

Technical Report No.: 704062210703-24

Date: 2026-01-21

Client:	Name:	Trina Solar Co., Ltd. (Customer No.: 070321)
	Address:	No. 2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
	Contact person:	Mr Zhangang Zhao
Manufacturer:	Name:	Trina Solar Co., Ltd. (Customer No.: 070321)
	Address:	No. 2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
	Contact person:	Mr Zhangang Zhao
Factories:	Name:	Trina Solar Co., Ltd. (Customer No.: 070321)
	Address:	No. 2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
	Contact person:	Mr Zhangang Zhao
	Name:	Trina Solar Science & Technology (Thailand) Ltd. (Customer No.: 096822)
	Address:	No.7/496 Moo.6 Tambol Mabyangporn, Amphur Pluakdaeng, Rayong Province 21140, THAILAND
	Name:	Trina Solar(Suqian)Technology Co., Ltd. (Customer No.: 104940)
Address:	1599 Guangzhou Road, Suqian Economic and Technological Development Zone, 223814 Suqian	



City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar Yiwu Technology Co., Ltd.
(Customer No.: 109402)

Address: No.801, Longqi Road, Suxi Town, 322009 Yiwu
City, Zhejiang Province, PEOPLE'S REPUBLIC OF CHINA

Name: Inner Mongolia Tiansheng New Technology Co.,
Ltd. (Customer No.: 117928)

Address: Room 109, Management Committee, Dalu Coal
Chemical Base, Zhungeer Banner, 017100 Ordos,
Inner Mongolia Autonomous Region, PEOPLE'S
REPUBLIC OF CHINA

Name: Trina Solar (Yancheng) New Energy Co., Ltd.
(Customer No.: 118708)

Address: Building 1, No.66, Jiuhuashan Road, Yancheng
Economic and Technological Development Zone,
224007 Yancheng City, Jiangsu Province,
PEOPLE'S REPUBLIC OF CHINA

Name: Zhejiang Beyondsun Green Energy Technology
Co., Ltd. (Customer No.: 109511)

Address: No.888 Zhili Section of G318 Zhili Town, 313008
Huzhou City, Zhejiang Province, PEOPLE'S
REPUBLIC OF CHINA

Name: Trina Solar (Huai an) Technology Co., Ltd.
(Customer No.: 120685)

Address: No. 189, Shenzhen East Road, Economic and
Technological Development Zone, 223300 Huai'an,



Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar (Qinghai) Science & Technology Co., Ltd. (Customer No.: 120695)

Address: No. 17, Planning Road 5, Shangxinzhuan Town, Huangzhong District, 811600 Xining City, Qinghai Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar (Dongtai) Science & Technology Co., Ltd. (Customer No.: 125085)

Address: No.1 East Second Road, Dongtai Economic Development District, 224299 Yancheng City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar (Yancheng Tinghu) Science & Technology Co., Ltd. (Customer No.: 125188)

Address: (8), No.99-1 Yancai Road, Nanyang Town, Tinghu District, 224052 Yancheng City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar (Suqian) Co., Ltd. (Customer No.: 125304)

Address: No.499 Nanjing Road, Economic and Technological Development Zone, 223814 Suqian City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA

Name: Trina Solar (Yangzhou) Science & Technology Co., Ltd. (Customer No.: 125944)

Address: No. 188, Xingxi Road, Puxi Town, Yangzhou Economic and Technological Development Zone,

211404 Yangzhou, Jiangsu Province, PEOPLE'S
REPUBLIC OF CHINA

Name: PT TRINA MAS AGRA INDONESIA
(Customer No.: 127198)

Address: Jalan Indraprasta Nomor 6, Kawasan Industri
Kendal, Desa/Kelurahan, Wonorejo,
Kec.Kaliwungu, 51372 Kab. Kendal, Provinsi Jawa
Tengah, INDONESIA

Name: T1 G1 Dallas Solar Module (Trina) LLC
(Customer No.: 128346)

Address: 1200 North Sunrise Road, Wilmer, TX 75172, USA

Test object: Product: Mono and Poly -crystalline Silicon Photovoltaic (PV)
Module

Model: See clause 1.4

Trade mark: 

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

Purpose of
examination:

- ☒ Testing (☒ visual / ☒ partial) for compliance with specified requirements to assess conformity with the German Product Safety Act - ProdSG (latest version)
- ☐ Testing (visual / partial) for compliance with specified requirements to assess conformity with the essential safety and health requirements of the following European Directives / Regulations:
 - ☐ Low Voltage Directive 2014/35/EU
 - ☐ Machinery Directive 2006/42/EC ☐ Machinery Regulation (EU) 2023/1230

- ☐ General Product Safety Directive 2001/95/EC ☐ General Product Safety Regulation (EU)2023/988 ☐ Radio Equipment Directive 2014/53/EU Art. 3.1(a)
☐ Battery Regulation (EU) 2023/1542 Testing and evaluation (☐ visual / ☐ partial) according to the test specification

Test result: ☒ The test results show that the presented product is in compliance with the above listed test specifications.

☐ The present test results show that after removal of the points of non-compliance as listed in the report and an appropriate retest the product will be in compliance with the above listed test specifications.

A retest of a modified product is necessary.

- ☐ This report is the result of a visual examination.
☐ In case of a full testing further non-compliances can be located.
☐ In case of a full testing non-compliances can be located.

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see Testing, Certification, Validation and Verification Regulations, chapter A-3.3.

1. Description of the test object

1.1 Picture(s)

N/A

1.2 Function

Manufacturer's specification for intended use:

The PV modules for electricity generation systems with max. voltage of 1500 V DC or 1000 V DC.

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1.3 Consideration of the foreseeable use

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

*

1.4 Technical Data

Model: 1500V system voltage PV modules:
mono series with 157 x 157 (mm) and 156.75 x 156.75 (mm) solar cells:
72 cells:
TSM-xxxDEG14(II), TSM-xxxDEG14.07(II), TSM-xxxDEG14.20(II),
TSM-xxxDEG14.27(II), TSM-xxxDEG14.28(II), TSM-xxxDEG14.29(II),
TSM-xxxDEG14.40(II), TSM-xxxDEG14.47(II) (xxx=330-390, in steps of 5).
60 cells:
TSM-xxxDEG5(II), TSM-xxxDEG5.07(II), TSM-xxxDEG5.20(II),
TSM-xxxDEG5.27(II), TSM-xxxDEG5.28(II), TSM-xxxDEG5.29(II),
TSM-xxxDEG5.40(II), TSM-xxxDEG5.47(II) (xxx=275-325, in steps of 5).

mono series with 158.75 x 158.75 (mm) solar cells:
72 cells:
TSM-xxxDEG15(II), TSM-xxxDEG15.07(II),
TSM-xxxDEG15.20(II), TSM-xxxDEG15.27(II),
TSM-xxxDEG15.28(II), TSM-xxxDEG15.29(II), TSM-xxxDEG15.40(II),
TSM-xxxDEG15.47(II) (xxx=330-380, in steps of 5).
60 cells:
TSM-xxxDEG6(II), TSM-xxxDEG6.07(II),
TSM-xxxDEG6.20(II), TSM-xxxDEG6.27(II),
TSM-xxxDEG6.28(II), TSM-xxxDEG6.29(II), TSM-xxxDEG6.40(II),
TSM-xxxDEG6.47(II) (xxx=275-315, in steps of 5).

mono series with 157 x 157 (mm) bifacial cell:
72 cells:
TSM-xxxDEG14C(II), TSM-xxxDEG14C.07(II),
TSM-xxxDEG14C.20(II), TSM-xxxDEG14C.27(II),

TSM-xxxDEG14C.28(II), TSM-xxxDEG14C.29(II)
(xxx=335-370, in steps of 5).

60 cells:

TSM-xxxDEG5C(II), TSM-xxxDEG5C.07(II),
TSM-xxxDEG5C.20(II), TSM-xxxDEG5C.27(II),
TSM-xxxDEG5C.28(II), TSM-xxxDEG5C.29(II)
(xxx=285-305, in steps of 5).

mono series with 158.75 x 158.75 (mm) bifacial cell:

72 cells:

TSM-xxxDEG15C(II), TSM-xxxDEG15C.07(II),
TSM-xxxDEG15C.20(II), TSM-xxxDEG15C.27(II),
TSM-xxxDEG15C.28(II), TSM-xxxDEG15C.29(II)
(xxx=335-350, in steps of 5).

60 cells:

TSM-xxxDEG6C(II), TSM-xxxDEG6C.07(II),
TSM-xxxDEG6C.20(II), TSM-xxxDEG6C.27(II),
TSM-xxxDEG6C.28(II), TSM-xxxDEG6C.29(II)
(xxx=285-295, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting cell:

144 cells:

TSM-xxxDEG14H(II), TSM-xxxDEG14H.07(II),
TSM-xxxDEG14H.20(II), TSM-xxxDEG14H.27(II),
TSM-xxxDEG14H.28(II), TSM-xxxDEG14H.29(II), TSM-
xxxDEG14H.40(II),
TSM-xxxDEG14H.47(II) (xxx=345-395, in steps of 5).

120 cells:

TSM-xxxDEG5H(II), TSM-xxxDEG5H.07(II),
TSM-xxxDEG5H.20(II), TSM-xxxDEG5H.27(II),
TSM-xxxDEG5H.28(II), TSM-xxxDEG5H.29(II), TSM-
xxxDEG5H.40(II),
TSM-xxxDEG5H.47(II) (xxx=290-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting cell:

144 cells:

TSM-xxxDEG15H(II), TSM-xxxDEG15H.07(II),
TSM-xxxDEG15H.20(II), TSM-xxxDEG15H.27(II),
TSM-xxxDEG15H.28(II), TSM-xxxDEG15H.29(II), TSM-
xxxDEG15H.40(II),
TSM-xxxDEG15H.47(II) (xxx=380-410, in steps of 5).

120 cells:

TSM-xxxDEG6H(II), TSM-xxxDEG6H.07(II),
TSM-xxxDEG6H.20(II), TSM-xxxDEG6H.27(II),
TSM-xxxDEG6H.28(II), TSM-xxxDEG6H.29(II), TSM-
xxxDEG6H.40(II),

TSM-xxxDEG6H.47(II) (xxx=310-340, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting MBB cell:
(or module type with MBB bifacial cell for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG14M(II), TSM-xxxDEG14M.07(II),
TSM-xxxDEG14M.20(II), TSM-xxxDEG14M.27(II), TSM-
xxxDEG14M.28(II), TSM-xxxDEG14M.29(II), TSM-
xxxDEG14M.40(II), TSM-xxxDEG14M.47(II) (xxx=345-385, in
steps of 5).

120 cells:

TSM-xxxDEG5M(II), TSM-xxxDEG5M.07(II),
TSM-xxxDEG5M.20(II), TSM-xxxDEG5M.27(II),
TSM-xxxDEG5M.28(II), TSM-xxxDEG5M.29(II), TSM-
xxxDEG5M.40(II),
TSM-xxxDEG5M.47(II) (xxx=290-320, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting MBB cells:
(or module type with MBB bifacial cell for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG15M(II), TSM-xxxDEG15M.07(II), TSM-
xxxDEG15M.20(II),
TSM-xxxDEG15M.27(II), TSM-xxxDEG15M.28(II), TSM-
xxxDEG15M.29(II), TSM-xxxDEG15M.40(II), TSM-
xxxDEG15M.47(II) (xxx=350-420, in steps of 5).

120 cells:

TSM-xxxDEG6M(II), TSM-xxxDEG6M.07(II),
TSM-xxxDEG6M.20(II), TSM-xxxDEG6M.27(II),
TSM-xxxDEG6M.28(II), TSM-xxxDEG6M.29(II), TSM-
xxxDEG6M.40(II),
TSM-xxxDEG6M.47(II) (xxx=295-350, in steps of 5).

mono series with 166.0 x 83.0 (mm) half cutting MBB cells:
(or module type with MBB bifacial cell for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG17M(II), TSM-xxxDEG17M.07(II), TSM-
xxxDEG17M.20(II),
TSM-xxxDEG17M.27(II), TSM-xxxDEG17M.28(II), TSM-
xxxDEG17M.29(II), TSM-xxxDEG17M.40(II), TSM-
xxxDEG17M.47(II) (xxx=425-460, in steps of 5).

120 cells:

TSM-xxxDEG8M(II), TSM-xxxDEG8M.07(II), TSM-
xxxDEG8M.20(II),

TSM-xxxDEG8M.27(II), TSM-xxxDEG8M.28(II), TSM-xxxDEG8M.29(II),
TSM-xxxDEG8M.40(II), TSM-xxxDEG8M.47(II)
(xxx=355-380, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting bifacial cell:

144 cells:

TSM-xxxDEG14HC(II), TSM-xxxDEG14HC.07(II), TSM-xxxDEG14HC.20(II),
TSM-xxxDEG14HC.27(II), TSM-xxxDEG14HC.28(II),
TSM-xxxDEG14HC.29(II) (xxx=350-395, in steps of 5).

120 cells:

TSM-xxxDEG5HC(II), TSM-xxxDEG5HC.07(II), TSM-xxxDEG5HC.20(II),
TSM-xxxDEG5HC.27(II), TSM-xxxDEG5HC.28(II),
TSM-xxxDEG5HC.29(II) (xxx=295-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting bifacial cell:

144 cells:

TSM-xxxDEG15HC(II), SM-xxxDEG15HC.07(II), TSM-xxxDEG15HC.20(II),
TSM-xxxDEG15HC.27(II), TSM-xxxDEG15HC.28(II),
TSM-xxxDEG15HC.29(II) (xxx=350-410, in steps of 5).

120 cells:

TSM-xxxDEG6HC(II), TSM-xxxDEG6HC.07(II), TSM-xxxDEG6HC.20(II),
TSM-xxxDEG6HC.27(II), TSM-xxxDEG6HC.28(II),
TSM-xxxDEG6HC.29(II) (xxx=295-340, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG14MC(II), TSM-xxxDEG14MC.07(II), TSM-xxxDEG14MC.20(II),
TSM-xxxDEG14HMC.20(II), TSM-xxxDEG14MC.27(II),
TSM-xxxDEG14MC.28(II), TSM-xxxDEG14MC.29(II)
(xxx=350-395, in steps of 5).

120 cells:

TSM-xxxDEG5MC(II), TSM-xxxDEG5MC.07(II), TSM-xxxDEG5MC.20(II),
TSM-xxxDEG5MC.27(II), TSM-xxxDEG5MC.28(II),
TSM-xxxDEG5MC.29(II) (xxx=295-330, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG15MC(II), TSM-xxxDEG15MC.07(II), TSM-xxxDEG15MC.20(II), TSM-xxxDEG15MC.27(II), TSM-xxxDEG15MC.28(II), TSM-xxxDEG15MC.29(II) (xxx=350-425, in steps of 5).

120 cells:

TSM-xxxDEG6MC(II), TSM-xxxDEG6MC.07(II), TSM-xxxDEG6MC.20(II), TSM-xxxDEG6MC.27(II), TSM-xxxDEG6MC.28(II), TSM-xxxDEG6MC.29(II) (xxx=295-350, in steps of 5).

mono series with 166.0 x 83.0 (mm) half cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG17MC(II), TSM-xxxDEG17MC.07(II), TSM-xxxDEG17MC.20(II), TSM-xxxDEG17MC.27(II), TSM-xxxDEG17MC.28(II), TSM-xxxDEG17MC.29(II) (xxx=425-460, in steps of 5).

120 cells:

TSM-xxxDEG8MC(II), TSM-xxxDEG8MC.07(II), TSM-xxxDEG8MC.20(II), TSM-xxxDEG8MC.27(II), TSM-xxxDEG8MC.28(II), TSM-xxxDEG8MC.29(II) (xxx=355-380, in steps of 5).

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

150 cells:

TSM-xxxDEG18MC(II), TSM-xxxDEG18MC.07(II), TSM-xxxDEG18MC.20(II), TSM-xxxDEG18MC.27(II), TSM-xxxDEG18MC.28(II), TSM-xxxDEG18MC.29(II), TSM-xxxDEG18MC.20W(II) (xxx=460-510, in steps of 5).

120 cells:

TSM-xxxDEG9C.20, TSM-xxxDEG9C.27, TSM-xxxDEG9C.28, TSM-xxxDEG9C.29 (xxx=370-405, in steps of 5).

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

150 cells:

TSM-xxxDEG18M(II), TSM-xxxDEG18M.07(II), TSM-xxxDEG18M.20(II), TSM-xxxDEG18M.27(II), TSM-xxxDEG18M.28(II), TSM-xxxDEG18M.29(II) (xxx=460-510, in steps of 5).

120 cells:

TSM-xxxDEG9.20, TSM-xxxDEG9.27, TSM-xxxDEG9.28, TSM-xxxDEG9.29

(xxx=370-405, in steps of 5).

mono series with 166 x 83 (mm) half cutting MBB bifacial cell
(for cells splicing technology):

156 cells:

TSM-xxxDEG17XC.20(II), TSM-xxxDEG17XC.27(II),
TSM-xxxDEG17XC.28(II), TSM-xxxDEG17XC.29(II)
(xxx=445-490, in steps of 5).

mono series with 166 x 83 (mm) half cutting MBB bifacial cell
(for cells splicing technology)

(Module Type for rear side with white EVA or Glass white):

156 cells:

TSM-xxxDEG17X.20(II), TSM-xxxDEG17X.27(II), TSM-
xxxDEG17X.28(II),
TSM-xxxDEG17X.29(II) (xxx=445-490, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial
cell:

120 cells:

TSM-xxxDEG20C.20, TSM-xxxDEG20C.27, TSM-
xxxDEG20C.28,
TSM-xxxDEG20C.29, TSM-xxxDEG20C.20W, TSM-
xxxDEG20C.70
(xxx=570-610, in steps of 5).

110 cells:

TSM-xxxDEG19C.20, TSM-xxxDEG19C.27, TSM-
xxxDEG19C.28,
TSM-xxxDEG19C.29, TSM-xxxDEG19C.20W
(xxx=525-555, in steps of 5).

132 cells:

TSM-xxxDEG21C.20, TSM-xxxDEG21C.27, TSM-
xxxDEG21C.28,
TSM-xxxDEG21C.29, TSM-xxxDEG21C.20W, TSM-
xxxDEG21C.70
(xxx=625-675, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial
cell:

(Module Type for rear side with white EVA or Glass white)

120 cells:

TSM-xxxDEG20.20, TSM-xxxDEG20.27, TSM-xxxDEG20.28,
TSM-xxxDEG20.29 (xxx=575-605, in steps of 5).

110 cells:

TSM-xxxDEG19.20, TSM-xxxDEG19.27, TSM-xxxDEG19.28,
TSM-xxxDEG19.29 (xxx=525-555, in steps of 5).

mono series with 182.0 x 91.0/91.875 (mm) half cutting MBB
bifacial cell:

144 cells:

TSM-xxxDEG18C.20, TSM-xxxDEG18C.27, TSM-
xxxDEG18C.28,
TSM-xxxDEG18C.29, TSM-xxxDEG18C.20W
(xxx=520-555, in steps of 5).

120 cells:

TSM-xxxDEG10C.20, TSM-xxxDEG10C.25,
TSM-xxxDEG10C.27, TSM-xxxDEG10C.28,
TSM-xxxDEG10C.29 (xxx=425-450, in steps of 5).

mono series with 182.0 x 91.0/91.875 (mm) half cutting MBB
bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG18.20, TSM-xxxDEG18.27, TSM-xxxDEG18.28,
TSM-xxxDEG18.29 (xxx=520-555, in steps of 5).

120 cells:

TSM-xxxDEG10.20, TSM-xxxDEG10.27, TSM-xxxDEG10.28,
TSM-xxxDEG10.29 (xxx=425-450, in steps of 5).

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG19RC.20, TSM-xxxDEG19RC.25,
TSM-xxxDEG19RC.27, TSM-xxxDEG19RC.28,
TSM-xxxDEG19RC.29, TSM-xxxDEG19RC.B0,
TSM-xxxDEG19RC.B5, TSM-xxxDEG19RC.B7,
TSM-xxxDEG19RC.B8, TSM-xxxDEG19RC.B9,
TSM-xxxDEG19RC.20W, TSM-xxxDEG19RC.70
(xxx=540-590, in steps of 5)

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

132 cells:

TSM-xxxDEG19R.20, TSM-xxxDEG19R.25,
TSM-xxxDEG19R.27, TSM-xxxDEG19R.28,
TSM-xxxDEG19R.29, TSM-xxxDEG19R.B0,
TSM-xxxDEG19R.B5, TSM-xxxDEG19R.B7,
TSM-xxxDEG19R.B8, TSM-xxxDEG19R.B9,
(xxx=540-590, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG9RC.B0, TSM-xxxDEG9RC.B5,

TSM-xxxDEG9RC.B7, TSM-xxxDEG9RC.B8,
TSM-xxxDEG9RC.B9, TSM-xxxDEG9RC.20,
TSM-xxxDEG9RC.25, TSM-xxxDEG9RC.28,
TSM-xxxDEG9RC.27, TSM-xxxDEG9RC.29,
TSM-xxxDEG9RC.27W (xxx=395-435, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)
144 cells:

TSM-xxxDEG9R.B0, TSM-xxxDEG9R.B5,
TSM-xxxDEG9R.B7, TSM-xxxDEG9R.B8,
TSM-xxxDEG9R.B9, TSM-xxxDEG9R.20,
TSM-xxxDEG9R.25, TSM-xxxDEG9R.27,
TSM-xxxDEG9R.28, TSM-xxxDEG9R.29,
TSM-xxxDEG9R.20W, TSM-xxxDEG9R.28W
(xxx=395-435, in steps of 5)

mono series with 158.75 x 52.9 (mm) 1/3 cutting MBB bifacial cell:

252 cells:
TSM-xxxDEG15VC.20(II), TSM-xxxDEG15VC.27(II), TSM-
xxxDEG15VC.28(II),
TSM-xxxDEG15VC.29(II) (xxx=465-490, in steps of 5).

mono series with 157 x 157 (mm) N type MBB bifacial cell:
72 cells:

TSM-xxxNEG14C(II), TSM-xxxNEG14C.07(II), TSM-
xxxNEG14C.20(II),
TSM-xxxNEG14C.27(II), TSM-xxxNEG14C.28(II), TSM-
xxxNEG14C.29(II) (xxx=350-370, in steps of 5).

60 cells:

TSM-xxxNEG5C(II), TSM-xxxNEG5C.07(II), TSM-
xxxNEG5C.20(II),
TSM-xxxNEG5C.27(II), TSM-xxxNEG5C.28(II), TSM-
xxxNEG5C.29(II) (xxx=295-305, in steps of 5).

mono series with 158.75 x 158.75 (mm) N type MBB bifacial cell:

72 cells:

TSM-xxxNEG15C(II), TSM-xxxNEG15C.07(II), TSM-
xxxNEG15C.20(II),
TSM-xxxNEG15C.27(II), TSM-xxxNEG15C.28(II), TSM-
xxxNEG15C.29(II) (xxx=350-370, in steps of 5).

60 cells:

TSM-xxxNEG6C(II), TSM-xxxNEG6C.07(II), TSM-
xxxNEG6C.20(II),

TSM-xxxNEG6C.27(II), TSM-xxxNEG6C.28(II), TSM-xxxNEG6C.29(II) (xxx=295-305, in steps of 5).

mono series with 161.7 x 161.7 (mm) N type MBB bifacial cell:

72 cells:

TSM-xxxNEG16C(II), TSM-xxxNEG16C.07(II), TSM-xxxNEG16C.20(II),

TSM-xxxNEG16C.27(II), TSM-xxxNEG16C.28(II), TSM-xxxNEG16C.29(II) (xxx=350-410, in steps of 5).

60 cells:

TSM-xxxNEG7C(II), TSM-xxxNEG7C.07(II), TSM-xxxNEG7C.20(II),

TSM-xxxNEG7C.27(II), TSM-xxxNEG7C.28(II), TSM-xxxNEG7C.29(II) (xxx=295-340, in steps of 5).

mono series with 157 x 78.5 (mm) half cutting N type MBB bifacial cell:

144 cells:

TSM-xxxNEG14MC(II), TSM-xxxNEG14MC.07(II), TSM-xxxNEG14MC.20(II), TSM-xxxNEG14MC.27(II), TSM-xxxNEG14MC.28(II), TSM-xxxNEG14MC.29(II) (xxx=350-380, in steps of 5).

120 cells:

TSM-xxxNEG5MC(II), TSM-xxxNEG5MC.07(II), TSM-xxxNEG5MC.20(II),

TSM-xxxNEG5MC.27(II), TSM-xxxNEG5MC.28(II), TSM-xxxNEG5MC.29(II) (xxx=295-315, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting N type MBB bifacial cell:

144 cells:

TSM-xxxNEG15MC(II), TSM-xxxNEG15MC.07(II), TSM-xxxNEG15MC.20(II), TSM-xxxNEG15MC.27(II), TSM-xxxNEG15MC.28(II), TSM-xxxNEG15MC.29(II) (xxx=350-420, in steps of 5).

120 cells:

TSM-xxxNEG6MC(II), TSM-xxxNEG6MC.07(II), TSM-xxxNEG6MC.20(II),

TSM-xxxNEG6MC.27(II), TSM-xxxNEG6MC.28(II), TSM-xxxNEG6MC.29(II) (xxx=295-345, in steps of 5).

mono series with 158.75 x 79.375 (mm) half cutting N type MBB bifacial cell (Module Type for rear side with white EVA or Glass white):

144 cells:

TSM-xxxNEG15M(II), TSM-xxxNEG15M.07(II), TSM-xxxNEG15M.20(II),
TSM-xxxNEG15M.27(II), TSM-xxxNEG15M.28(II), TSM-xxxNEG15M.29(II) (xxx=350-420, in steps of 5).

120 cells:

TSM-xxxNEG6M(II), TSM-xxxNEG6M.07(II), TSM-xxxNEG6M.20(II),
TSM-xxxNEG6M.27(II), TSM-xxxNEG6M.28(II), TSM-xxxNEG6M.29(II) (xxx=295-345, in steps of 5).

mono series with 161.7 x 80.85 (mm) half cutting N type MBB bifacial cell (Module Type for rear side with white EVA or white Glass):

144 cells:

TSM-xxxNEG16M(II), TSM-xxxNEG16M.07(II), TSM-xxxNEG16M.20(II),
TSM-xxxNEG16M.27(II), TSM-xxxNEG16M.28(II), TSM-xxxNEG16M.29(II) (xxx=390-435, in steps of 5).

120 cells:

TSM-xxxNEG7M(II), TSM-xxxNEG7M.07(II), TSM-xxxNEG7M.20(II),
TSM-xxxNEG7MC.27(II), TSM-xxxNEG7M.28(II), TSM-xxxNEG7M.29(II) (xxx=325-360, in steps of 5).

mono series with 161.7 x 80.85 (mm) half cutting N type MBB bifacial cell:

144 cells:

TSM-xxxNEG16MC(II), TSM-xxxNEG16MC.07(II), TSM-xxxNEG16MC.20(II), TSM-xxxNEG16MC.27(II), TSM-xxxNEG16MC.28(II), TSM-xxxNEG16MC.29(II) (xxx=390-435, in steps of 5).

120 cells:

TSM-xxxNEG7MC(II), TSM-xxxNEG7MC.07(II), TSM-xxxNEG7MC.20(II),
TSM-xxxNEG7MC.27(II), TSM-xxxNEG7MC.28(II), TSM-xxxNEG7MC.29(II) (xxx=325-360, in steps of 5).

mono series with 210.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:

150 cells:

TSM-xxxNEG18MC.20(II), TSM-xxxNEG18MC.27(II),
TSM-xxxNEG18MC.28(II), TSM-xxxNEG18MC.29(II),
TSM-xxxNEG18MC.30(II)
(xxx=500-520, in steps of 5).

120 cells:

TSM-xxxNEG9C.20, TSM-xxxNEG9C.27,

TSM-xxxNEG9C.28, TSM-xxxNEG9C.29
(xxx=390-430, in steps of 5).

mono series with 210.0 x 70.0 (mm) N type 1/3 cutting MBB
bifacial cell:
(Module Type for rear side with white EVA or Glass white)
120 cells:
TSM-xxxNEG9.20, TSM-xxxNEG9.27, TSM-xxxNEG9.28,
TSM-xxxNEG9.29 (xxx=390-430, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting N type MBB
bifacial cell:
120 cells:
TSM-xxxNEG20C.20, TSM-xxxNEG20C.27, TSM-
xxxNEG20C.28,
TSM-xxxNEG20C.29, TSM-xxxNEG20C.70, TSM-
xxxNEG20C.C0 (xxx=580-670, in steps of 5).
110 cells:
TSM-xxxNEG19C.20, TSM-xxxNEG19C.27, TSM-
xxxNEG19C.28,
TSM-xxxNEG19C.29 (xxx=530-570, in steps of 5).
132 cells:
TSM-xxxNEG21C.20, TSM-xxxNEG21C.27, TSM-
xxxNEG21C.28,
TSM-xxxNEG21C.29, TSM-xxxNEG21C.70, TSM-
xxxNEG21C.B0, TSM-xxxNEG21C.22, TSM-
xxxNEG21C.20K, TSM-xxxNEG21C.20M
(xxx=635-740, in steps of 5).
64 cells:
TSM-xxxNEG9M5C.26(xxx=305-345, in steps of 5)
56 cells:
TSM-xxxNEG9M4C.26(xxx=265-300, in steps of 5)

mono series with 210.0 x 105.0 (mm) N type MBB bifacial cell:
132 cells:
TSM-xxxNEG21C.20U (xxx=715-740, in steps of 5)

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB
bifacial cell:
144 cells:
TSM-xxxNEG9RC.20, TSM-xxxNEG9RC.25,
TSM-xxxNEG9RC.28, TSM-xxxNEG9RC.27,
TSM-xxxNEG9RC.29, TSM-xxxNEG9RC.B0,
TSM-xxxNEG9RC.B5, TSM-xxxNEG9RC.B8,
TSM-xxxNEG9RC.B7, TSM-xxxNEG9RC.B9,
TSM-xxxNED9RC.20, TSM-xxxNED9RC.25,

TSM-xxxNED9RC.28, TSM-xxxNED9RC.27,
TSM-xxxNED9RC.29
(xxx=375-460, in steps of 5).

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB
bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxNEG9R.20, TSM-xxxNEG9R.25,
TSM-xxxNEG9R.28, TSM-xxxNEG9R.27,
TSM-xxxNEG9R.29, TSM-xxxNEG9R.B0,
TSM-xxxNEG9R.B5, TSM-xxxNEG9R.B8,
TSM-xxxNEG9R.B7, TSM-xxxNEG9R.B9,
TSM-xxxNED9R.20, TSM-xxxNED9R.25,
TSM-xxxNED9R.28, TSM-xxxNED9R.27,
TSM-xxxNED9R.29

(xxx=375-480, in steps of 5).

mono series with 182.3 x 71.1 (mm) N type 1/3 cutting MBB
bifacial cell:

a)198 cells:

TSM-xxxNEG19RC.20Z, TSM-xxxNEG19RC.25Z,
TSM-xxxNEG19RC.27Z, TSM-xxxNEG19RC.28Z,
TSM-xxxNEG19RC.29Z, TSM-xxxNEG19RC.70Z,
(xxx=615-665, in steps of 5)

mono series with 182.3 x 53.25 (mm) N type 1/4 cutting MBB
bifacial cell:

a)264 cells:

TSM-xxxNEG19RC.20Q, TSM-xxxNEG19RC.25Q,
TSM-xxxNEG19RC.27Q, TSM-xxxNEG19RC.28Q,
TSM-xxxNEG19RC.29Q, TSM-xxxNEG19RC.70Q
(xxx=615-665, in steps of 5)

mono series with 182.0 x 105.0 (mm) or 183.0 x 106.05 (mm)
half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG19RC.20, TSM-xxxNEG19RC.25,
TSM-xxxNEG19RC.27, TSM-xxxNEG19RC.28,
TSM-xxxNEG19RC.29, TSM-xxxNEG19RC.70,
TSM-xxxNEG19RC.20K, TSM-xxxNED19RC.20,
TSM-xxxNED19RC.25, TSM-xxxNED19RC.27,
TSM-xxxNED19RC.28, TSM-xxxNED19RC.29

(xxx=525-650, in steps of 5).

mono series with 182.0 x 105.0 (mm) or 183.0 x 106.05 (mm)
half cutting N type MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

132 cells:

TSM-xxxNEG19R.20, TSM-xxxNEG19R.25,
TSM-xxxNEG19R.27, TSM-xxxNEG19R.28,
TSM-xxxNEG19R.29, (xxx=525-650, in steps of 5).

108 cells:

TSM-xxxNEG18R.20, TSM-xxxNEG18R.25,
TSM-xxxNEG18R.27, TSM-xxxNEG18R.28,
TSM-xxxNEG18R.29, (xxx=470-525, in steps of 5)

96 cells

TSM-xxxNEG9RH.25 (xxx=440-470, in steps of 5)
TSM-xxxNEG9RH.25 (xxx=415-445, in steps of 5)

mono series with 182.0 x 105.0 (mm) or 183.0 x 106.05 (mm)
half cutting N type MBB bifacial cell:

108 cells

TSM-xxxNEG18RC.20, TSM-xxxNEG18RC.25,
TSM-xxxNEG18RC.27, TSM-xxxNEG18RC.28,
TSM-xxxNEG18RC.29, (xxx=470-525, in steps of 5)

mono series with 182.0 x 91.0 (mm) or 182.2 x 91.875(mm)
half cutting N type MBB bifacial cell:

a)144 cells:

TSM-xxxNEG18C.20, TSM-xxxNEG18C.25,
TSM-xxxNEG18C.27, TSM-xxxNEG18C.28,
TSM-xxxNEG18C.29, (xxx=555-610, in steps of 5)

mono series with 182.2 x 91.875(mm) half cutting N type MBB
bifacial cell:

a)156 cells:

TSM-xxxNEG20MC.20, TSM-xxxNEG20MC.25,
TSM-xxxNEG20MC.27, TSM-xxxNEG20MC.28,
TSM-xxxNEG20MC.29, (xxx=600-650, in steps of 5)

mono series with 182.3 x 105.0 (mm) N type MBB bifacial cell:

a)132 cells:

TSM-xxxNEG19RC.20U, TSM-xxxNEG19RC.25U,
TSM-xxxNEG19RC.27U, TSM-xxxNEG19RC.28U,
TSM-xxxNEG19RC.29U, TSM-xxxNEG19RC.70U,
TSM-xxxNEG19RC.88U
(xxx=620-650, in steps of 5)

mono series with 182.3 x 70.0 (mm) N type MBB bifacial cell:
(Module Type for rear side with white EVA or Glass white)

a)144 cells:

TSM-xxxNEG9R.20U, TSM-xxxNEG9R.25U,
TSM-xxxNEG9R.28U, TSM-xxxNEG9R.27U,
TSM-xxxNEG9R.29U

(xxx=430-470, in steps of 5)

mono series with 158.75 x 79.375 (mm) half cutting N type MBB
bifacial cell (for cells splicing technology):

156 cells:

TSM-xxxNEG15XC(II), TSM-xxxNEG15XC.07(II), TSM-
xxxNEG15XC.20(II), TSM-xxxNEG15XC.27(II), TSM-
xxxNEG15XC.28(II), TSM-xxxNEG15XC.29(II)

(xxx=425-445, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial
HJT cell:

132 cells:

TSM-xxxHEG21C.20, TSM-xxxHEG21C.27,
TSM-xxxHEG21C.28, TSM-xxxHEG21C.29

(xxx=680-740, in steps of 5).

120 cells:

TSM-xxxHEG20C.20, TSM-xxxHEG20C.27,
TSM-xxxHEG20C.28, TSM-xxxHEG20C.29

(xxx=585-620, in steps of 5).

110 cells:

TSM-xxxHEG19C.20, TSM-xxxHEG19C.27,
TSM-xxxHEG19C.28, TSM-xxxHEG19C.29

(xxx=530-565, in steps of 5).

poly series with 157 x 157 (mm) and 156 x 156 (mm) solar cells:

72 cells:

TSM-xxxPEG14, TSM-xxxPEG14.07, TSM-xxxPEG14.20,
TSM-xxxPEG14.27, TSM-xxxPEG14.28, TSM-xxxPEG14.29,
TSM-xxxPEG14.40,

TSM-xxxPEG14.47 (xxx=315-360, in steps of 5);

TSM-xxxPEG14(II), TSM-xxxPEG14.07(II), TSM-
xxxPEG14.20(II),

TSM-xxxPEG14.27(II), TSM-xxxPEG14.28(II), TSM-
xxxPEG14.29(II),

TSM-xxxPEG14.40(II), TSM-xxxPEG14.47(II) (xxx=315-360, in
steps of 5).

60 cells:

TSM-xxxPEG5, TSM-xxxPEG5.07, TSM-xxxPEG5.20, TSM-
xxxPEG5.27,

TSM-xxxPEG5.28, TSM-xxxPEG5.29, TSM-xxxPEG5.40, TSM-
xxxPEG5.47 (xxx=265-300, in steps of 5);

TSM-xxxPEG5(II), TSM-xxxPEG5.07(II), TSM-xxxPEG5.20(II), TSM-xxxPEG5.27(II), TSM-xxxPEG5.28(II), TSM-xxxPEG5.29(II), TSM-xxxPEG5.40(II), TSM-xxxPEG5.47(II) (xxx=265-300, in steps of 5).

poly series with 158.75 x 158.75 (mm) solar cells:

72 cells:

TSM-xxxPEG15, TSM-xxxPEG15.07, TSM-xxxPEG15.20, TSM-xxxPEG15.27, TSM-xxxPEG15.28, TSM-xxxPEG15.29, TSM-xxxPEG15.40, TSM-xxxPEG15.47 (xxx=315-360, in steps of 5); TSM-xxxPEG15(II), TSM-xxxPEG15.07(II), TSM-xxxPEG15.20(II), TSM-xxxPEG15.27(II), TSM-xxxPEG15.28(II), TSM-xxxPEG15.29(II), TSM-xxxPEG15.40(II), TSM-xxxPEG15.47(II) (xxx=315-360, in steps of 5).

60 cells:

TSM-xxxPEG6, TSM-xxxPEG6.07, TSM-xxxPEG6.20, TSM-xxxPEG6.27, TSM-xxxPEG6.28, TSM-xxxPEG6.29, TSM-xxxPEG6.40, TSM-xxxPEG6.47 (xxx=265-300, in steps of 5); TSM-xxxPEG6(II), TSM-xxxPEG6.07(II), TSM-xxxPEG6.20(II), TSM-xxxPEG6.27(II), TSM-xxxPEG6.28(II), TSM-xxxPEG6.29(II), TSM-xxxPEG6.40(II), TSM-xxxPEG6.47(II) (xxx=265-300, in steps of 5).

poly series with 157 x 78.5 (mm) half cutting cell:

144 cells:

TSM-xxxPEG14H, TSM-xxxPEG14H.07, TSM-xxxPEG14H.20, TSM-xxxPEG14H.27, TSM-xxxPEG14H.28, TSM-xxxPEG14H.29, TSM-xxxPEG14H.40, TSM-xxxPEG14H.47 (xxx=330-360, in steps of 5); TSM-xxxPEG14H(II), TSM-xxxPEG14H.07(II), TSM-xxxPEG14H.20(II), TSM-xxxPEG14H.27(II), TSM-xxxPEG14H.28(II), TSM-xxxPEG14H.29(II), TSM-xxxPEG14H.40(II), TSM-xxxPEG14H.47(II) (xxx=330-360, in steps of 5).

120 cells:

TSM-xxxPEG5H, TSM-xxxPEG5H.07, TSM-xxxPEG5H.20, TSM-xxxPEG5H.27, TSM-xxxPEG5H.28, TSM-xxxPEG5H.29, TSM-xxxPEG5H.40,

TSM-xxxPEG5H.47 (xxx=275-300, in steps of 5);
 TSM-xxxPEG5H(II), TSM-xxxPEG5H.07(II), TSM-
 xxxPEG5H.20(II),
 TSM-xxxPEG5H.27(II), TSM-xxxPEG5H.28(II), TSM-
 xxxPEG5H.29(II),
 TSM-xxxPEG5H.40(II), TSM-xxxPEG5H.47(II) (xxx=275-300, in
 steps of 5).

poly series with 158.75 x 79.375 (mm) half cutting cell:

144 cells:

TSM-xxxPEG15H, TSM-xxxPEG15H.07, TSM-xxxPEG15H.20,
 TSM-xxxPEG15H.27, TSM-xxxPEG15H.28, TSM-
 xxxPEG15H.29, SM-xxxPEG15H.40, TSM-xxxPEG15H.47
 (xxx=340-360, in steps of 5);
 TSM-xxxPEG15H(II), TSM-xxxPEG15H.07(II), TSM-
 xxxPEG15H.20(II),
 TSM-xxxPEG15H.27(II), TSM-xxxPEG15H.28(II), TSM-
 xxxPEG15H.29(II),
 TSM-xxxPEG15H.40(II), TSM-xxxPEG15H.47(II) (xxx=340-400,
 in steps of 5).

120 cells:

TSM-xxxPEG6H, TSM-xxxPEG6H.07, TSM-xxxPEG6H.20,
 TSM-xxxPEG6H.27, TSM-xxxPEG6H.28, TSM-xxxPEG6H.29,
 TSM-xxxPEG6H.40,
 TSM-xxxPEG6H.47 (xxx=280-300, in steps of 5);
 TSM-xxxPEG6H(II), TSM-xxxPEG6H.07(II), TSM-
 xxxPEG6H.20(II),
 TSM-xxxPEG6H.27(II), TSM-xxxPEG6H.28(II), TSM-
 xxxPEG6H.29(II),
 TSM-xxxPEG6H.40(II), TSM-xxxPEG6H.47(II) (xxx=280-330, in
 steps of 5).

poly series with 157 x 78.5 (mm) half cutting MBB cell:

144 cells:

TSM-xxxPEG14M(II), TSM-xxxPEG14M.07(II), TSM-
 xxxPEG14M.20(II),
 TSM-xxxPEG14M.27(II), TSM-xxxPEG14M.28(II), TSM-
 xxxPEG14M.29(II), TSM-xxxPEG14M.40(II), TSM-
 xxxPEG14M.47(II) (xxx=330-360, in steps of 5).

120 cells:

TSM-xxxPEG5M(II), TSM-xxxPEG5M.07(II), TSM-
 xxxPEG5M.20(II),
 TSM-xxxPEG5M.27(II), TSM-xxxPEG5M.28(II), TSM-
 xxxPEG5M.29(II),
 TSM-xxxPEG5M.40(II), TSM-xxxPEG5M.47(II) (xxx=275-300, in
 steps of 5).

poly series with 158.75 x 79.375 (mm) half cutting MBB cell:

144 cells:

TSM-xxxPEG15M(II), TSM-xxxPEG15M.07(II), TSM-

xxxPEG15M.20(II),

TSM-xxxPEG15M.27(II), TSM-xxxPEG15M.28(II), TSM-

xxxPEG15M.29(II), TSM-xxxPEG15M.40(II), TSM-

xxxPEG15M.47(II) (xxx=340-405, in steps of 5).

120 cells:

TSM-xxxPEG6M(II), TSM-xxxPEG6M.07(II), TSM-

xxxPEG6M.20(II),

TSM-xxxPEG6M.27(II), TSM-xxxPEG6M.28(II), TSM-

xxxPEG6M.29(II),

TSM-xxxPEG6M.40(II), TSM-xxxPEG6M.47(II) (xxx=280-335, in steps of 5).

xxx stands for rated output power at STC

Smart PV modules:

(Module Type with junction box TSD301xy)

mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG21C.20S (xxx=625-675, in steps of 5)

120 cells:

TSM-xxxDEG20C.20S (xxx=570-605, in steps of 5)

110 cells:

TSM-xxxDEG19C.20S (xxx=525-555, in steps of 5)

mono series with 182 x 105 (mm) half cutting MBB bifacial cell:

132 cells:

TSM-xxxDEG19RC.20S (xxx=540-590, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

144 cells:

TSM-xxxDEG9RC.B7S (xxx=395-435, in steps of 5)

mono series with 182 x 70 (mm) 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxDEG9R.B0S, TSM-xxxDEG9R.B8S

(xxx=395-435, in steps of 5)

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

150 cells:

TSM-xxxDEG18MC.20S(II) (xxx=460-510, in steps of 5)

mono series with 210.0 x 70.0 (mm) 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

150 cells:

TSM-xxxDEG18M.20S(II) (xxx=460-510, in steps of 5)

mono series with 210.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG21C.20S (xxx=635-690, in steps of 5)

mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

132 cells:

TSM-xxxNEG19RC.20S (xxx=565-595, in steps of 5)

mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:

(Module Type for rear side with white EVA or Glass white)

144 cells:

TSM-xxxNEG9R.20S, TSM-xxxNEG9R.28S

(xxx=395-445, in steps of 5)

xxx stands for rated output power at STC.

1000V system voltage PV modules:

mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:

(Module Type for rear side with white EVA)

48 cells:

TSM-xxxNDG05R.78, TSM-xxxNDG05R.78A (xxx=215-235, in steps of 5)

xxx stands for rated output power at STC.

Rated output Power at STC:

See above

Max.system voltage:

1500 V DC or 1000 V DC

2. Order

Report No.: 704062210703

Rev.: 24

Date: 2026-01-21

www.tuvsud.com

TUV[®]

2.1 Date of Purchase Order, Customer's Reference

Item 1: 2025-04-03

Item 2: 2025-07-17

2.2 Test Sample(s)

- Reception date(s): Item 1: 2025-05-16
Item 2: 2025-07-22
- Location(s) of reception: Yangzhou Opto-Electrical Products Testing Institute Co., Ltd.
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China.
- Condition of test sample(s): In good condition

2.3 Testing

- Testing date(s): Item 1: 2025-05-16 to 2025-06-05
Item 2: 2025-07-22 to 2025-08-12
- Location(s) of testing: Yangzhou Opto-Electrical Products Testing Institute Co., Ltd.
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China.

2.4 Points of Non-Compliance or Exceptions of the Test Procedure

- None

3. Test Results

- ☒ Decision rule according to ILAC-G8:09/2019 clause 4.2.1 Binary statement for simple acceptance rule or IEC Guide 115:2023, clause 4.3.3 Simple acceptance was applied.
- ☐ Decision rule according to customer's requirements was applied. It is:

- ☐ Decision rule according to ILAC-G8:09/2019 clause 4.2.2 Binary statement with guard band - guard band length = 95 % extended measurement uncertainty, was applied.
- ☒ Decision rule according to ILAC-G8:09/2019 clause 4.2.3 Non-binary statement with guard band - guard band length = 95% extended measurement uncertainty was applied for an upper specification limit (A lower limit or specification with an upper and a lower limit is treated similarly.):
 - Pass - the measured result is below the specification limit minus the guard band.
 - Fail - the measured result is above the specification limit plus the guard band.
 - Conditional Pass - the measured result is inside the guard band and below the specification limit.
 - Conditional Fail - the measured result is above the specification limit but below the specification limit plus the guard band.
- ☐ There are no statements to conformity or no results with measurand stated in this report, no decision rule has been applied.

3.1 Positive Test Results

Test specification(s)	Report no. / Rev. No.	Date	Remark
Electrical safety:	704062210703-24	2026-01-21	N/A
Mechanical safety:	704062210703-24	2026-01-21	N/A
Other specifications:	N/A	N/A	N/A

3.2 Points of Non-Compliance according to the test specification

☒ None ☐ Yes as follows:

Test specification(s)	Clause	Remark
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4. Test History

Report no. / Rev. No.	Date	History
704062210703-18	2025-01-20	Cert Update
704062210703-18A1	2025-02-24	CDF change
704062210703-18A2	2025-03-11	CDF change
704062210703-19	2025-06-23	Cert Update
704062210703-20	2025-07-23	Cert Update
704062210703-21	2025-08-07	Cert Update
704062210703-22	2025-09-24	Cert Update
704062210703-22A1	2025-11-14	CDF change
704062210703-23	2025-11-21	Cert Update

5. Remarks

5.1 General

Item 1. Based on the previous project 704062210703-23 and basic certification 642901705817, add new encapsulant combination, P507M (front side) & P507M (rear side), manufactured by Shanghai HIUV New Materials Co., Ltd.

Add new Adhesive for frame and Junction box, JS-606D, manufactured by Hangzhou Zhijiang Silicone Chemicals Co., Ltd.

PID testing was conducted on representative model TSM-620NEG19RC.20, in accordance with IEC TS 62804-1:2025, clause 5.2, except higher temperature, instead of 60°C.

In the test, temperature and humidity condition are 85°C/85% RH, test duration 192h.

Item 2. Based on Item 1, add new encapsulant combination, PO8110 (front side) & PO8110 (rear side), manufactured by Zhejiang Sinopont Technology Co., Ltd.

Add new Adhesive for frame and Junction box, HT-8366, manufactured by Jiangsu Tianchen materials PLC.

PID testing was conducted on representative model TSM-620NEG19RC.20, in accordance with IEC TS 62804-1:2025, clause 5.2, except higher temperature, instead of 60°C.

In the test, temperature and humidity condition are 85°C/85% RH, test duration 192h.

Add new components and new module models listed below. All tests had been conducted in the project 64290170581784, no tests were considered necessary.

1. Add new cross section of the frame, Supplier drawing number: < TS-DR-G9R(35)-070-02>, manufactured by Trina Solar Co.,Ltd.

For the new frame, add new module models:

TSM-xxxNEG9RH.25 (xxx=415-445, in steps of 5)

xxx stands for rated output power at STC.

2. Add new size of the cell, TSC-D6GB-18BB, Bifacial Mono-Si N-topcon, 210 (±2) x 105 (±2) (mm), Cell thickness: 115±10% (µm), manufactured by Trina Solar Co.,Ltd.

For the new cell, add new module models:

TSM-xxxNEG21C.20U (xxx=715-740, in steps of 5)

xxx stands for rated output power at STC.

3. The power range of the TSM-xxxNEG9R series modules had been extended to 480W.

TSM-xxxNEG9R.20, TSM-xxxNEG9R.25,

TSM-xxxNEG9R.28, TSM-xxxNEG9R.27,

TSM-xxxNEG9R.29, TSM-xxxNEG9R.B0,

TSM-xxxNEG9R.B5, TSM-xxxNEG9R.B8,

TSM-xxxNEG9R.B7, TSM-xxxNEG9R.B9,

TSM-xxxNED9R.20, TSM-xxxNED9R.25,

TSM-xxxNED9R.28, TSM-xxxNED9R.27,

TSM-xxxNED9R.29 (xxx=375-480, in steps of 5)

xxx stands for rated output power at STC.

4. The power range of the TSM-xxxNEG18R series modules had been extended to 525W.

TSM-xxxNEG18R.20, TSM-xxxNEG18R.25,

TSM-xxxNEG18R.27, TSM-xxxNEG18R.28,

TSM-xxxNEG18R.29, (xxx=470-525, in steps of 5)

TSM-xxxNEG18RC.20, TSM-xxxNEG18RC.25,

TSM-xxxNEG18RC.27, TSM-xxxNEG18RC.28,

TSM-xxxNEG18RC.29, (xxx=470-525, in steps of 5)

xxx stands for rated output power at STC.

5. The power range of the TSM-xxxNEG19R series modules had been extended to 650W.

TSM-xxxNEG19R.20, TSM-xxxNEG19R.25,

TSM-xxxNEG19R.27, TSM-xxxNEG19R.28,

TSM-xxxNEG19R.29, (xxx=525-650, in steps of 5)

xxx stands for rated output power at STC.

6. Add new Cell thickness: $143 \pm 10\%$ (μm) of the TSC-D6GB-18BB, All tests had been verified in the Cell thickness: $115 \pm 10\%$ (μm).

7. According to the customer's statement, add new glass factory: TRIUMPH NEW ENERGY COMPANY LIMITED.

The quality management system and product properties are the same as China building materials Tongcheng new energy materials Co.,Ltd.

8. According to the customer's requirement, update the electrical parameters of the following module models:

Models		Before the change	After the change
TSM-660NEG20C.xx	Vm(V)	37.8	37.8
	Im(A)	17.46	17.47
	Voc(V)	45.7	45.7
	Isc(A)	18.42	18.42
TSM-665NEG20C.xx	Vm(V)	38.3	38.0
	Im(A)	17.49	17.50
	Voc(V)	45.9	46.0

	Isc(A)	18.46	18.45
TSM-670NEG20C.xx	Vm(V)	38.5	38.2
	Im(A)	17.52	17.54
	Voc(V)	46.1	46.3
	Isc(A)	18.50	18.48

Add new components and new module models listed below. All tests had been conducted in the project 64290170581785, no tests were considered necessary.

1.Add new size of the cell, TSC-D6GB-16BB, 182.3 (± 2) x 53.25 (± 2) x 0.115 (mm), 1/4 cut, manufactured by Trina Solar Co., Ltd.

2.Add new interconnection circuitry, the number of cells per bypass diode increased to 88, but the operating voltage/current of the new module model did not increase.

3.Add new junction box, PV-XT1609Nxyz(x=8; y=4;z=12), two boxes, manufactured by Suzhou Xtong Photovoltaic Technologies Co., Ltd.

4.Add new size of the String connector, 8 x 0.20mm, Sn55Pb45, manufactured by Trina Solar Co., Ltd.

5.For above items, add new module models:

mono series with 182.3 x 53.25 (mm) N type 1/4 cutting MBB bifacial cell:

a)264 cells:

TSM-xxxNEG19RC.20Q, TSM-xxxNEG19RC.25Q,

TSM-xxxNEG19RC.27Q, TSM-xxxNEG19RC.28Q,

TSM-xxxNEG19RC.29Q, TSM-xxxNEG19RC.70Q,

(xxx=615-665, in steps of 5)

xxx stands for rated output power at STC.

6. Add new size of TSC-D6GB-14BB cell, 182.3 (± 2) x 71.1 (± 2) (mm), 1/3 cut, manufactured by Trina Solar Co., Ltd. All tests had been verified in size 182 (± 2) x 70 (± 2) (mm), 1/3 cut.

7. Add new interconnection circuitry, the number of cells per bypass diode increased to 66, but the operating voltage/current of the new module model did not increase.

8. For above items, add new module models:

mono series with 182.3 x 71.1 (mm) N type 1/3 cutting MBB bifacial cell:

a)198 cells:

TSM-xxxNEG19RC.20Z, TSM-xxxNEG19RC.25Z,

TSM-xxxNEG19RC.27Z, TSM-xxxNEG19RC.28Z,

TSM-xxxNEG19RC.29Z, TSM-xxxNEG19RC.70Z,

(xxx=615-665, in steps of 5)

xxx stands for rated output power at STC.

9. Add new junction box, TS308x, manufactured by Trina Solar Co., Ltd. All tests had been verified in TÜV Rheinland project CN22Y8WP 026. No additional testing was considered necessary.

The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

5.2 Factory surveillance cycle

Your production facility is currently on the following surveillance cycle.

☒ Annual (12 month)

☐ Bi-Annual (6 month)

☐ Quarterly (3 month)

☐

5.3 Additional information for routine tests to be performed by the factory(ies)

Routine tests for electrical appliances / equipment:

Routine test requirements for production are described in each factory inspection report.

6. Documentation

File	File name	Date
Data form (CDF):	704062210703-24 CDF_TUV MARK_E	2026-01-21

Report No.: 704062210703
Rev.: 24
Date: 2026-01-21

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Photo documentation:	704062210703-24 TRF_TUV MARK_E	2026-01-21
User manual:	N/A	N/A
Installation manual:	704062210703-24 MAN_TUV MARK_E	2026-01-21
Component datasheets:	704062210703-24 COMP_TUV MARK_E	2026-01-21

7. Summary

- ☒ The test specifications are met.
- ☐ The test specification(s) is (are) not met.
- ☐ In case of full testing further Non-Compliances can be located.

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

Tested by:

Meng Wang *Meng Wang*

printed name, function & signature

Approved by:

Yang Xu *Xu Yang*

printed name, function & signature