



QNN182-HS-72

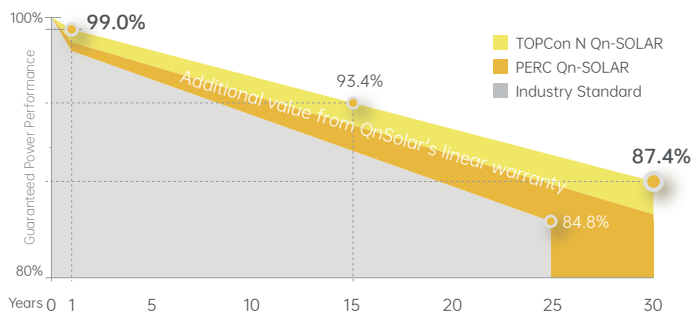
555-605W

TOPCon N-Type Monofacial Half-Cell Module

Max Efficiency 23.42%



LINEAR PERFORMANCE WARRANTY



Linear power guarantee over 87.4% power output after 30 years

15~30 years

Product materials and process warranty

< 1%

First year power degradation

30 years

Linear power warranty

< 0.4%

Year 2~30 power degradation



Excellent lower temperature coefficient, 1%-2% more power generation than P-type modules in high temperature areas.



Lower LCOE, 3.5% more power generation than PERC modules, greatly reduce the cost of power generation.



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



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



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

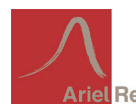
COMPREHENSIVE CERTIFICATES



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

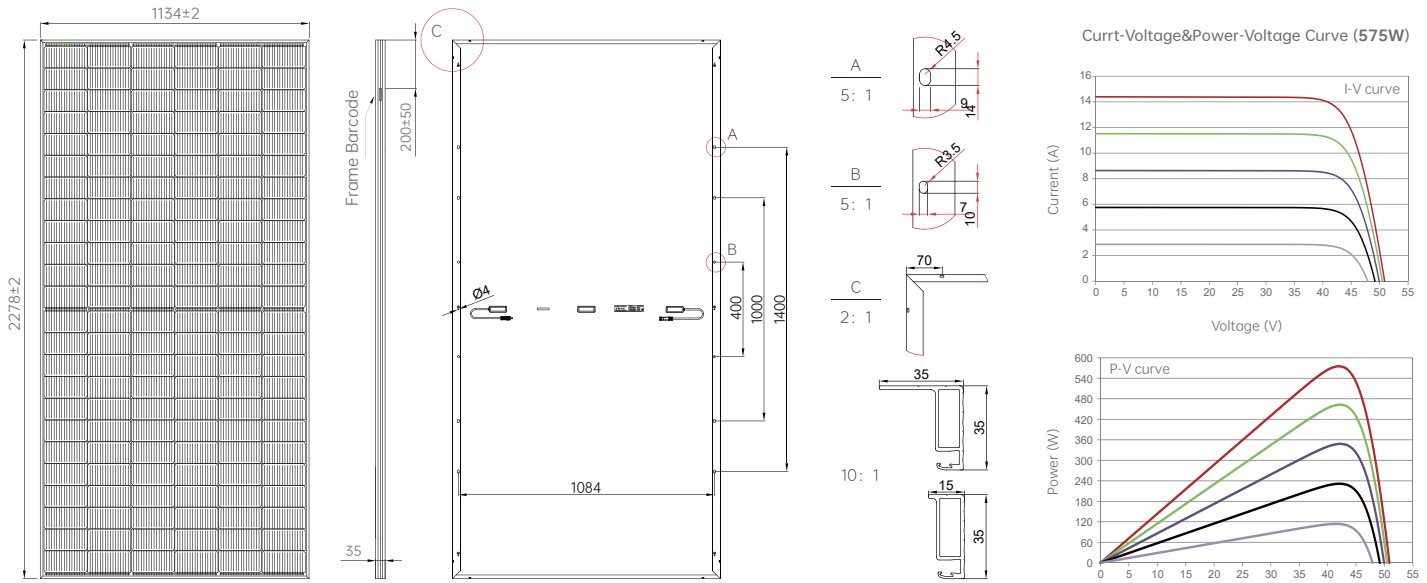
* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

PERFORMANCE INSURANCE



MODULE DIMENSIONS (mm)

144 cells



ELECTRIC CHARACTERISTICS

Module Type	QNN182-HS555-72	QNN182-HS560-72	QNN182-HS565-72	QNN182-HS570-72	QNN182-HS575-72	QNN182-HS580-72	QNN182-HS585-72	QNN182-HS590-72	QNN182-HS595-72	QNN182-HS600-72	QNN182-HS605-72
STC Peak Power - Pmax(Wp)	555	560	565	570	575	580	585	590	595	600	605
Optimum Working Voltage - Vmp(V)	41.48	41.66	41.85	42.04	42.22	42.40	42.58	42.76	42.93	43.11	43.28
Optimum Working Current - Imp(A)	13.38	13.44	13.50	13.56	13.62	13.68	13.74	13.80	13.86	13.92	13.98
Open Circuit Voltage - Voc(V)	50.19	50.37	50.55	50.70	50.88	51.04	51.21	51.36	51.52	51.68	51.83
Short Circuit Current - Isc(A)	14.09	14.17	14.25	14.33	14.41	14.49	14.57	14.65	14.73	14.81	14.89
Module Efficiency (%)	21.48	21.68	21.87	22.07	22.26	22.45	22.65	22.84	23.03	23.23	23.42

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

MECHANICAL PARAMETERS

Cell Type	TOPCon N-type Monocrystalline
Number of Half Cells	144 (2x72)
Module Size	2278mm × 1134mm × 35mm (30mm)
Weight	28.3kg (35mm Frame) / 28.1kg (30mm Frame)
Glass	3.2mm Coated tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 standard (3 bypass diode)
Output Cable	TUV (2pfg1169:2007) 4mm ² /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°C, Spectra at AM1.5, Wind at 1m/s.

TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.046%/°C
Power Tolerance (W)	0~+5W
Maximum Series Fuse Rating	25A
Maximum System Voltage	DC1500V
Operating Module Temperature	-40°C ~ +85°C

PACKING CONFIGURATION (40'HC)

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

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



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* The technical parameters contained in this datasheet may deviate slightly, and QnSolar does not guarantee that they are completely accurate. Due to continuous innovation, research and development and product improvement, QnSolar reserves the right to adjust the information in this datasheet at any time without prior notice. The customer should obtain the latest version of datasheet when signing the contract and make it an integral part of the binding contract signed by both parties. The Chinese (or other language) translation files of this datasheet are for reference only. If there is any inconsistency between the English version and the Chinese version (or other language versions), the English version shall prevail.



View Our Web

A close-up photograph of a solar panel, showing the grid of cells and the white interconnecting lines. The panel is positioned on the left side of the page, partially overlapping a large yellow trapezoidal shape.

**15 YEARS
PRODUCT
WARRANTY
PV MODULE**

Version 2024

A thin yellow horizontal line is positioned below the version information.

Dear customers:

Thank you for purchasing the PV modules manufactured by Qn-SOLAR PV LIMITED (hereinafter referred to as "Qn-SOLAR").

We promise that PV modules have the following quality performance guarantee. The Product Warranty Term starts from the date of sale to the first customer (use by oneself) and has a certified invoice ("sales date") or 6 months after the modules are shipped out of the production plant, which the earlier date shall be effective (hereinafter short as the "Warranty Effective Date").

1 Limited product warranty - repair, replacement or refund during use

Qn-SOLAR guarantees that the solar modules ("modules"), including factory-assembled DC connectors and cables, meet customer requirements under normal application, installation, use and service conditions. If the module fails to meet the quality assurance requirement within **15** years as of the Warranty Effective Date, the company can choose to repair, replace the product or refund the price according to the current price of products similar to modules. This repair, replacement and refund is the only and exclusive compensation measure under the limited warranty of this product and shall not exceed the warranty period stipulated in this warranty. This limited warranty does not involve assurance for the module power output. The power output assurance is to be specially elaborated in the Section 2 "Limited Warranty for Peak Power" below.

2 Limited peak power warranty

Output ratio of rated power warranty

— PERC P-type

- For monofacial module, the first year is 98.0% output, from the second year to 25th year, the max degradation is 0.55% every year. The output ratio is 84.8% when the warranty was ended at the 25th years.
- For bifacial module, the first year is 98.0% output, from the second year to 30th year, the Max degradation is 0.45% every year. The output ratio is 84.95% when the warranty was ended at the 30th years.

— TOPCon N-type

- For both monofacial and bifacial module, the first year is 99.0% output, from the second year to 30th year, the Max degradation is 0.4% every year. The output ratio is 87.4% when the warranty was ended at the 30th years.

Qn-SOLAR guarantee that all the modules have no defects in material or process, so the PV module will not fail at the rated

output power mentioned above in the specification of Qn-SOLAR. According to the Qn-SOLAR judgment if the defects were not

in material or workmanship, the Qn-SOLAR will choose any way by itself: either (1) replacement: either (a) to provide the additional module to compensate the output lost. or (b) to replace the defective module or parts with the same performance module or parts. or (2) Return the cost (calculate as the current market price) which equivalent to the balance of the stipulated output rating.

The stipulated compensation in Article 2 should be the exclusive remedies of the limited peak power warranty.

The rated output in the specification is the Max power of the PV module in the standard testing condition (STC), the unit is watt.

STC: AM1.5 light spectrum ,1000W/M² irradiance ,25°C cell temperature in the vertical radiation. Measurement shall be made in accordance with IEC61215 at the end of the connector. If it is feasible, test shall be made in accordance with the calibration and testing standard of Qn-SOLAR.

3 Exclusions and limitations

(1) Claims under the Limited Warranty must be filed within the applicable warranty period for the limited warranty to be valid.

(2) The Limited Warranty and Limited Peak Power Warranty shall not apply to the following scenarios.

- Misuse, abuse, negligence, accident
- Improper transportation, storage or operation
- Refit, improper installment or usage
- Clients do not follow Qn-SOLAR's instruction on installment or maintenance
- The maintenance made by the technician who was not authorized by Qn-SOLAR
- The PV modules were installed on the mobile site or on the ocean
- Thunder, flood, fire, unexpected damage, or other force majeure that out control of Qn-SOLAR

(3) The Limited Warranty and Limited Peak Power Warranty do not cover the following cost such as the installment, disassembly, re-installation (except the last section of the article 5), the custom cleaning fee or other cost

(4) The claims would be refused when the module's type or serial number was modified, removed or beyond recognition.

4 Scope of application of warranty

Unless Qn-SOLAR expressly agrees, signs and acknowledges other obligations and responsibilities in writing, the "limited warranty of PV modules" set forth in this paper explicitly replaces and excludes all other express or implied warranties (including but not limited to commercial warranties, warranties for special purposes, uses or applications) and all other obligations or responsibilities of Qn-SOLAR. Qn-SOLAR shall not be liable for personal injury or property damage, nor for any other loss or damage caused by or related to the module (including but not limited to any defects in the module, any defects arising from use and installation). Under no circumstances shall Qn-SOLAR be liable for incidental, indirect or special loss arising from any cause. Qn-SOLAR shall not be liable for any loss of utility, production, earnings or profits. If Qn-SOLAR bears any loss or other liability to the customer, its cumulative liability shall not exceed the invoice value of the single module paid by the customer.

5 The fulfillment of the warranty

If the customers have the legitimate reason to claim according to the Limited Warranty, they shall immediately notify either (a) installation company, or (b) the distributor authorized by Qn-SOLAR or (c) to post the written notice or send E-mail to Qn-SOLAR, meanwhile customer shall provide the invoice with the purchase date, module type, signature of Qn-SOLAR or authorized distributor.

The returned module would not be accepted without the written authorization issued by Qn-SOLAR. Qn-SOLAR will afford the reasonable freight of the return, re-shipment, or the cost of replacement, such freight or cost should have the document evidence, and must be agreed by the Customer Service Department of Qn-SOLAR.

6 Severability

If a part, a provision or a clause of this "limited warranty of PV modules" or its application to a person or environment is deemed invalid or unenforceable, this determination shall not affect the validity of all other parts, provisions, terms or applications of the "limited warranty of PV modules". And for this purpose, other parts, provisions, terms or applications of the "limited warranty of PV modules" shall be deemed divisible.

7 Technical dispute

Any disputations of the claim under the warranty shall be arbitrated by the first-class testing organization such as Fraunhofer ISE in Freiburg Germany, TÜV Rhineland in Cologne Germany, Arizona State University, UL, or Intertek. All the test shall follow the regulation of the IEC61215 Second version. The arbitration expense shall be afforded by the losing party unless otherwise specified. Qn-SOLAR has the final right to select the above-mentioned testing organization. The customers may have other special legal rights. In different countries, customers will have different rights. This warranty will not affect the customers enjoy any other additional rights.

8 The rest

The maintenance, replacement or supply of additional modules does not mean that the warranty period has been renewed. The original term of this "limited warranty of PV modules" should not be extended. Any replaced modules shall be the property of Qn-SOLAR and at its sole discretion. In the process of dealing with the claim, if Qn-SOLAR has stopped producing the module which will be replaced, Qn-SOLAR is entitled to provide another module (different size, color, shape and/or power).

9 Assignment of warranty

This warranty could be transferred when the products are still installed at the original installation location on the warranty registration and has not been disassembled or transferred.

10 Force Majeure

Force Majeure shall mean nature force, war, riots, war, plague, fire, flood that beyond the control of Qn-SOLAR. If an event of the Force Majeure occurs, Qn-SOLAR has no responsibility about the cancellation or delay for the performance of the contract, nor shall be responsible for the suspend of the Limited Warranty in this case.



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