



C E R T I F I C A T E

Certificate No. 09-PPV-00025-WA01-TIC

**WE HEREBY CERTIFY THAT THE PHOTOVOLTAIC MODULES WITH THE MODELS
EST-460**

**And with Types extended for similarity*
- See Annex -**

**MANUFACTURING & LICENSE HOLDER
ENN SOLAR ENERGY CO., LTD.**

N° 106 Huaxiang road, Economic and Technological Development
Zone, LangFang, 065001, P.R.C

**IS IN COMPLIANCE WITH THE REQUIREMENTS OF
IEC 61646 : 2008**

Thin-film terrestrial photovoltaic (PV) modules. Design qualification and type approval
&

EN 61730-1 / EN 61730-2 : 2007

Photovoltaic (PV) module safety qualification

To be used in plants at a total voltage up to : 1000 Vdc

AS RESULT OF THE TEST IN OUR APPOINTED LABORATORY

**EUROTEST LABORATORI
(EA ACCREDITED LABORATORY N. 0192)**

**REPORT No. TIC-PVC01CdO09C405001 & TIC-PVC02CdO08C405005
&**

THE MANUFACTURING INSPECTION ON THE DATE 09th May 2009 WITH**

REPORT No. RFI-0509-PPV-TIC-00025-09

Expiring date 21.05.2012

(Providing that the testing basis continues unchanged)

Notes: (*) The manufacturer declares that these products are constructed using the same materials, components and processes as the tested type q-size & SJ Full Size. Further details on certified models are reported on the attachment. Technical data, materials and components description are into the indicated test reports. Any changes of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval. The certification is performed on tested model as complete certification This certificate is for type approval and based on voluntarily product test **with Factory Inspection**.** The Manufacturing Inspection was conducted by a TÜV INTERCERT appointed inspector on the base of agreement with the certification body TÜV INTERCERT.

**TÜV
INTERCERT**



Am Bonner Bogen 2, D-53227 Bonn,

22.05.2009

TÜV INTERCERT Certification Body

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C E R T I F I C A T E

Annex of

Certificate No. 09-PPV-00025-WA01-TIC

THE PHOTOVOLTAIC MODULES WITH THE MODELS

| <u>Tested type</u> | <u>Cell Number</u> | <u>Cell Size</u> | <u>Cell technology</u> | <u>Power[W]</u> |
|--------------------|--------------------|-----------------------|--------------------------|-----------------|
| q-size | 106 | 127.2 cm ² | tandem cell [a-Si/uc-Si] | 104 |
| SJ Full size | 216 | 257.2 cm ² | a-Si | 343.2 |

Types extended for similarity* with tandem cell [a-Si/uc-Si] cell technology without need of re-testing (according to IEC61215 "Retesting guideline"):

| <u>Type</u> | <u>Cell Number</u> | <u>Cell Size</u> | <u>Power[W]</u> |
|-------------|--------------------|-----------------------|-----------------|
| EST-110* | 106 | 127.2 cm ² | from 93 to 114 |
| EST-225V* | 106 | 257.2 cm ² | from 188 to 229 |
| EST-225H* | 216 | 127.2 cm ² | from 188 to 229 |
| EST-460* | 216 | 257.2 cm ² | from 375 to 458 |

Notes: (*) The manufacturer declares that these products are constructed using the same materials, components and processes as the tested type q-size & SJ Full Size. Further details on certified models are reported on the attachment. Technical data, materials and components description are into the indicated test reports. Any changes of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval. The certification is performed on tested model as complete certification This certificate is for type approval and based on voluntarily product test with Factory Inspection.** The Manufacturing Inspection was conducted by a TÜV INTERCERT appointed inspector on the base of agreement with the certification body TÜV INTERCERT.



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