



Product Service

CERTIFICATE

No. Z2 070321 0167 Rev. 00

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 and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704062210740-00

Valid until: 2028-11-22

Date, 2023-11-29

(David Bo)

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- Model(s):**
- mono series with 210.0 x 105.0 (mm) half cutting MBB bifacial cell:
 - a)120 cells:
 TSM-xxxDEG20C.20, TSM-xxxDEG20C.25,
 TSM-xxxDEG20C.27, TSM-xxxDEG20C.28,
 TSM-xxxDEG20C.29 (xxx=580-610, in steps of 5).
 - b)132 cells:
 TSM-xxxDEG21C.20, TSM-xxxDEG21C.25,
 TSM-xxxDEG21C.27, TSM-xxxDEG21C.28,
 TSM-xxxDEG21C.29 (xxx=640-670, in steps of 5)

 - mono series with 210.0 x 105.0 (mm) half cutting N type MBB bifacial cell:
 - a)120 cells:
 TSM-xxxNEG20C.20, TSM-xxxNEG20C.25,
 TSM-xxxNEG20C.27, TSM-xxxNEG20C.28,
 TSM-xxxNEG20C.29 (xxx=585-645, in steps of 5).
 - b)132 cells:
 TSM-xxxNEG21C.20, TSM-xxxNEG21C.25,
 TSM-xxxNEG21C.27, TSM-xxxNEG21C.28
 TSM-xxxNEG21C.29 (xxx=645-710, in steps of 5)

 - mono series with 182.0 x 70.0 (mm) N type 1/3 cutting MBB bifacial cell:
 - a)144 cells:
 TSM-xxxNEG9RC.20, TSM-xxxNEG9RC.25,
 TSM-xxxNEG9RC.28, TSM-xxxNEG9RC.27,
 TSM-xxxNEG9RC.29 (xxx=410-450, 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)
 - a)144 cells:
 TSM-xxxNEG9R.20, TSM-xxxNEG9R.25,
 TSM-xxxNEG9R.28, TSM-xxxNEG9R.27,
 TSM-xxxNEG9R.29 (xxx=410-460, in steps of 5)

 - mono series with 182.0 x 105.0 (mm) half cutting N type MBB bifacial cell:
 - a)132 cells:
 TSM-xxxNEG19RC.20, TSM-xxxNEG19RC.25,
 TSM-xxxNEG19RC.27, TSM-xxxNEG19RC.28,
 TSM-xxxNEG19RC.29 (xxx=575-620, in steps of 5)

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

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

a)108 cells

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

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

TSM-xxxNEG18R.29 (xxx=470-505, in steps of 5)

xxx stands for rated output power at STC

The corresponding BNPI power range as follows:

All electrical data is shown as relative to this test conditions:

front side irradiance 1000 W/m², backside irradiance 135

W/m², 25 °C, AM 1.5

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

a)120 cells:

TSM-xxxDEG20C.20, TSM-xxxDEG20C.25,

TSM-xxxDEG20C.27, TSM-xxxDEG20C.28,

TSM-xxxDEG20C.29 (Rated Output Power at BNPI: 635W,

640W,646W,651W,657W,662W,668W).

b)132 cells:

TSM-xxxDEG21C.20, TSM-xxxDEG21C.25,

TSM-xxxDEG21C.27, TSM-xxxDEG21C.28,

TSM-xxxDEG21C.29 (Rated Output Power at BNPI: 700W,

706W, 711W, 717W, 722W, 728W, 733W).

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

a)120 cells:

TSM-xxxNEG20C.20, TSM-xxxNEG20C.25,

TSM-xxxNEG20C.27, TSM-xxxNEG20C.28,

TSM-xxxNEG20C.29 (Rated Output Power at BNPI: 648W,

654W, 659W, 665W, 670W, 676W, 681W,687W, 693W, 698W,

704W, 709W, 715W).

b)132 cells:

TSM-xxxNEG21C.20, TSM-xxxNEG21C.25,

TSM-xxxNEG21C.27, TSM-xxxNEG21C.28,

TSM-xxxNEG21C.29 (Rated Output Power at BNPI:

715W,720W,726W,731W,737W,742W,748W,

753W,759W,765W,770W,776W,781W,787W).

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

a)144 cells:

TSM-xxxNEG9RC.20, TSM-xxxNEG9RC.25,

TSM-xxxNEG9RC.28, TSM-xxxNEG9RC.27,

TSM-xxxNEG9RC.29 (Rated Output Power at BNPI:

454W,460W,465W,471W,476W,482W,



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488W,493W,499W).

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

a)132 cells:

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

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

TSM-xxxNEG19RC.29

(Rated Output Power at BNPI:

637W,643W,648W,654W,659W,665W,670W,676W,681W,687W).

Parameters:

Safety Class:	Class II
Max. system voltage:	1500V DC
Construction:	Framed, with Junction box, cable and connector.
Fire Safety Class:	Class C according to UL790
Test Laboratory:	Yangzhou Opto-Electrical Products Test-ing Institute No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China

Tested according to:

IEC 61215-1:2021
IEC 61215-1-1:2021
IEC 61215-2:2021
IEC 61730-1:2016
IEC 61730-2:2016
EN IEC 61215-1:2021
EN IEC 61215-1-1:2021
EN IEC 61215-2:2021
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