Q-SUN solar

QN-60-18X(NLm)

Lightweight and Flexible Mono-Crystalline

440~460W

0~+5W POWER TOLERANCE

High Efficiency, Low LID

Half-cell TOPCon Technology

120 HALF-Cell CELLS

182 ×91 mm SQUARE CELLS

12 years material warranty 12

30 years power linear warranty 30

Quick installation

through'Quick-Bonding' technology eliminates traditional mounting systems, resulting in reduced installation costs.

Ultra-lightweight

This module weighs only 6.3 kg, reducing weight by up to 70% compared to conventional glass modules.

Safety

Integrated with the roof installation surface to ensure waterproof performance and safety of the roof.

Flexibility

The biggest advantage of flexible PV modules is their ability to bend, allowing them to adapt to a wider range of applications.

A sound quality management system and product certification

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality management system

ISO14001:2015: Environmental management system

ISO45001:2018: Occupational health and safety management system

FLEXIBILITY

440~460W

21.1%	0~+5W	0.4%	Half-Cell Module
MAXIMUM CONVERSION	POWER TOLERANCE	0.4% PER YEAR OVER 30 YEARS	LOWER TEMPERATURE COEFFICIENT

Specification

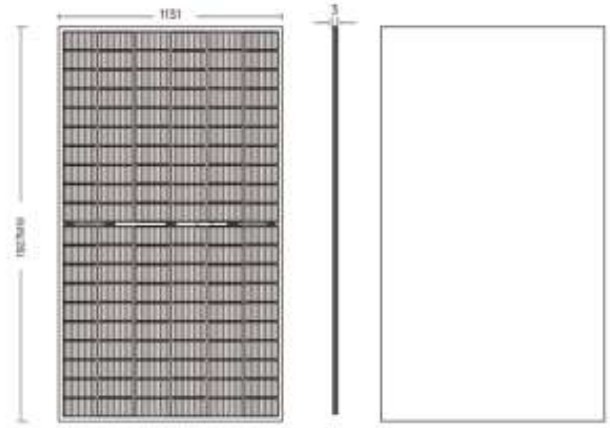
Cell Type	Mono-Crystalline 182x91mm
No. of Cells	120(6 x 20) pcs
Dimension	1927mmx1131mm x3 mm
Weight	6.3±0.5kg
Connector	MC4/MC4 Compatible
Frame	Frameless Design
Junction Box	IP68
Cable Length	4mm2 (UL/IEC) length: 400mm (+, -) /or customizable

Packing Standard

40'HQ container

58pcs/pallet, 22pallets/ctns, 1276pcs/ctn

Mechanical Diagrams



Length: ±2mm **Width:** ±2mm **Thickness:** ±0.1mm

Electrical Parameters At STC

Module Type	**QN-60-18X(NLm)-440**	**QN-60-18X(NLm)-445**	**QN-60-18X(NLm)-450**	**QN-60-18X(NLm)-455**	**QN-60-18X(NLm)-460**
Peak Power-Pmax	440W	445W	450W	455W	460W
Open Circuit Voltage-Voc	41.03V	41.18V	41.33V	41.48V	41.63V
Short Circuit Current-Isc	13.76A	13.83A	13.90A	13.97A	14.04A
Maximum Power Voltage-Vmp	34.48V	34.63V	34.78V	34.93V	35.08V
Maximum Power Current-mp	12.76A	12.85A	12.93A	13.02A	13.11A
Module Efficiency - nm	20.2%	20.4%	20.6%	20.8%	21.1%

Electrical Parameters At NMOT

Maximum Power-Pmax	329W	333W	337W	340W	344W
Open Circuit Voltage-Voc	48.4V	48.48V	48.59V	48.69V	48.78V
Short Circuit Current-Isc	8.75A	8.83A	8.91A	9.00A	9.09A
Maximum Power Voltage-Vmp	40.10V	40.24V	40.33V	40.41V	40.50V
Maximum Power Current-Imp	8.21A	8.27A	8.35A	8.42A	8.49A

Operating Parameters

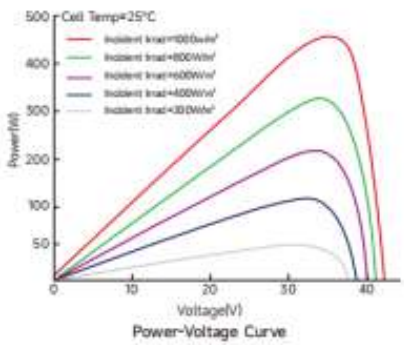
Maximum System Voltage	1500V DC (UL/IEC)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Operational Temperature	-45°C~+85°C
Safety Class	Class II

Temperature Coefficient (STC Test)

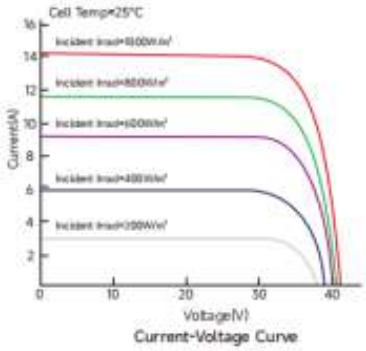
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.31%/°C

Product Features

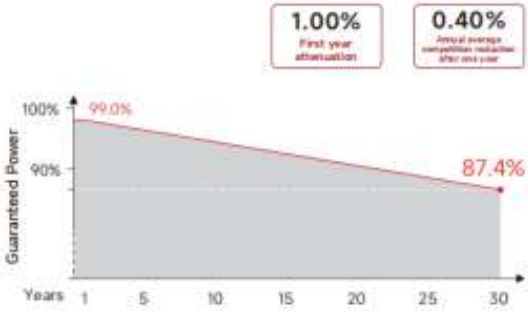
High Efficiency, Low LID, Half-cell **TOPCon** Technology



Power-Voltage Curve



Current-Voltage Curve



STC: Irradiance:1000W/m² | Battery temperature: 25°C | Atmospheric=1.5

NOCT: Irradiance:800W/m² | Ambien temperature: 20°C | Atmospheric=1.5 | Wind speed 1m/s

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