

Q-SUN solar

Onyx Series

Full Black Mono-Crystalline

480~500W

0~+5W POWER TOLERANCE

High efficiency N - type Double glass black grid solar module ●

Stronger properties, PID resistance, reduced hot spot loss ●

Better temperature coefficient ●

Harsh environmental adaptation ●

Full black module, aesthetic appearance ●

Bifacial module, more power generation ●

15 years material warranty **15**

30 years power linear warranty **30**

120

HALF-CUT
CELLS

**182
x182
mm**

SQUARE
CELLS

**Comprehensive quality management system
and product certification**



IEC61215(2016), IEC61730(2016)

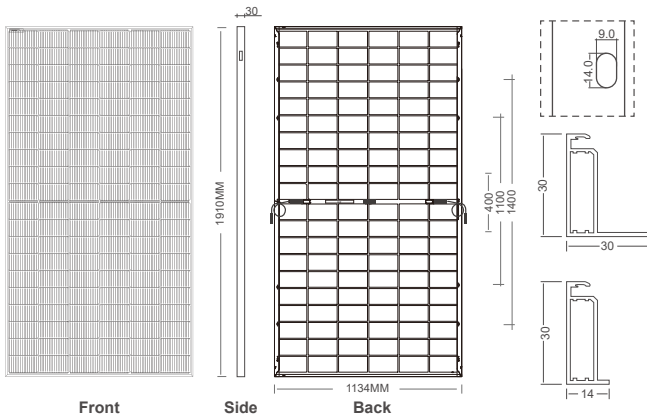
ISO9001:2015: Quality management system

ISO14001:2015: Environmental management system

ISO45001:2018: Occupational health and safety management system

23.1%
MAXIMUM CONVERSION0~+5W
POWER TOLERANCE0.4%
0.4% PER YEAR OVER 30 YEARSHalf-Cut Module
LOWER TEMPERATURE COEFFICIENT

Mechanical Diagrams

Length: ± 2 mm Width: ± 2 mm Thickness: ± 1 mm Hole pitch: ± 2 mm

Packing Standard

Container capacity(40HQ)

Pallet size (mm) : 37pcs/pallet, 24pallets/ctns, 888pcs/ctn

Electrical Parameters At BNPI

Maximum Power (Pmax)	529	535	540	546	551
Open Circuit Voltage (Voc)	43.93	44.20	44.33	44.52	44.71
Short Circuit Current (Isc135)	15.25	15.32	15.38	15.44	15.51
Short Circuit Current (Isc300)	16.99	17.06	17.13	17.20	17.27
Maximum Power Voltage (Vmp)	36.70	36.94	37.18	37.41	37.65
Maximum Power Current (Imp)	14.42	14.48	14.53	14.59	14.64

Electrical Parameters

Module Type	QN-480HT-06		QN-485HT-06		QN-490HT-06		QN-495HT-06		QN-500HT-06	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	480	363	485	367	490	370	495	374	500	378
Open Circuit Voltage (Voc)	43.93	41.73	44.20	41.99	44.33	42.11	44.52	42.29	44.71	42.48
Short Circuit Current (Isc)	13.83	11.07	13.89	11.11	13.95	11.16	14.01	11.21	14.06	11.25
Maximum Power Voltage (Vmp)	36.70	34.68	36.94	34.91	37.18	35.13	37.41	35.36	37.65	35.58
Maximum Power Current (Imp)	13.08	10.46	13.13	10.50	13.18	10.54	13.23	10.58	13.28	10.62
Module Efficiency - η m (%)	22.2		22.4		22.6		22.9		23.1	

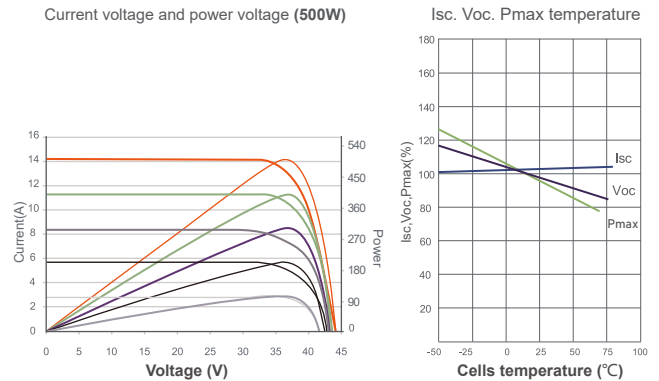
Load Capacity

Max Load Front	5400Pa
Max Load Back	2400Pa
Through Hail Testing	25mm Diameter, Impact Speed 23m/s

Temperature Coefficient (STC Test)

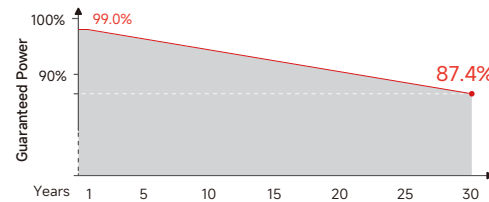
Temperature Coefficient of Isc	+0.04%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.30%/°C

Curve Figure



Specification

Cell Type	Mono Crystalline
No. of Cells	120 [2x(6x10)] pcs
Dimension	1910x1134x30mm
Weight	26.5kg
Front Glass	2.0mm
Back Glass	2.0mm
Junction Box	IP68
Cable Length	300mm,1200mm(can be customized)



Operation Parameters

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC (IEC)
Maximum Series Fuse Rating	25A
Power Tolerance	0~+5W
Nominal Operating Cell Temperature (NOCT)	42 $\pm$ 2°C
Safety Class	Class II
Fire Safety Class According	Class C
Refer.Bifacial Factor	80 $\pm$ 10%

STC : Irradiance:1000W/m² | Battery temperature: 25°C | Atmospheric=1.5NOCT: Irradiance:800W/m² | Ambien temperature: 20°C | Atmospheric=1.5 | Wind speed 1m/sBNPI: Rear Irradiance 135W/m² | Bifaciality coefficient 80% $\pm$ 5%D5 Greenland Window Building
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