxx=275 to 340 in step of 5;
RSM144-6-xxxM, xxx=350 to 450 in step of 5;
RSM144-7-xxxM, xxx=425 to 450 in step of 5;
RSM132-6-xxxM, xxx=320 to 385 in step of 5;
RSM120-6-xxxM, xxx=295 to 375 in step of 5;
RSM120-7-xxxM, xxx=355 to 375 in step of 5;
RSM156-6-xxxM, xxx= 410 to 455 in step of 5;
xxx is standing for rated output power at STC

Parameters:

| | |
|-----------------------------|----------------------------------------------------|
| Construction: | Framed with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire safety Class: | Class C according to UL790 |
| Severity of salt mist test: | Level 6 |

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 61701:2011

Production Facility(ies):

094163, 082429, 101449, 083073, 106291



Choose certainty.
Add value.

Declaration

Client : Risen Energy Co., Ltd.
Meilin, Ninghai, 315613 Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Manufacturer: Risen Energy Co., Ltd.
Meilin, Ninghai, 315613 Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Project No: 704061704311-25; 704061704304-17; 704061704310-12

Product : Mono & Poly crystalline Silicon Photovoltaic (PV) Module

Model No.:

RSM72-6-xxxP, xxx=315-395 in step of 5,
RSM60-6-xxxP, xxx=260-330 in step of 5,
RSM144-6-xxxP, xxx=330-400 in step of 5,
RSM132-6-xxxP, xxx=305-370 in step of 5,
RSM120-6-xxxP, xxx=275-335 in step of 5,
RSM72-6-xxxP-15, xxx=305-310 in step of 5,

RSM72-6-xxxM, xxx=330 to 405 in step of 5
RSM60-6-xxxM, xxx=275 to 340 in step of 5,
RSM156-6-xxxM, xxx=410 to 455 in step of 5,
RSM156-6-xxxMB, xxx=410 to 455 in step of 5,
RSM144-6-xxxM, xxx=350 to 420 in step of 5,
RSM144-6-xxxMB, xxx=350 to 420 in step of 5,
RSM144-6-xxxM, xxx=425 to 450 in step of 5,
RSM144-7-xxxM, xxx=425 to 465 in step of 5,
RSM144-7-xxxMB, xxx=425 to 465 in step of 5,
RSM132-6-xxxM, xxx=320 to 385 in step of 5,
RSM132-6-xxxMB, xxx=320 to 385 in step of 5,
RSM120-6-xxxM, xxx=295 to 350 in step of 5,
RSM120-6-xxxMB, xxx=295 to 350 in step of 5,
RSM120-6-xxxM, xxx=355 to 375 in step of 5,
RSM120-7-xxxM, xxx=355 to 390 in step of 5,
RSM120-7-xxxMB, xxx=355 to 390 in step of 5,
RSM150-8-xxxM, xxx=465 to 515 in step of 5,
RSM150-8-xxxMB, xxx=465 to 515 in step of 5,
RSM40-8-xxxM, xxx=385 to 415 in step of 5,
RSM40-8-xxxMB, xxx=385 to 415 in step of 5,

TÜV SÜD Certification and Testing
(China) Co., Ltd. Shanghai Branch

Telephone : +86 21 6141-0100
Telefax : +86 21 6141-8600
www.tuv-sud.cn

TÜV SÜD Group
7F, No.151 Heng Tong Road
Shanghai 200 070
P.R. China

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Choose certainty.
Add value.

RSM144-9-xxxM, xxx=525 to 555 in step of 5,
RSM144-9-xxxMB, xxx=525 to 555 in step of 5,
RSM132-9-xxxM, xxx=485 to 510 in step of 5,
RSM132-9-xxxMB, xxx=485 to 510 in step of 5,
RSM120-9-xxxM, xxx=440 to 465 in step of 5 ,
RSM120-9-xxxMB, xxx=440 to 465 in step of 5 ,
RSM120-8-xxxM, xxx=580 to 610 in step of 5,
RSM120-8-xxxMB, xxx=580 to 610 in step of 5,
RSM110-8-xxxM, xxx=530 to 560 in step of 5,
RSM110-8-xxxMB, xxx=530 to 560 in step of 5,
RSM156-6-xxxBMTG, xxx=410 to 455 in step of 5,
RSM144-6-xxxBMTG, xxx=350 to 420 in step of 5,
RSM132-6-xxxBMTG, xxx=320 to 385 in step of 5,
RSM120-6-xxxBMTG, xxx=295 to 350 in step of 5,
RSM120-6-xxxBMTG, xxx=355 to 375 in step of 5,
RSM150-8-xxxBMTG, xxx=465 to 515 in step of 5,
RSM144-9-xxxBMTG, xxx=525 to 555 in step of 5,
RSM132-9-xxxBMTG, xxx=485 to 510 in step of 5,
RSM120-9-xxxBMTG, xxx=440 to 465 in step of 5,
RSM120-8-xxxBMTG, xxx=580 to 610 in step of 5,
RSM110-8-xxxBMTG, xxx=530 to 560 in step of 5
RSM144-6-xxxBMTG, xxx=425 to 450 in step of 5,
RSM144-7-xxxBMTG, xxx=425 to 465 in step of 5,
RSM120-7-xxxBMTG, xxx=355 to 390 in step of 5,
RSM40-8-xxxBMTG, xxx= 385 to 415 in step of 5,
RSM132-8-xxxM, xxx=640 to 670 in step of 5,
RSM132-8-xxxMB, xxx=640 to 670 in step of 5,
RSM132-8-xxxBMTG, xxx=640 to 670 in step of 5

RSM72-6-xxxPDG, xxx=315-360 in step of 5
RSM60-6-xxxPDG, xxx=265-300 in step of 5
RSM144-6-xxxPDG, xxx=330-365 in step of 5
RSM120-6-xxxPDG, xxx=275-305 in step of 5

RSM72-6-xxxMDG, xxx=315 to 385 in step of 5
RSM60-6-xxxMDG, xxx=265 to 320 in step of 5
RSM144-6-xxxMDG, xxx=350 to 415 in step of 5
RSM132-6-xxxMDG, xxx=320 to 380 in step of 5
RSM120-6-xxxMDG, xxx=295 to 350 in step of 5
RSM72-6-xxxBMDG, xxx=340 to 385 in step of 5
RSM60-6-xxxBMDG, xxx=280 to 325 in step of 5
RSM144-6-xxxBMDG, xxx=360 to 415 in step of 5
RSM132-6-xxxBMDG, xxx=330 to 380 in step of 5
RSM120-6-xxxBMDG, xxx=300 to 350 in step of 5

TÜV SÜD Certification and Testing
(China) Co., Ltd. Shanghai Branch

Telephone : +86 21 6141-0100
Telefax : +86 21 6141-8600
www.tuv-sud.cn

TÜV SÜD Group
7F, No.151 Heng Tong Road
Shanghai 200 070
P.R. China

TUV®



Choose certainty.
Add value.

RSM156-6-xxxBHDG, xxx=435 to 465 in step of 5
RSM132-6-xxxBHDG, xxx=365 to 390 in step of 5
RSM144-6-xxxBHDG, xxx=400 to 430 in step of 5
RSM120-6-xxxBHDG, xxx=330 to 360 in step of 5
RSM144-7-xxxBMDG, xxx=425 to 455 in step of 5
RSM132-7-xxxBMDG, xxx=390 to 420 in step of 5
RSM120-7-xxxBMDG, xxx=355 to 380 in step of 5
RSM144-6-xxxBMDG, xxx=425 to 455 in step of 5
RSM144-7-xxxBMDGZ, xxx=425 to 455 in step of 5
RSM132-6-xxxBMDG, xxx=390 to 420 in step of 5
RSM132-7-xxxBMDGZ, xxx=390 to 420 in step of 5
RSM120-6-xxxBMDG, xxx=355 to 380 in step of 5
RSM120-7-xxxBMDGZ, xxx=355 to 380 in step of 5
RSM150-8-xxxBMDG, xxx= 465 to 510 in step of 5
RSM90-8-xxxBMDG, xxx= 285 to 300 in step of 5
RSM144-9-xxxBMDG, xxx= 520 to 550 in step of 5
RSM132-9-xxxBMDG, xxx= 480 to 505 in step of 5
RSM120-9-xxxBMDG, xxx= 435 to 460 in step of 5
RSM132-8-xxxBMDG, xxx= 640 to 670 in step of 5
RSM120-8-xxxBMDG, xxx= 560 to 610 in step of 5
RSM110-8-xxxBMDG, xxx= 530 to 560 in step of 5
RSM80-8-xxxBMDG, xxx= 380 to 405 in step of 5
RSM144-6-xxxHDGB, xxx=400 to 430 in step of 5
RSM132-6-xxxHDGB, xxx=365 to 390 in step of 5
RSM120-6-xxxHDGB, xxx=330 to 360 in step of 5
xxx is standing for rated output power at STC

It is confirmed by TÜV SÜD that modules listed in Attestation of conformity

No.: N8A 082429 0151 Rev. 14 & No.: N8A 082429 0148 Rev. 16 &

No.: N8A 082429 0149 Rev. 04 are complying with EN IEC 61730-1:2018,

EN IEC 61730-2:2018,EN IEC 61730-1:2018/AC:2018-06,EN IEC 61730-

2:2018/AC:2018-06.

Also Photovoltaic modules are complying with European LVD directive

2014/35/EU, EMC Directive 2014/30/EU.



<Xiaoguang Song>

Kind regards
2021-07-01
Date

2021.07.01

TÜV SÜD Certification and Testing
(China) Co., Ltd. Shanghai Branch

Telephone : +86 21 6141-0100
Telefax : +86 21 6141-8600
www.tuv-sud.cn

TÜV SÜD Group
7F, No.151 Heng Tong Road
Shanghai 200 070
P.R. China

TÜV®



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 14

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061704311-18

Valid until: 2025-06-16

Date, 2020-06-19

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 14

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5
RSM60-6-xxxM, xxx=275 to 340 in step of 5
RSM156-6-xxxM, xxx=410 to 455 in step of 5
RSM144-6-xxxM, xxx=350 to 420 in step of 5
RSM144-6-xxxM, xxx=425 to 450 in step of 5
RSM144-7-xxxM, xxx=425 to 450 in step of 5
RSM132-6-xxxM, xxx=320 to 385 in step of 5
RSM120-6-xxxM, xxx=295 to 350 in step of 5
RSM120-6-xxxM, xxx=355 to 375 in step of 5
RSM120-7-xxxM, xxx=355 to 375 in step of 5
RSM150-8-xxxM, xxx=465 to 505 in step of 5
xxx is standing for rated output power at STC

Parameters:

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction: | Framed, with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire Safety Class: | Class C according to UL790 Yangzhou Opto-Electrical Products Testing Institute, No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China. |
| Test Laboratory: | |

Tested according to:

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016
EN 61215-1:2016
EN 61215-1-1:2016
EN 61215-2:2017
EN IEC 61730-1:2018
EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018
EN IEC 61730-2:2018/AC:2018-06

Production Facility(ies):

082429, 101449, 094163, 083073, 106291



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 13

Holder of Certificate: **Risen Energy Co.,Ltd**
 Meilin, Ninghai,
 315609 Ningbo, Zhejiang
 PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061704311-17

Valid until: 2025-03-22

Date, 2020-03-26

(Zhulin Zhang)

To:

Company: Risen Energy Co., Ltd.
Contact: Mr. Yang Shubo
Email: yangsb@risenenergy.com

From:

Company: TÜV NORD (HANGZHOU) CO., LTD.
Contact: Ms. Miley Li
Email: wli@tuv-nord.com

2020-07-03

Subject: Declaration of cancellation

File No.: SHV12077/19
License holder: **Risen Energy Co., Ltd.**
Tashan Industry Zone, Meilin Town, Ninghai County
Ningbo City, Zhejiang Province, 315609, P.R. China
Manufacturer 1: **Risen Energy Co., Ltd.**
No.23 Middle, Xingke Road, Ninghai, 315609,
Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA
Manufacturer 2: **Risen Energy (CHANGZHOU) Co., Ltd.**
No.1, Shuinan Road, Industrial Concentration Area, Zhixi Town,
Jintan District, 213251, Changzhou City, PEOPLE'S REPUBLIC OF
CHINA
Manufacturer 3: **Risen Energy (YIWU) Co., Ltd.**
No.599 Sufu Road, Suxi Town, Yiwu City, Zhejiang Province, China
Certificate No.: 44 780 19 406749 - 391R2M1
Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Herewith it is declared, that the above noted certificate(s) has (have) been invalidated since the date 2020-07-03.

The cancellation is to:

- License holder applied for cancellation.
 New certificate(s) has (have) been issued to replace the cancelled one(s).
(New certificate(s) : 44 780 19 406749 - 391R3M2)
 Annual factory inspection is refused by the license holder or the manufacturer.
 Factory Inspection fee or annual fee or registration fee is not paid by License Holder or Manufacturer.
 Others. (N/A)

Please pay attention to stop using the invalid certificate(s) from 2020-07-03. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

TÜV NORD reserved the right of final explanation about the cancellation of certificate(s). TÜV NORD will not take any responsibility for the circumstance of misusing the invalid certificate(s) by the license holder or the manufacturer.

PV Business - Renewable Energy
TÜV NORD (Hangzhou) Co., Ltd.

Miley Li 
Technical Support

TÜV NORD (Hangzhou) Co., Ltd.
杭州汉德质量认证服务有限公司
Member of TÜV NORD Group
TÜV NORD 集团成员之一

B502, No.9, JiujuanRoad,
Jinggan District, Hangzhou, China, 310019
中国浙江省杭州市江干区九堡路9号
浙江大学科技园 B502. 310019

Tel / 电话:
+86 (0)571 85386989
Fax / 传真:
+86 (0)571 85386986

Website / 网站:
www.tuv-nord.com
www.tuv-nord.com/cn
www.tuev-nord-cert.de

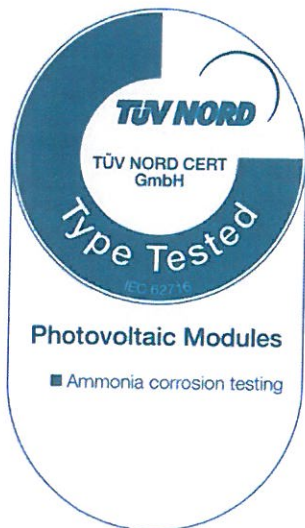
CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Risen Energy Co., Ltd.

Tashan Industry Zone, Meilin Town, Ninghai County
Ningbo City, Zhejiang Province, 315609
P.R. China

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



Description of product (details see Annex 2):

PV Modules with 6" Mono-crystalline Silicon Solar Cells

PV Modules with 6" Poly-crystalline Silicon Solar Cells

PV Modules with 6" Cast Mono-crystalline Silicon Solar Cells

Valid until: 2021-07-26

Tested according to: IEC 62716:2013 / EN 62716:2013 + AC:2014.
Registered No.: 44 780 19 406749 - 391R3M2
Manufacturer: see Annex 1
Test Report No.: 492010677.014
File No.: SHV03029/20



Essen, 2020-07-03



A handwritten signature in blue ink, appearing to read 'Rupen Fu'.

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Please also pay attention to the information stated overleaf.

Manufacturer:

Manufacturer 1: **Risen Energy Co., Ltd.**
No.23 Middle, Xingke Road, Ninghai, 315609,
Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Factory inspection report no.: 862010150.008

Manufacturer 2: **Risen Energy (CHANGZHOU) Co., Ltd.**
No.1, Shuinan Road, Industrial Concentration Area, Zhixi Town,
Jintan District, 213251, Changzhou City, PEOPLE'S REPUBLIC OF
CHINA

Factory inspection report no.: 862010430.001

Manufacturer 3: **Risen Energy (YIWU) Co., Ltd.**
No.599 Sufu Road, Suxi Town, Yiwu City, Zhejiang Province, China

Factory inspection report no.: 862010464.001

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types: **PV Modules with 6" Mono-crystalline Silicon Solar Cells**
72 cells: RSM72-6-xxxM (xxx=330 - 405, in increments of 5)
60 cells: RSM60-6-xxxM (xxx=275 - 340, in increments of 5)
156 cells: RSM156-6-xxxM (xxx=410 - 455, in increments of 5)
144 cells: RSM144-6-xxxM (xxx=350 - 450, in increments of 5)
132 cells: RSM132-6-xxxM (xxx=320 - 385, in increments of 5)
120 cells: RSM120-6-xxxM (xxx=295 - 375, in increments of 5)
144 cells: RSM144-7-xxxM (xxx=425 - 450, in increments of 5)
120 cells: RSM120-7-xxxM (xxx=355 - 375, in increments of 5)

Maximum system voltage: 1500V
Fuse rating: 20A
Application class: Class A
Electrical protection class: Class II

Module types: **PV Modules with 6" Poly-crystalline Silicon Solar Cells**
72 cells: RSM72-6-xxxP (xxx=315 - 355 in increments of 5)
60 cells: RSM60-6-xxxP (xxx=260 - 295, in increments of 5)
144 cells: RSM144-6-xxxP (xxx=330 - 365, in increments of 5)
120 cells: RSM120-6-xxxP (xxx=275 - 305, in increments of 5)

Maximum system voltage: 1500V
Fuse rating: 20A
Application class: Class A
Electrical protection class: Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

| | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module types: | PV Modules with 6" Cast Mono-crystalline Silicon Solar Cells 72 cells: RSM72-6-xxxM (xxx=360 - 395, in increments of 5) 60 cells: RSM60-6-xxxM (xxx=300 - 330, in increments of 5) 144 cells: RSM144-6-xxxP (xxx=370 - 400, in increments of 5) 132 cells: RSM132-6-xxxP (xxx=340 - 370, in increments of 5) 120 cells: RSM120-6-xxxP (xxx=310 - 335, in increments of 5) |
| Maximum system voltage: | 1500V |
| Fuse rating: | 20A |
| 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



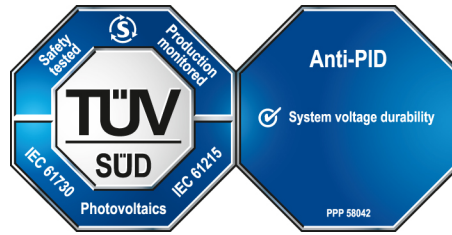
Product Service

CERTIFICATE

No. Z2 082429 0156 Rev. 08

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061900412-07

Valid until: 2025-07-01

Date, 2020-07-03

(Zhulin Zhang)

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFIKAT ◆ CERTIFICATE



Product Service

CERTIFICATE

No. Z2 082429 0156 Rev. 08

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5;
RSM60-6-xxxM, xxx=275 to 340 in step of 5;
RSM144-6-xxxM, xxx=350 to 450 in step of 5;
RSM144-7-xxxM, xxx=425 to 450 in step of 5;
RSM132-6-xxxM, xxx=320 to 385 in step of 5;
RSM120-6-xxxM, xxx=295 to 375 in step of 5;
RSM120-7-xxxM, xxx=355 to 375 in step of 5;
RSM156-6-xxxM, xxx= 410 to 455 in step of 5;
RSM150-8-xxxM, xxx= 465 to 505 in step of 5.
xxx is standing for rated output power at STC

Parameters:

| | |
|---------------------------------------------------------|--------------------------------------------------|
| Construction: | Framed, with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500 V DC |
| Fire Safety Class: | Class C according to UL790. |
| PID test condition: | -1500 V DC, 85 °C, 85 % RH, 96h |
| PID testing method is according to IEC TS 62804-1:2015. | |

Tested according to:

PPP 58042B:2015
IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016

Production Facility(ies):

094163, 082429, 101449, 083073, 106291



VERIFICATION OF COMPLIANCE

No.: SHES200300319701PVC

Applicant: Risen Energy Co., Ltd.
Meilin, Ninghai, 315609, Ningbo, Zhejiang,
PEOPLE'S REPUBLIC OF CHINA

Manufacturer: Risen Energy Co., Ltd.
No.23 Middle, Xingke Road, Ninghai, 315609, Ningbo,
Zhejiang, PEOPLE'S REPUBLIC OF CHINA.
Risen Energy (Changzhou) Co., Ltd.
No.1, Shuinan Road, Zhixi Industrial Park, Jintan District
213251 Changzhou City PEOPLE'S REPUBLIC OF CHINA
Risen Energy (YIWU) Co., Ltd.
No.599, Sufu Road, Suxi Town, Yiwu City, Zhejiang Province,
322000 PEOPLE'S REPUBLIC OF CHINA

Product Description: Photovoltaic Modules

Model No.: Refer to page 2

Additional Information (if any): Blowing sand test based on internal testing specification in accordance to IEC 60068-2-68:1994, including initial and final visual inspection (MQT01), maximum power determination (MQT02) of IEC 61215:2016; ground continuity test (MST13), insulation test (MST16), wet leakage current test (MST17) of IEC 61730-2:2016 and Electroluminescence (EL) test.

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard: IEC 60068-2-68:1994
IEC 61215-2:2016
IEC 61730-2:2016

as shown in the Test Report Number(s): SHES200300319771

Van Hua
E&E Safety Lab Technical Manager
SGS-CSTC



2020-07-03

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Member of SGS Group (Société Générale de Surveillance)

Note: You may contact us to validate this document by email address: EE.shanghai@sgs.com

SHE-VOC-F002 / V1.1

Effective Date :2019-02-25

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Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Clients instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

SGSPAPER
20183682





VERIFICATION OF LVD COMPLIANCE

Attachment to Verification No.: SHES200300319701PVC

Model No:

- RSM72-6-xxxP (xxx=315-355W, in steps of 5, 72 cells)
- RSM144-6-xxxP (xxx=330-365W, in steps of 5, 144 cut cells)
- RSM60-6-xxxP (xxx=260-295W, in steps of 5, 60 cells)
- RSM120-6-xxxP (xxx=275-305W, in steps of 5, 120 cut cells)
- RSM72-6-xxxM (xxx=330-405W, in steps of 5, 72 cells)
- RSM144-6-xxxM (xxx=350-420W, in steps of 5, 144 cut cells)
- RSM156-6-xxxM (xxx=410-455W, in steps of 5, 156 cut cells)
- RSM60-6-xxxM (xxx=275-340W, in steps of 5, 60 cells)
- RSM120-6-xxxM (xxx=295-350W, in steps of 5, 120 cut cells)
- RSM132-6-xxxM (xxx=320-385W, in steps of 5, 132 cut cells)
- RSM144-6-xxxM (xxx=425-450W, in steps of 5, 144 cut cells)
- RSM144-7-xxxM (xxx=425-450W, in steps of 5, 144 cut cells)
- RSM120-6-xxxM (xxx=355-375W, in steps of 5, 120 cut cells)
- RSM120-7-xxxM (xxx=355-375W, in steps of 5, 120 cut cells)
- RSM150-8-xxxM (xxx=465-505W, in steps of 5, 150 cut cells)

Van Hua
E&E Safety Lab Technical Manager
SGS-CSTC



2020-07-03

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Member of SGS Group (Société Générale de Surveillance)

Note: You may contact us to validate this document by email address: EE.shanghai@sgs.com

SHE-VOC-F002 / V1.1

Effective Date :2019-02-25

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Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Clients instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

SGSPAPER
20183683





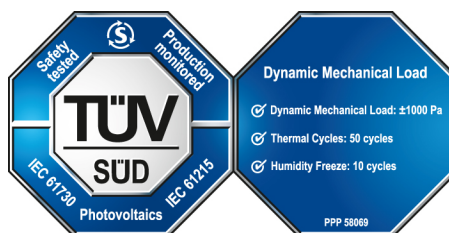
Product Service

CERTIFICATE

No. Z2 082429 0161 Rev. 02

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061900403-02

Valid until: 2025-07-12

Date, 2020-07-15


(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 082429 0161 Rev. 02

Model(s):

RSM156-6-xxxM, xxx=410 to 455, in step of 5
RSM144-6-xxxM, xxx=350 to 450, in step of 5
RSM132-6-xxxM, xxx=320 to 385, in step of 5
RSM120-6-xxxM, xxx=295 to 375, in step of 5
RSM144-7-xxxM, xxx=425 to 450, in step of 5
RSM120-7-xxxM, xxx=355 to 375, in step of 5
xxx is standing for rated output power at STC

Parameters:

| | |
|--------------------------------------------------------------------------|--------------------------------------------------|
| Construction: | Framed, with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500 V DC |
| Fire Safety Class: | Class C according to UL790 |
| Dynamic mechanical load testing method is according to IEC TS 62782:2016 | |

Tested according to:

PPP 58069A:2013
IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016

Production Facility(ies):

082429, 094163, 101449, 083073, 106291



Choose certainty.
Add value.

Technical Report No. 704061704320

Rev. 00

Dated 2018-02-28

Client name: Risen Energy Co., Ltd.
Client address: Meilin, Ninghai, 315609 Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA
Client contact: Mr. Shubo Yang
Manufacturing place: Risen Energy Co., Ltd.
Meiqiao Industrial park, Ninghai, 315609, Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA
Test subject: Product: PV module:
Small sample with one cell, frameless;
Test specification: ATSM E 424-1971(2007) Standard test methods for solar energy transmittance and reflectance (Terrestrial) of sheet materials;
Client's requirements;
Purpose of examination: Test according to the test specification.
Test result: The test results show that the presented product is in compliance with the specified requirements.

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.



1 Description of the test subject

1.1 Function

N/A

1.2 Consideration of the foreseeable misuse

- Not applicable
- Covered through the applied standard
- Covered by the following comment
- Covered by attached risk analysis

1.3 Technical Data

| Description of sample construction: | | |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key material | Sample 1# (See Annex 1 Photos) | Sample 2# (See Annex 1 Photos) |
| Front Cover | Irico Group Electronics Co.,Ltd., Type: AR-coated glass , Thickness: 3.2mm | Irico Group Electronics Co.,Ltd., Type: AR-coated glass , Thickness: 3.2mm |
| Rear Cover | Jolywood(Suzhou) Sunwatt Co.,Ltd. Type: KFB-30(plus), white, Three layers laminate, PVDF/PET/Fluorine, thickness :20µm / 275µm / 10µm | Jolywood(Suzhou) Sunwatt Co.,Ltd. Type: KFB-30(plus), white, Three layers laminate, PVDF/PET/Fluorine, thickness :20µm / 275µm / 10µm |
| Encapsulation material | Changzhou Sveck PV New Material Co., Ltd., EVA, type SV-15296 (closed to glass) and SV-15297 (closed to backsheets), thickness 0.5 mm | Changzhou Sveck PV New Material Co., Ltd., EVA, type SV-15296 (closed to glass) and SV-15297 (closed to backsheets), thickness 0.5 mm |
| Cell (include type) | Risen Energy Co., Ltd., Mono-Si, Cell type: RSTDB156S (5 busbar) | Risen Energy Co., Ltd., Poly-Si, Cell type: RSTPB156S (5 busbar) |
| Number of cells | 1 | 1 |
| Cell and string connectors | Zhejiang Twinsel Electronic Technology Co.,Ltd. , Cell interconnector : Base Cu(TU1). Purity ≥99.97%, Cross section: 0.25mm x 1.0mm, String connectors: Base Cu(TU2 or better). Purity ≥99.97%, Cross section: 0.35mmx 8.0mm; 3M, Type: Light Redirecting Film (LRF) T80-X; | Zhejiang Twinsel Electronic Technology Co.,Ltd. , Cell interconnector : Base Cu(TU1). Purity ≥99.97%, Cross section: 0.25mm x 1.0mm, String connectors: Base Cu(TU2 or better). Purity ≥99.97%, Cross section: 0.35mmx 8.0mm; 3M, Type: Light Redirecting Film (LRF) T80-X; |

TPS_GC_N_F_0920E - Rev. 1 2012-10-29



2 Order

2.1 Date of Purchase Order, Customer's Reference

The order dated 2017-06-30.

2.2 Receipt of Test Sample, Location

National Center of Supervision & Inspection on Solar Photovoltaic Products Quality
No. 5 Xinhua Road, WND, Wuxi, Jiangsu, China.

2.3 Date of Testing

2018-01-03.

2.4 Location of Testing

National Center of Supervision & Inspection on Solar Photovoltaic Products Quality
No. 5 Xinhua Road, WND, Wuxi, Jiangsu, China.

2.5 Points of Non-compliance or Exceptions of the Test Procedure

N/A

3 Test Results

| No | Test items | Technical Requirement | Test Results | | Judgment |
|----|---------------------------|------------------------------------------------------------|-----------------------------|--------|----------|
| 1# | Reflectance (380nm~780nm) | Scan interval 5nm, take the average value within test band | Position 1 (backsheet area) | 50.94% | -- |
| | | | Position 2 (busbar area) | 61.32% | -- |
| | | | Position 3 (cell area) | 5.07% | -- |
| 2# | Reflectance (380nm~780nm) | Scan interval 5nm, take the average value within test band | Position 1 (backsheet area) | 52.43% | -- |
| | | | Position 2 (busbar area) | 64.48% | -- |
| | | | Position 3 (cell area) | 6.36% | -- |

Remark: The light is coming in from the front side in the test process.

4 Remark

N/A

5 Appendix

Annex 1 Photos of samples:



Sample 1# front side



Sample 1# back side

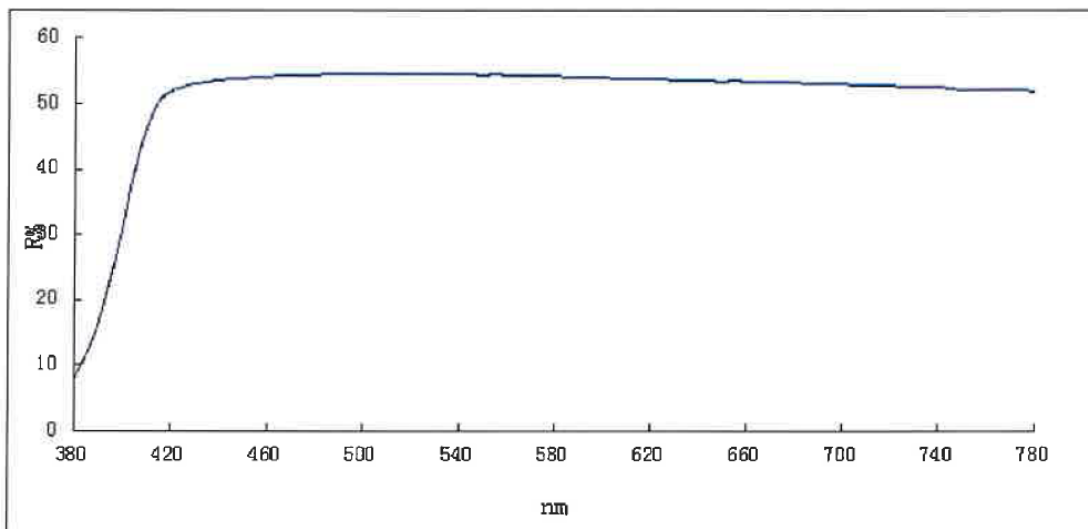


Sample 2# front side

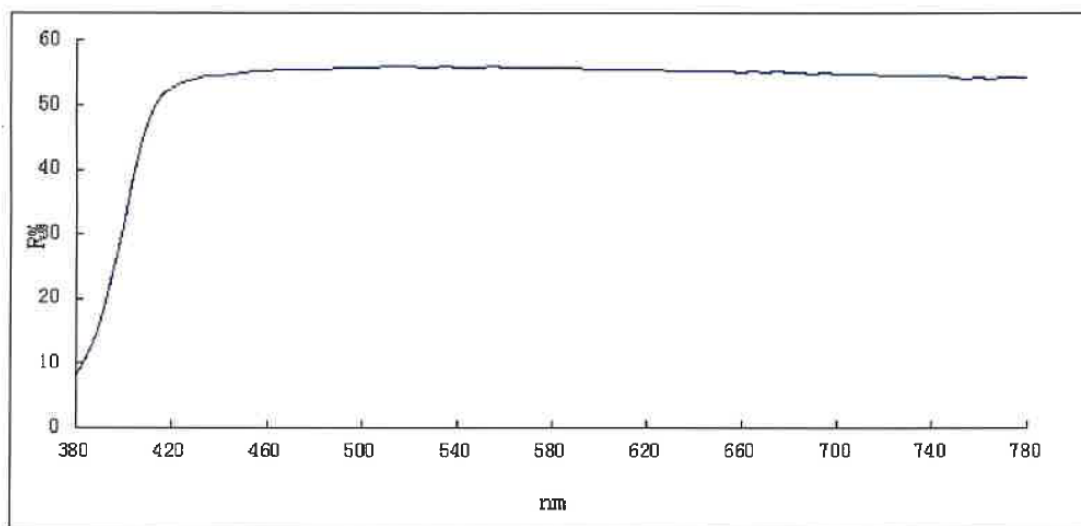


Sample 2# back side

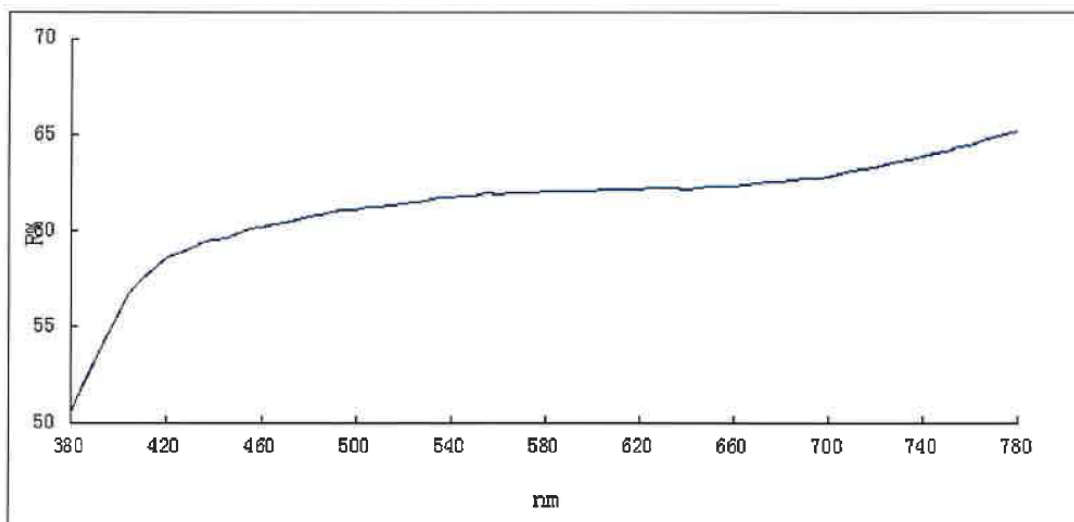
Annex 2 Reflectance spectrum



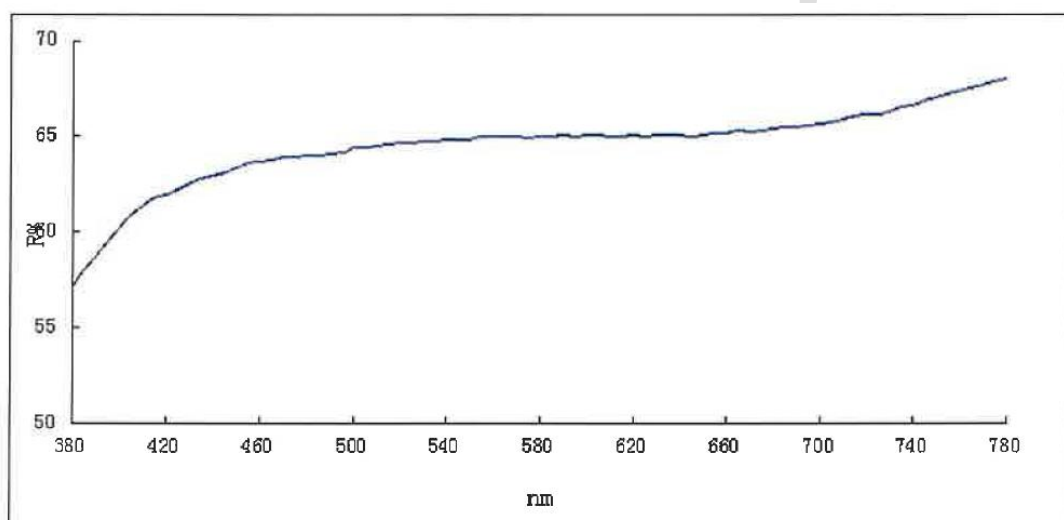
The reflectance spectrum of 1#-1



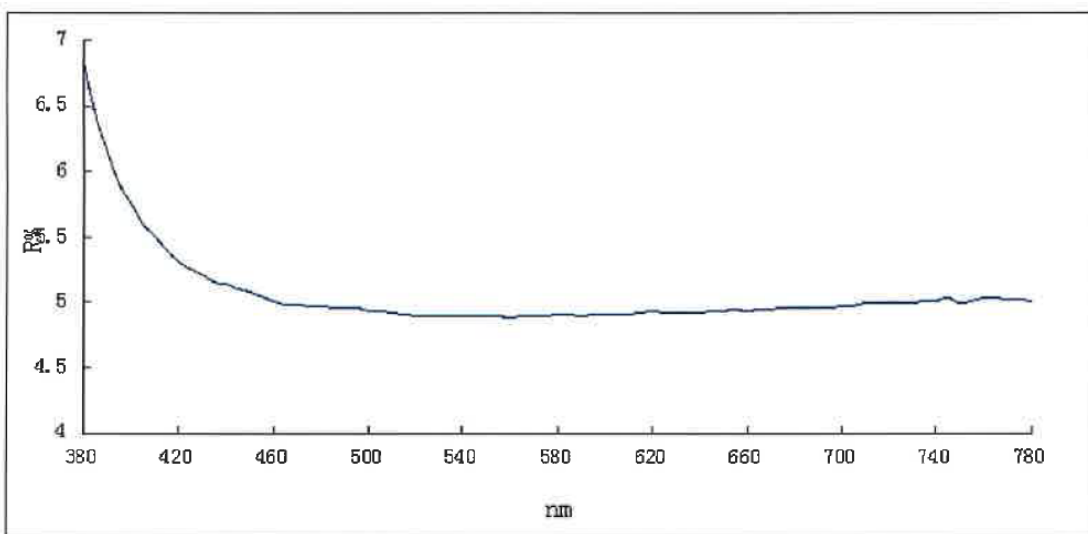
The reflectance spectrum of 2#-1



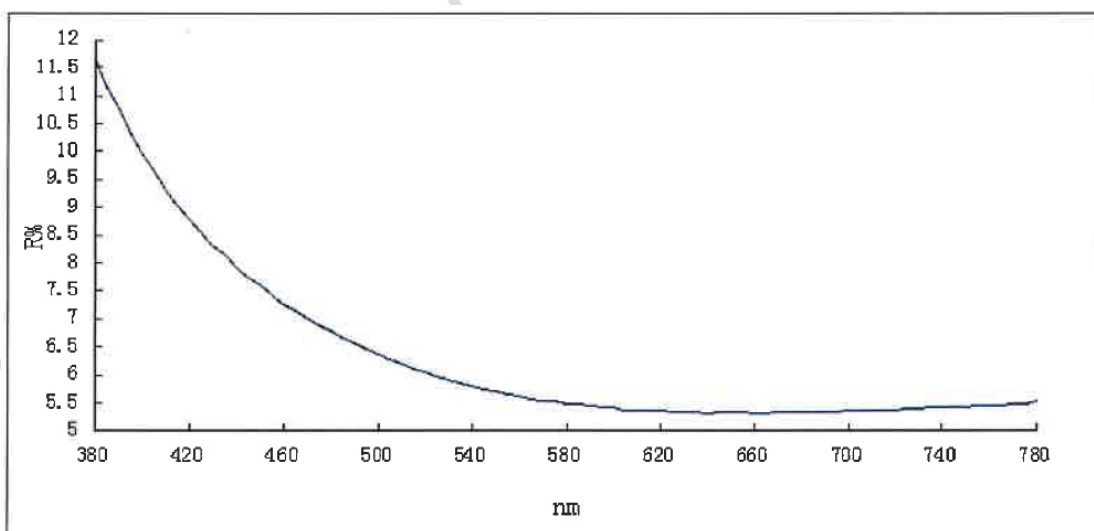
The reflectance spectrum of 1#-2



The reflectance spectrum of 2#-2



The reflectance spectrum of 1#-3



The reflectance spectrum of 2#-3

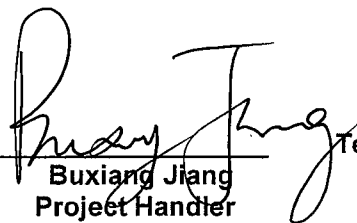


6 Summary

N/A

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
TÜV SÜD Group

Engineer:


Buxiang Jiang
Project Handler

Technical Report checked:


Ning Tang
Designated Reviewer

TPS_GCN_F_09 20E - Rev 1 2012-10-29

Project No: 704061704320
Rev.: 00
Date: 2018-02-28
Page: 9 of 9

Telephone : +86 21 6141-0100
Telefax : +86 21 6141-8600

<http://www.tuv-sud.cn>

TÜV SÜD Certification and Testing
(China) Co., Ltd. Shanghai branch
TÜV SÜD Group

No. 151 Heng Tong Road
Shanghai 200070
P. R. China



Product Service

CERTIFICATE

No. Z2 082429 0145 Rev. 22

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061704311-26

Valid until: 2026-07-21

Date, 2021-07-23

(Zhulin Zhang)

CERTIFICATE

No. Z2 082429 0145 Rev. 22

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5,
 RSM60-6-xxxM, xxx=275 to 340 in step of 5,
 RSM156-6-xxxM, xxx=410 to 455 in step of 5,
 RSM156-6-xxxMB, xxx=410 to 455 in step of 5,
 RSM144-6-xxxM, xxx=350 to 420 in step of 5,
 RSM144-6-xxxMB, xxx=350 to 420 in step of 5,
 RSM144-6-xxxM, xxx=425 to 450 in step of 5,
 RSM144-7-xxxM, xxx=425 to 465 in step of 5,
 RSM144-7-xxxMB, xxx=425 to 465 in step of 5,
 RSM132-6-xxxM, xxx=320 to 385 in step of 5,
 RSM132-6-xxxMB, xxx=320 to 385 in step of 5,
 RSM120-6-xxxM, xxx=295 to 350 in step of 5,
 RSM120-6-xxxMB, xxx=295 to 350 in step of 5,
 RSM120-6-xxxM, xxx=355 to 375 in step of 5,
 RSM120-7-xxxM, xxx=355 to 390 in step of 5,
 RSM120-7-xxxMB, xxx=355 to 390 in step of 5,
 RSM150-8-xxxM, xxx=465 to 515 in step of 5,
 RSM150-8-xxxMB, xxx=465 to 515 in step of 5,
 RSM40-8-xxxM, xxx=385 to 415 in step of 5,
 RSM40-8-xxxMB, xxx=385 to 415 in step of 5,
 RSM144-9-xxxM, xxx=525 to 555 in step of 5,
 RSM144-9-xxxMB, xxx=525 to 555 in step of 5,
 RSM132-9-xxxM, xxx=485 to 510 in step of 5,
 RSM132-9-xxxMB, xxx=485 to 510 in step of 5,
 RSM120-9-xxxM, xxx=440 to 465 in step of 5,
 RSM120-9-xxxMB, xxx=440 to 465 in step of 5,
 RSM120-8-xxxM, xxx=575 to 610 in step of 5,
 RSM120-8-xxxMB, xxx=575 to 610 in step of 5,
 RSM110-8-xxxM, xxx=525 to 560 in step of 5,
 RSM110-8-xxxMB, xxx=525 to 560 in step of 5,
 RSM156-6-xxxBMTG, xxx=410 to 455 in step of 5,
 RSM144-6-xxxBMTG, xxx=350 to 420 in step of 5,
 RSM132-6-xxxBMTG, xxx=320 to 385 in step of 5,
 RSM120-6-xxxBMTG, xxx=295 to 350 in step of 5,
 RSM120-6-xxxBMTG, xxx=355 to 375 in step of 5,
 RSM150-8-xxxBMTG, xxx=465 to 515 in step of 5,
 RSM144-9-xxxBMTG, xxx=525 to 555 in step of 5,
 RSM132-9-xxxBMTG, xxx=485 to 510 in step of 5,
 RSM120-9-xxxBMTG, xxx=440 to 465 in step of 5,
 RSM120-8-xxxBMTG, xxx=575 to 610 in step of 5,
 RSM110-8-xxxBMTG, xxx=525 to 560 in step of 5,
 RSM144-6-xxxBMTG, xxx=425 to 450 in step of 5,
 RSM144-7-xxxBMTG, xxx=425 to 465 in step of 5,
 RSM120-7-xxxBMTG, xxx=355 to 390 in step of 5,
 RSM40-8-xxxBMTG, xxx= 385 to 415 in step of 5,
 RSM132-8-xxxM, xxx=635 to 670 in step of 5,
 RSM132-8-xxxMB, xxx=635 to 670 in step of 5,
 RSM132-8-xxxBMTG, xxx=635 to 670 in step of 5
 xxx is standing for rated output power at STC



CERTIFICATE

No. Z2 082429 0145 Rev. 22

Parameters:

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Construction: | Framed, with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire Safety Class: | Class C according to UL790 |
| Test Laboratory: | Yangzhou Opto-Electrical Products Testing Institute, No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China. |

Tested according to:

- IEC 61215-1:2016
- IEC 61215-1-1:2016
- IEC 61215-2:2016
- IEC 61730-1:2016
- IEC 61730-2:2016
- EN 61215-1:2016
- EN 61215-1-1:2016
- EN 61215-2:2017
- EN IEC 61730-1:2018
- EN IEC 61730-1:2018/AC:2018-06
- EN IEC 61730-2:2018
- EN IEC 61730-2:2018/AC:2018-06



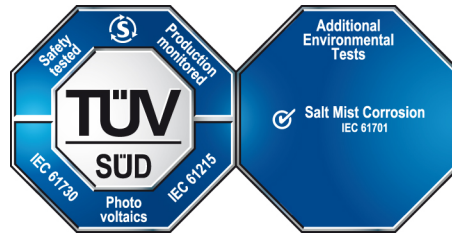
Product Service

CERTIFICATE

No. Z2 082429 0163 Rev. 07

Holder of Certificate: **Risen Energy Co.,Ltd**
Meilin, Ninghai,
315609 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



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

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704061900406-07

Valid until: 2026-08-31

Date, 2021-09-01

(Zhulin Zhang)

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFIKAT ◆ CERTIFICATE

CERTIFICATE

No. Z2 082429 0163 Rev. 07

Model(s):

RSM72-6-xxxM, xxx=330 to 405 in step of 5;
 RSM60-6-xxxM, xxx=275 to 340 in step of 5;
 RSM144-6-xxxM, xxx=350 to 420 in step of 5;
 RSM144-6-xxxMB, xxx=350 to 420 in step of 5;
 RSM144-6-xxxM, xxx=425 to 450 in step of 5;
 RSM144-7-xxxM, xxx=425 to 450 in step of 5;
 RSM144-7-xxxMB, xxx=425 to 450 in step of 5;
 RSM132-6-xxxM, xxx=320 to 385 in step of 5;
 RSM132-6-xxxMB, xxx=320 to 385 in step of 5;
 RSM120-6-xxxM, xxx=295 to 350 in step of 5;
 RSM120-6-xxxMB, xxx=295 to 350 in step of 5;
 RSM120-6-xxxM, xxx=355 to 375 in step of 5;
 RSM120-7-xxxM, xxx=355 to 375 in step of 5;
 RSM120-7-xxxMB, xxx=355 to 375 in step of 5;
 RSM156-6-xxxM, xxx= 410 to 455 in step of 5;
 RSM156-6-xxxMB, xxx=410 to 455 in step of 5;
 RSM150-8-xxxM, xxx=465 to 515 in step of 5;
 RSM150-8-xxxMB, xxx=465 to 515 in step of 5;
 RSM40-8-xxxM, xxx=385 to 415 in step of 5;
 RSM40-8-xxxMB, xxx=385 to 415 in step of 5;
 RSM144-9-xxxM, xxx=525 to 555 in step of 5;
 RSM144-9-xxxMB, xxx=525 to 555 in step of 5;
 RSM132-9-xxxM, xxx=485 to 510 in step of 5;
 RSM132-9-xxxMB, xxx=485 to 510 in step of 5;
 RSM120-9-xxxM, xxx=440 to 465 in step of 5;
 RSM120-9-xxxMB, xxx=440 to 465 in step of 5;
 RSM132-8-xxxM, xxx=635 to 670 in step of 5;
 RSM120-8-xxxM, xxx=575 to 610 in step of 5;
 RSM110-8-xxxM, xxx=525 to 560 in step of 5;
 RSM156-6-xxxBMTG, xxx=410 to 455 in step of 5;
 RSM144-6-xxxBMTG, xxx=350 to 450 in step of 5;
 RSM144-7-xxxBMTG, xxx=425 to 450 in step of 5;
 RSM132-6-xxxBMTG, xxx=320 to 385 in step of 5;
 RSM120-6-xxxBMTG, xxx=295 to 375 in step of 5;
 RSM120-7-xxxBMTG, xxx=355 to 375 in step of 5;
 RSM150-8-xxxBMTG, xxx=465 to 515 in step of 5;
 RSM144-9-xxxBMTG, xxx=525 to 555 in step of 5;
 RSM132-9-xxxBMTG, xxx=485 to 510 in step of 5;
 RSM120-9-xxxBMTG, xxx=440 to 465 in step of 5;
 RSM40-8-xxxBMTG, xxx=385 to 415 in step of 5;
 xxx is standing for rated output power at STC

Parameters:

| | |
|----------------------------|----------------------------------------------------|
| Construction: | Framed with Junction box, Cable and Connectors. |
| Safety Class: | Class II |
| Maximum System Voltage: | 1500V DC |
| Fire safety Class: | Class C according to UL790 |
| Test method of salt mist : | Test method 6 |

Tested according to:

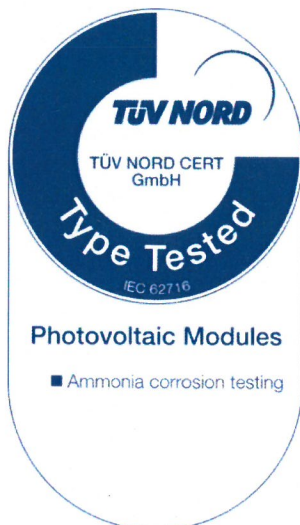
IEC 61215-1:2016
 IEC 61215-1-1:2016
 IEC 61215-2:2016
 IEC 61730-1:2016
 IEC 61730-2:2016
 IEC 61701:2020

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Risen Energy Co., Ltd.
Tashan Industry Zone, Meilin Town, Ninghai County
Ningbo City, Zhejiang Province, 315609
P.R. China

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



Description of product (details see Annex 2):

PV Modules with 6" Mono-crystalline Silicon Solar Cells

PV Modules with 7" Mono-crystalline Silicon Solar Cells

PV Modules with 8" Mono-crystalline Silicon Solar Cells

PV Modules with 6" Poly-crystalline Silicon Solar Cells

PV Modules with 6" Cast Mono-crystalline Silicon Solar Cells

Valid until: 2026-07-26

| | |
|-------------------------------|-------------------------------------------|
| Certification program: | P12-VA-01 Rev. 17 09.20 |
| Certification fundamental(s): | IEC 62716:2013 / EN 62716:2013 + AC:2014. |
| Registered No.: | 44 780 19 406749 - 391R7A1M7 |
| Manufacturer: | see Annex 1 |
| Test Report No.: | 492010677.019 |
| File No.: | PVP05006/21P-01 |



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2021-08-02

Please also pay attention to the information stated overleaf.

Manufacturer:

Manufacturer 1: **Risen Energy Co., Ltd.**
No.23 Middle, Xingke Road, Ninghai, 315609,
Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Factory inspection report no.: 862010150.009

Manufacturer 2: **Risen Energy (CHANGZHOU) Co., Ltd.**
No.1, Shuinan Road, Industrial Concentration Area, Zhixi Town,
Jintan District, 213251, Changzhou City, PEOPLE'S REPUBLIC OF
CHINA

Factory inspection report no.: 862010430.002

Manufacturer 3: **Risen Energy (YIWU) Co., Ltd.**
No.599 Sufu Road, Suxi Town, Yiwu City, Zhejiang Province, China

Factory inspection report no.: 862010464.002

Manufacturer 4: **Risen Energy (Anhui) Co., Ltd.**
Chuzhou Avenue, Economic and Technological Development Zone,
239000 Chuzhou City, Anhui Province, PEOPLE'S REPUBLIC OF
CHINA

Factory inspection report no.: 862010547.001

Remark:

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



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Description of product(s):

Module types:

PV Modules with 6" Mono-crystalline Silicon Solar Cells

72 cells: RSM72-6-xxxM (xxx=330 - 405, in increments of 5)
60 cells: RSM60-6-xxxM (xxx=275 - 340, in increments of 5)
156 cells: RSM156-6-xxxM (xxx=410 - 455, in increments of 5)
156 cells: RSM156-6-xxxMB (xxx=410 - 455, in increments of 5)
144 cells: RSM144-6-xxxM (xxx=350 - 450, in increments of 5)
144 cells: RSM144-6-xxxMB (xxx=350 - 450, in increments of 5)
132 cells: RSM132-6-xxxM (xxx=320 - 385, in increments of 5)
132 cells: RSM132-6-xxxMB (xxx=320 - 385, in increments of 5)
120 cells: RSM120-6-xxxM (xxx=295 - 375, in increments of 5)
120 cells: RSM120-6-xxxMB (xxx=295 - 375, in increments of 5)
144 cells: RSM144-7-xxxM (xxx=425 - 465, in increments of 5)
144 cells: RSM144-7-xxxMB (xxx=425 - 465, in increments of 5)
120 cells: RSM120-7-xxxM (xxx=355 - 375, in increments of 5)
120 cells: RSM120-7-xxxMB (xxx=355 - 375, in increments of 5)

Maximum system voltage: 1500V
Fuse rating: 20A
Application class: Class A
Electrical protection class: Class II

Module types:

PV Modules with 7" Mono-crystalline Silicon Solar Cells

144 cells: RSM144-9-xxxM (xxx=525 - 555, in increments of 5)
144 cells: RSM144-9-xxxMB (xxx=525 - 555, in increments of 5)
132 cells: RSM132-9-xxxM (xxx=485 - 510, in increments of 5)
132 cells: RSM132-9-xxxMB (xxx=485 - 510, in increments of 5)
120 cells: RSM120-9-xxxM (xxx=440 - 465, in increments of 5)
120 cells: RSM120-9-xxxMB (xxx=440 - 465, in increments of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
Application class: Class A
Electrical protection class: Class II

| | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module types: | PV Modules with 8" Mono-crystalline Silicon Solar Cells 150 cells: RSM150-8-xxxM (xxx=465 - 515, in increments of 5) 150 cells: RSM150-8-xxxMB (xxx=465 - 515, in increments of 5) 40 cells: RSM40-8-xxxM (xxx=385 - 415, in increments of 5) 40 cells: RSM40-8-xxxMB (xxx=385 - 415, in increments of 5) 120 cells: RSM120-8-xxxM (xxx=575 - 610, in increments of 5) 120 cells: RSM120-8-xxxMB (xxx=575 - 610, in increments of 5) 110 cells: RSM110-8-xxxM (xxx=525 - 560, in increments of 5) 110 cells: RSM110-8-xxxMB (xxx=525 - 560, in increments of 5) 132 cells: RSM132-8-xxxM (xxx=635 - 670, in increments of 5) 132 cells: RSM132-8-xxxMB (xxx=635 - 670, in increments of 5) |
| Maximum system voltage: | 1500V |
| Fuse rating: | 20A or 30A |
| Application class: | Class A |
| Electrical protection class: | Class II |

| | |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module types: | PV Modules with 6" Poly-crystalline Silicon Solar Cells: 72 cells: RSM72-6-xxxP (xxx=315 - 355 in increments of 5) 60 cells: RSM60-6-xxxP (xxx=260 - 295, in increments of 5) 144 cells: RSM144-6-xxxP (xxx=330 - 365, in increments of 5) 120 cells: RSM120-6-xxxP (xxx=275 - 305, in increments of 5) |
| Maximum system voltage: | 1500V |
| Fuse rating: | 20A |
| Application class: | Class A |
| Electrical protection class: | Class II |



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Module types:

PV Modules with 6"Cast Mono-crystalline Silicon Solar Cells:

72 cells: RSM72-6-xxxP (xxx=360 - 395, in increments of 5)

60 cells: RSM60-6-xxxP (xxx=300 - 330, in increments of 5)

144 cells: RSM144-6-xxxP (xxx=370 - 400, in increments of 5)

132 cells: RSM132-6-xxxP (xxx=340 - 370, in increments of 5)

120 cells: RSM120-6-xxxP (xxx=310 - 335, in increments of 5)

Maximum system voltage: 1500V

Fuse rating: 20A

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.



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