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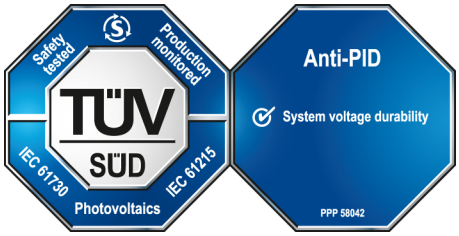
C E R T I F I C A T E

No. Z2 070321 0150 Rev. 28

Holder of Certificate: **Trina Solar Co., Ltd.**
No. 2 TianHe Road, Trina PV Industrial Park
New District
213031 Changzhou City, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**

Poly & Mono Crystalline Silicon Photovoltaic modules

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, Certification, Validation and Verification Regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704062210703-28

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Date, 2026-08-27

(Zhulin Zhang)

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Model(s):

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),

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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:
(Module Type for Double-glass monofacial)
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:
(Module Type for Double-glass monofacial)
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:
(Module Type for Double-glass monofacial)
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),

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**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),**

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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 Double-glass monofacial)
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 Double-glass monofacial):
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.28W,
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 Double-glass monofacial)
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

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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 Double-glass monofacial)
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 Double-glass monofacial)
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 Double-glass monofacial)
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).

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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 Double-glass monofacial):
144 cells:
TSM-xxxNEG15M(II), TSM-xxxNEG15M.07(II), TSM-xxxNEG15M.20(II),

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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 Double-glass monofacial):
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 Double-glass monofacial)
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,

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TSM-xxxNEG21C.29, TSM-xxxNEG21C.70, TSM-xxxNEG21C.B0,
TSM-xxxNEG21C.22, TSM-xxxNEG21C.20K,TSM-xxxNEG21C.20M,
TSM-xxxNEG21C.60 (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).
144 cells:
TSM-xxxNEG22C.20, TSM-xxxNEG22C.25,
TSM-xxxNEG22C.27, TSM-xxxNEG22C.28,
TSM-xxxNEG22C.29 (xxx=770-800, in steps of 5).

mono series with 210.0 x 105.0 (mm) half cutting N type MBB bifacial cell:
(Module Type for Double-glass monofacial)
144 cells:
TSM-xxxNEG22.20, TSM-xxxNEG22.25,
TSM-xxxNEG22.27, TSM-xxxNEG22.28,
TSM-xxxNEG22.29 (xxx=770-800, 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 Double-glass monofacial)
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,

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

mono series with 210 x 70 (mm) N type 1/3 cutting MBB bifacial cell:
a) 216 cells:
TSM-xxxNEG22C.20Z, TSM-xxxNEG22C.27Z,
(xxx=770-800, in steps of 5)

mono series with 182.3 x 71.1 (mm) N type 1/3 cutting MBB bifacial cell:
(Module Type for Double-glass monofacial)
a)156 cells:
TSM-xxxNEG10R.20Z, TSM-xxxNEG10R.25Z,
TSM-xxxNEG10R.27Z, TSM-xxxNEG10R.28Z,
TSM-xxxNEG10R.29Z (xxx=480-515, in steps of 5)

mono series with 182.3 x 71.1 (mm) N type 1/3 cutting MBB bifacial cell:
(Module Type for Double-glass monofacial)
a)150 cells:
TSM-xxxNEG9RP.28Z, TSM-xxxNEG9RP.20Z,
TSM-xxxNEG9RP.25Z (xxx=460-490, in steps of 5)

mono series with 210.3 x 53.5 (mm) N type 1/4 cutting MBB bifacial cell:
a)264 cells:
TSM-xxxNEG21C.20Q (xxx=705-760, in steps of 5)

mono series with 182.3 x 53.25 (mm) or 183 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,
TSM-xxxNED19RC.20Q (xxx=615-670, in steps of 5)

mono series with 183 x 53.25 (mm) N type 1/4 cutting MBB bifacial cell:
(Module Type for Double-glass monofacial)
a)216 cells:
TSM-xxxNEG18R.20Q, TSM-xxxNEG18R.28Q
(xxx=510-540, in steps of 5)

mono series with 182.0 x 105.0 (mm) or 183.0 x 106.05 (mm) or 183.0 x 106.5 (mm) half cutting N type MBB bifacial cell:
132 cells:
TSM-xxxNEG19RC.20, TSM-xxxNEG19RC.25,
TSM-xxxNEG19RC.27, TSM-xxxNEG19RC.28,

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**TSM-xxxNEG19RC.29, TSM-xxxNEG19RC.70,
TSM-xxxNEG19RC.20K, TSM-xxxNEG19RC.60,
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) or 183.0 x 106.5 (mm) half cutting N type MBB bifacial cell:
(Module Type for Double-glass monofacial)
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.20, TSM-xxxNEG9RH.28
(xxx=440-475, 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:
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 Double-glass monofacial)
a)144 cells:**

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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).

mono series with 182.0 x 105.0 (mm) half cutting MBB bifacial TBC cell:
(Module Type for Double-glass monofacial)
a) 96 cells
TSM-xxxIEG9RH.25 (xxx=440-470, 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),

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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),

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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 Double-glass monofacial)
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 Double-glass monofacial)
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:

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(Module Type for Double-glass monofacial)
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 Double-glass monofacial)
48 cells:
TSM-xxxNDG05R.78, TSM-xxxNDG05R.78A (xxx=215-235, in steps of 5)
xxx stands for rated output power at STC.

Parameters:

Construction:	Framed or Frameless with Junction box,cable and connector.
Safety Class:	Class II
Maximum System Voltage:	1500 V DC or 1000 V DC
PID-shunting test condition:	±1500 V or ±1000 V,192 Hours, 85 °C, 85 % RH

Remark:PID-shunting testing method is based on IEC TS 62804-1:2025.

Tested according to:

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

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