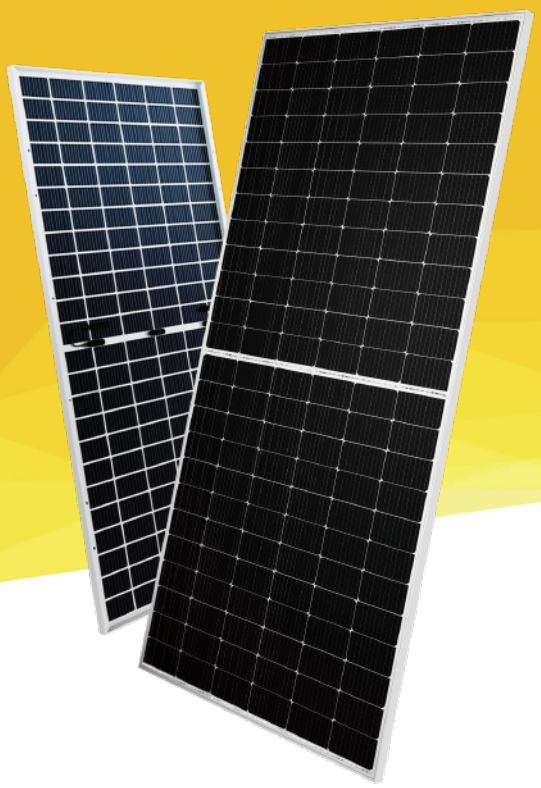
QNM182-HG-72

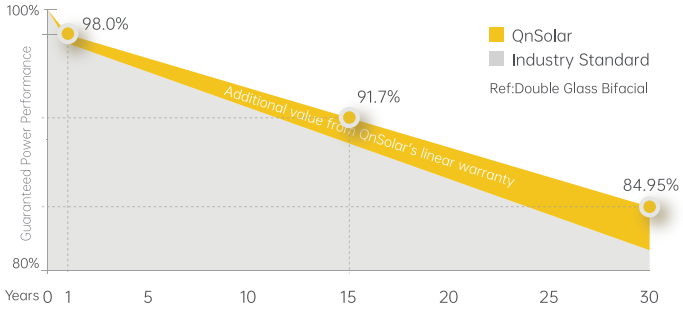
530-555W

Bifacial PERC Half-Cell Module

Max Efficiency 21.48%



LINEAR PERFORMANCE WARRANTY



Linear power guarantee over 84.95% power output after 30 years

12 years
Product materials and process warranty

30 years
Linear power warranty

< 2%
First year power degradation

< 0.45%
Year 2-30 power degradation

COMPREHENSIVE CERTIFICATES

• IEC 61215, IEC 61730 • UNI9177 • ISO 9001:2015 • ISO 14001:2015 • ISO 45001:2018

* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

Ultrahigh bifaciality, 25% maximum rear side power gain.

0/+5
0~+5W positive power tolerance peak power output ensures the reliability of the module.

2%
Effectively reduces the loss of up to 2% caused by mismatch and maximizes the output power of the system.

Weak Light
The module shows excellent weak light performance in the morning, evening and cloudy days.

Anti-PID
Improved cell technology and selected materials make the module has good PID resistance.

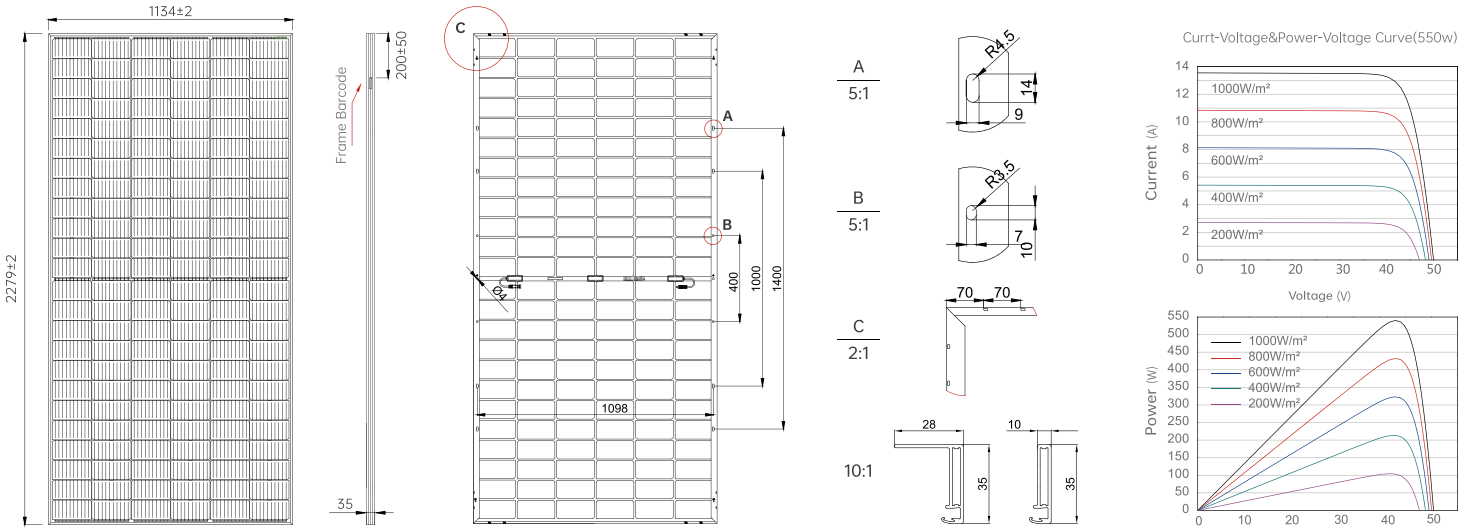
2400Pa
5400Pa
The module can withstand wind load of up to 2400Pa and snow load of 5400Pa.

PERFORMANCE INSURANCE

Guardians of human health and the natural environment.

MODULE DIMENSIONS (mm)

144 cells



ELECTRIC CHARACTERISTICS (STC)

Module Type	QNM182-HG530-72	QNM182-HG535-72	QNM182-HG540-72	QNM182-HG545-72	QNM182-HG550-72	QNM182-HG555-72
STC Peak Power - Pmax(Wp)	530	535	540	545	550	555
Optimum Working Voltage - Vmp(V)	41.00	41.19	41.38	41.58	41.77	41.96
Optimum Working Current - Imp(A)	12.93	12.99	13.05	13.11	13.17	13.23
Open Circuit Voltage - Voc(V)	49.52	49.65	49.78	49.91	50.04	50.17
Short Circuit Current - Isc(A)	13.45	13.50	13.55	13.61	13.65	13.69
Module Efficiency (%)	20.51	20.70	20.89	21.09	21.28	21.48

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 ℃ , Spectra at AM1.5.

ELECTRICAL CHARACTERISTICS WITH 10% REAR SIDE POWER GAIN

Total Equivalent power - Pmax (Wp)	583	589	594	600	605	611
Maximum Power Voltage - Vmp(V)	41.00	41.19	41.38	41.58	41.77	41.96
Maximum Power Current - Imp(A)	14.22	14.29	14.36	14.42	14.49	14.55
Open Circuit Voltage - Voc(V)	49.52	49.65	49.78	49.91	50.04	50.17
Short Circuit Current - Isc(A)	14.80	14.85	14.91	14.97	15.02	15.06

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standardtest condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

MECHANICAL PARAMETERS

Cell Type	P-type PERC Monocrystalline
Number of Half Cells	144(6×24)
Module Size	2279mm × 1134mm × 35mm (30mm)
Weight	31.4kg (30mm Frame) / 31.6kg (35mm Frame)
Glass	Dual,2.0mm Coated tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 standard (3 bypass diode)
Output Cable	TUV (2pfg1169:2007) 4mm²/1200mm
Connector	MC4 or (Compatible with MC4)
Hailstone Test	25mm Hailstone at the speed of 23m/s
Mechanical Load	Max. Snow load 5400 Pa, Max. Wind load 2400 Pa

NOCT: Irradiance 800W/m², Ambient Temperature 20℃ , Spectra at AM1.5, Wind at 1m/s.

TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45±2℃
Temperature Coefficient of Pmax	-0.31%/℃
Temperature Coefficient of Voc	-0.28%/℃
Temperature Coefficient of Isc	0.054%/℃
Power Tolerance (W)	0~+5W
Maximum Series Fuse Rating	25A
Maximum System Voltage	DC1500V
Operating Module Temperature	-40℃ ~ +85℃

PACKING CONFIGURATION (40'HC)

720 pcs / container , 20 pallets , 36 pcs / pallet (30mm Frame)

620 pcs / container , 20 pallets , 31 pcs / pallet (35mm Frame)

Web: www.qn-solarpv.com E-mail: info@qn-solarpv.com

View Our Web

ATTESTATION ◆ ATTESTATO ◆ ATTESTACIÓN ◆ BESCHEINIGUNG ◆ ATTESTATION

Product Service

Attestation of Conformity

No. N8A 120422 0004 Rev. 00

Holder of Attestation: **Qn-SOLAR PV LIMITED**
Unit 2 of LG 1, Mirror Tower, 61 Mody Road
999077 Tsim Sha Tsui, Kowloon
HONG KONG

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

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 conformity assessment. For details see: www.tuvsud.com/ps-cert

Test report no.: 882162303102

Date, 2023-06-27

(Xinlian LUO)

This Attestation does not replace the regulatory EU Declaration of Conformity (DoC) and does not allow for CE marking. After preparation of the necessary documentation and establishing compliance to requirements of all applicable directives, the manufacturer may sign a DoC and apply the CE marking.
The DoC is issued under the sole responsibility of the manufacturer.

CE

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TÜV SÜD Product Service GmbH • Ridlerstraße 65 • 80339 Munich • Germany

ATTESTATION ◆ ATTESTATO ◆ ATTESTACIÓN ◆ BESCHEINIGUNG ◆ ATTESTATION

Product Service

Attestation of Conformity

No. N8A 120422 0004 Rev. 00

Model(s):

With ½ cut of 210 mono c-Si cell (132pcs):
QNM210-HSxxx-66 (XXX=650-670, in step of 5)
With ½ cut of 210 mono c-Si cell (120pcs):
QNM210-HSxxx-60 (XXX=590-610, in step of 5)
With ½ cut of 210 mono c-Si cell (110pcs):
QNM210-HSxxx-55 (XXX=540-560, in step of 5)
With ⅓ cut of 210 mono c-Si cell (150pcs):
QNM210-HSxxx-50 (XXX=490-510, in step of 5)
With ½ cut of 182 mono c-Si cell (144pcs):
QNM182-HSxxx-72 (xxx=525-555, in step of 5)
With ½ cut of 182 mono c-Si cell (132pcs):
QNM182-HSxxx-66 (xxx=480-500, in step of 5)
With ½ cut of 182 mono c-Si cell (120pcs):
QNM182-HSxxx-60(xxx=440-460, in step of 5)
With ½ cut of 182 mono c-Si cell (108pcs):
QNM182-HSxxx-54 (xxx=395-415, in step of 5)
With ½ cut of 210 mono c-Si cell (132pcs):
QNN210-HSxxx-66 (xxx=670-695, in step of 5)
With ½ cut of 210 mono c-Si cell (120pcs):
QNN210-HSxxx-60 (xxx=610-630, in step of 5)
With ½ cut of 210 mono c-Si cell (110pcs):
QNN210-HSxxx-55 (xxx=555-575, in step of 5)
With ½ cut of 182 mono c-Si cell (144pcs):
QNN182-HSxxx-72 (xxx=555-575, in step of 5)
With ½ cut of 182 mono c-Si cell (120pcs):
QNN182-HSxxx-60(xxx=465-475, in step of 5)
With ½ cut of 182 mono c-Si cell (108pcs):
QNN182-HSxxx-54 (xxx=415-430, in step of 5)
xxx is standing for rated output power at STC

Parameters:

Safty Class: Class II
Max. System Voltage: 1500V DC
Fire Safety Class: Class C according to UL790.
Test Laboratory: Metrology and Testing Center of China Electronics Technology Group Corporation No.18th Research Institute
(NO.6 Huake seven RD, Haitai street, Xiqing District, Tianjin,300384, China)
Construction: Framed, with Junction box, cable and connector

Tested according to:

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

This Attestation does not replace the regulatory EU Declaration of Conformity (DoC) and does not allow for CE marking. After preparation of the necessary documentation and establishing compliance to requirements of all applicable directives, the manufacturer may sign a DoC and apply the CE marking.
The DoC is issued under the sole responsibility of the manufacturer.

CE

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Zertifikat *Certificate*

TÜVRheinland®

Zertifikat Nr. *Certificate No.*
PV 50571126

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*	**Unser Zeichen** *Our Reference*	**Ausstellungsdatum** *Date of Issue*
C.X.X.	01-Ruanand-CN21T1QV 008	09.01.2023 *(day/mo/yr)*

Genehmigungsinhaber *License Holder*
Q-SOLAR LIMITED
UNIT 2 LG 1 MIRROR TOWER 61 MODY RD
TST KLN HONG KONG
P.R. China

Fertigungsstätte *Manufacturing Plant*
040-0002393546

Prüfzeichen *Test Mark*

TÜVRheinland® CERTIFIED
IEC 61215
IEC 61730
Regular Production Surveillance
www.tuv.com
ID 1111263636

Geprüft nach *Tested acc. 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 61730-2:2018

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV Module

Type Designations:
Max. system voltage (Up to 1500VDC)
With 1/2 cut of mono c-Si cell:
QNM182-HSxxx-54 (xxx=395-415, in step of 5, 108pcs)
QNM182-HSxxx-60 (xxx=440-460, in step of 5, 120pcs)
QNM182-HSxxx-66 (xxx=480-500, in step of 5, 132pcs)
QNM182-HSxxx-72 (xxx=530-555, in step of 5, 144pcs)
QNM210-HSxxx-55 (xxx=540-560, in step of 5, 110pcs)
QNM210-HSxxx-60 (xxx=590-610, in step of 5, 120pcs)
QNM210-HSxxx-66 (xxx=650-670, in step of 5, 132pcs)
With 1/3 cut of mono c-Si cell:
QNM210-HSxxx-50 (xxx=490-510, in step of 5, 150pcs)

Continued on Page 2

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH
TÜVRheinland®

Dipl.-Ing. (FH) Tim Kirschner

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
http://www.tuv.com/safety E-mail: markcheck@tuv.com
Fax: +49 221 806-3935

Zertifikat *Certificate*

TÜVRheinland®

Zertifikat Nr. *Certificate No.*
PV 50571126

Blatt *Sheet*
0002

Ihr Zeichen *Client Reference*	**Unser Zeichen** *Our Reference*	**Ausstellungsdatum** *Date of Issue*
C.X.X.	01-Ruanand-CN21T1QV 008	09.01.2023 *(day/mo/yr)*

Genehmigungsinhaber *License Holder*
Q-SOLAR LIMITED
UNIT 2 LG 1 MIRROR TOWER 61 MODY RD
TST KLN HONG KONG
P.R. China

Fertigungsstätte *Manufacturing Plant*
040-0002393546

Prüfzeichen *Test Mark*

TÜVRheinland® CERTIFIED
IEC 61215
IEC 61730
Regular Production Surveillance
www.tuv.com
ID 1111263636

Geprüft nach *Tested acc. 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 61730-2:2018

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)*

Lizenzentgelte - Einheit *License Fee - Unit*

PV Module

Continuation of Page 0001
Remarks:
Class II acc. to IEC 61140
Fire Rating: Class C (according to UL 790)
Design Load / Safety Factors: 3600 Pa / 1.5 (downward)
1600 Pa / 1.5 (upward)

Conditions:
The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.
The certificate is valid until 10 November 2027.

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH Zertifizierungsstelle

Dipl.-Ing. (FH) Tim Kirschner

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
http://www.tuv.com/safety E-mail: markcheck@tuv.com
Fax: +49 221 806-3935

TÜV Rheinland (China) Ltd.
Member of TÜV Rheinland Group

TÜVRheinland®
Precisely Right.

Jiangsu Zhongqing Photovoltaic
Technology Co., Ltd.
Wang Jiajia

26, North Side of Taishan Road,
Xiyi High-tech Zone, Xinyi, Xuzhou
221400 Jiangsu
P.R. China

Date : 09.01.2023
Our ref. : Ruanand 01
Your ref.: C.X.X.

Ref : PV Photovoltaic Modules

Type of Equipment : PV Module
Model Designation : See Certificate
Certificate No. : PV 50571126 0001
Report No. : CN21T1QV 008

Dear Wang Jiajia,

Please find enclosed certification documents as specified above.

Please forward these documents to the certificate holder.

If you contact our office, please quote our reference above.

We thank you for your cooperation.

the certificate holder is: Q-SOLAR LIMITED

With kind regards,

Certification Body

Dipl.-Ing. (FH) Tim Kirschner

Enclosure

TÜV Rheinland (China) Ltd.
莱茵检测认证服务（中国）有限公司

Room 301, 3F and Room 1203,12F, Building 4, No.15, Ronghua South Road, Beijing Economic-Technological Development Area Beijing (Yizhuang group in high-end industrial area of Beijing Pilot Free Trade Zone), P.R.China,100176

北京市北京经济技术开发区荣华南路15号院4号楼3层301室、12层1203室(北京自贸试验区高端产业片区亦庄组团)
邮编：100176

Tel: 86 10 8524 2222
Fax: 86 10 8524 2200
e-mail: info@bj.chn.tuv.com
Internet: http://www.chn.tuv.com

TÜV Rheinland (China) Ltd.
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Precisely Right.

Q-SOLAR LIMITED
Chen Xiaoxiu

UNIT 2 LG 1 MIRROR TOWER 61 MODY RD
TST KLN HONG KONG
P.R. China

Date : 09.01.2023
Our ref. : Ruanand 01
Your ref.: C.X.X.

Ref : PV Photovoltaic Modules

Type of Equipment : PV Module
Model Designation : See Certificate
Certificate No. : PV 50571126 0001
Report No. : CN21T1QV 008

Dear Chen Xiaoxiu,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

Dipl.-Ing. (FH) Tim Kirschner

cc: Q-SOLAR LIMITED

Enclosure

TÜV Rheinland (China) Ltd.
莱茵检测认证服务（中国）有限公司

Room 301, 3F and Room 1203,12F, Building 4, No.15, Ronghua South Road, Beijing Economic-Technological Development Area Beijing (Yizhuang group in high-end industrial area of Beijing Pilot Free Trade Zone), P.R.China,100176

北京市北京经济技术开发区荣华南路15号院4号楼3层301室、12层1203室(北京自贸试验区高端产业片区亦庄组团)
邮编：100176

Tel: 86 10 8524 2222
Fax: 86 10 8524 2200
e-mail: info@bj.chn.tuv.com
Internet: http://www.chn.tuv.com