

# NEOSUN™ Duo (Bifacial) NS-144MHD 560-590W

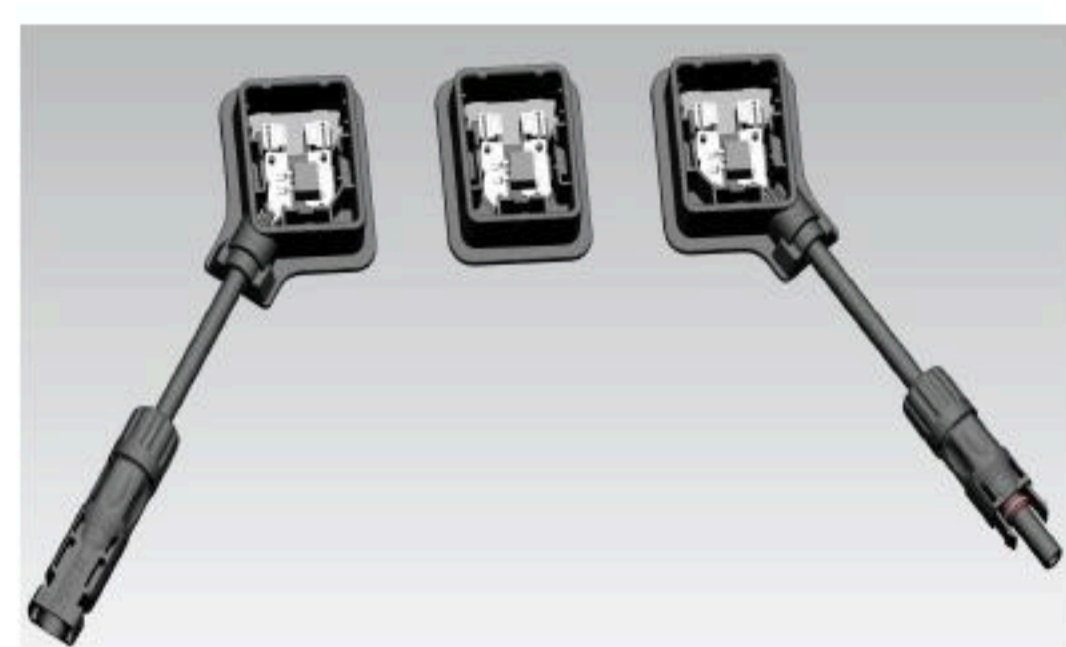
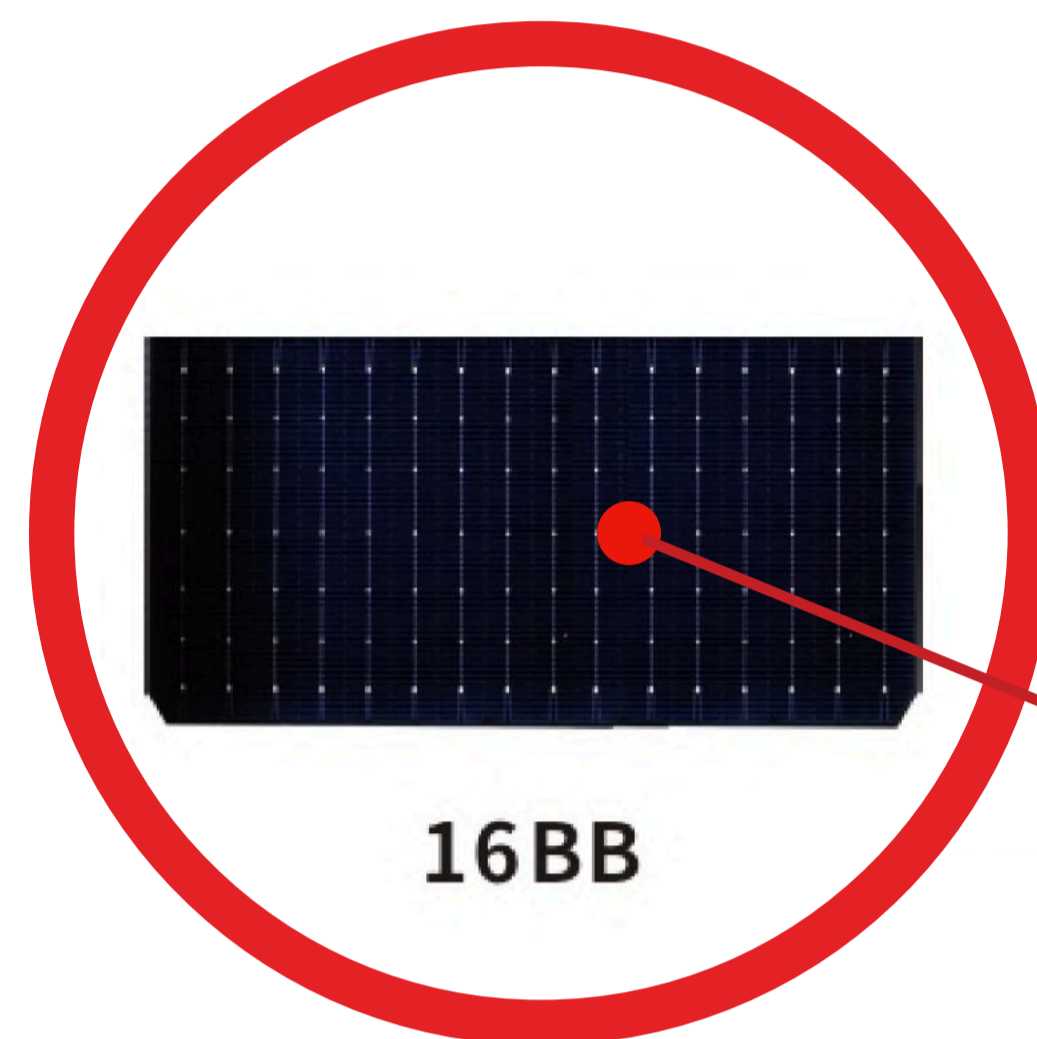
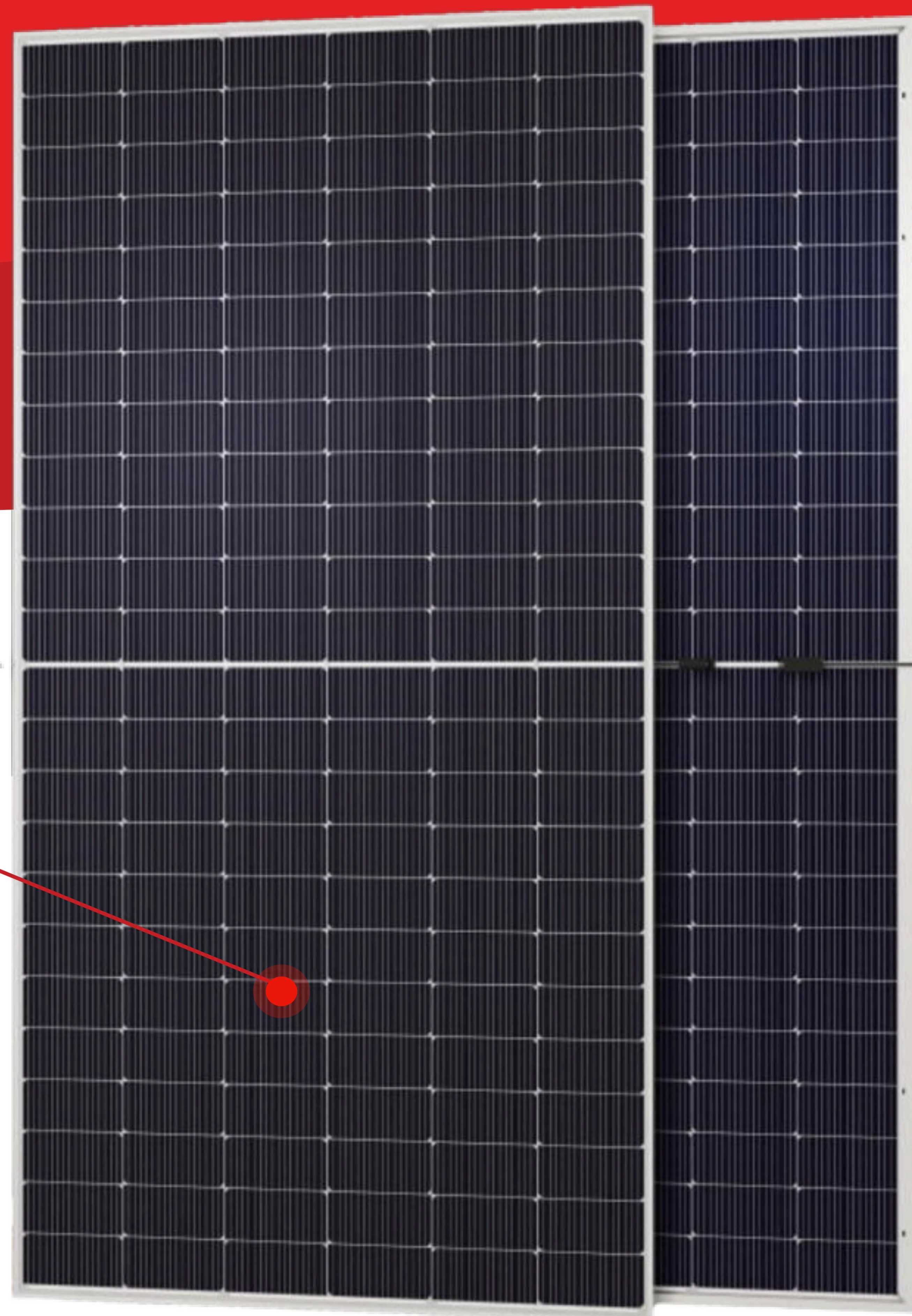
TOPCON TECHNOLOGY | MONO | N-TYPE

### POWER RANGE

560W ~ 590W

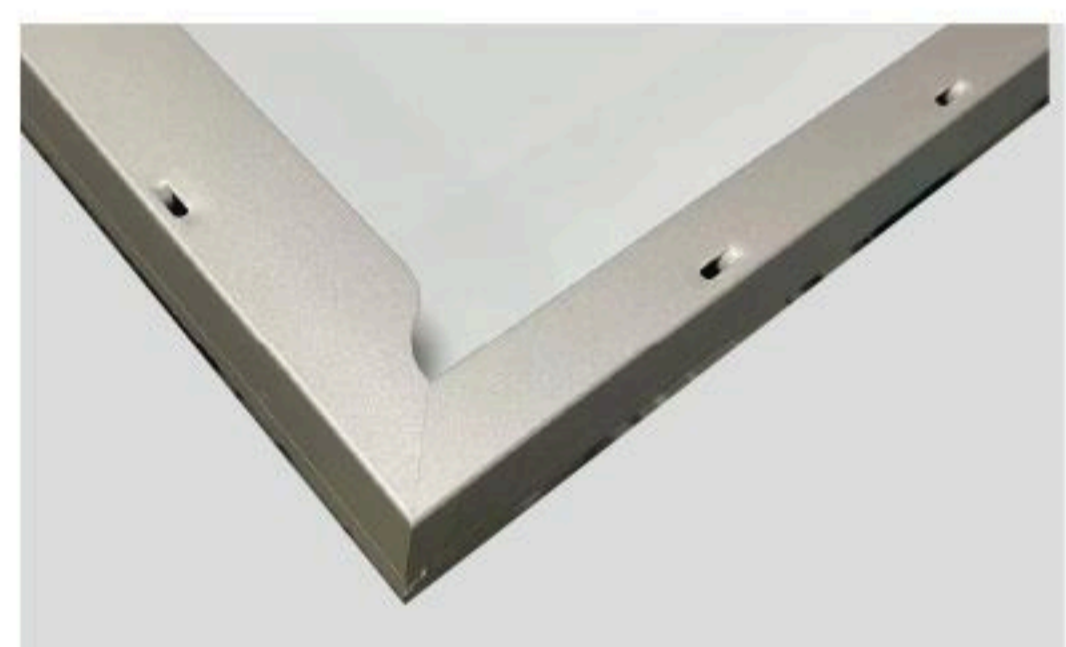
### CELL SIZE

182\*91mm



### JUNCTION BOX

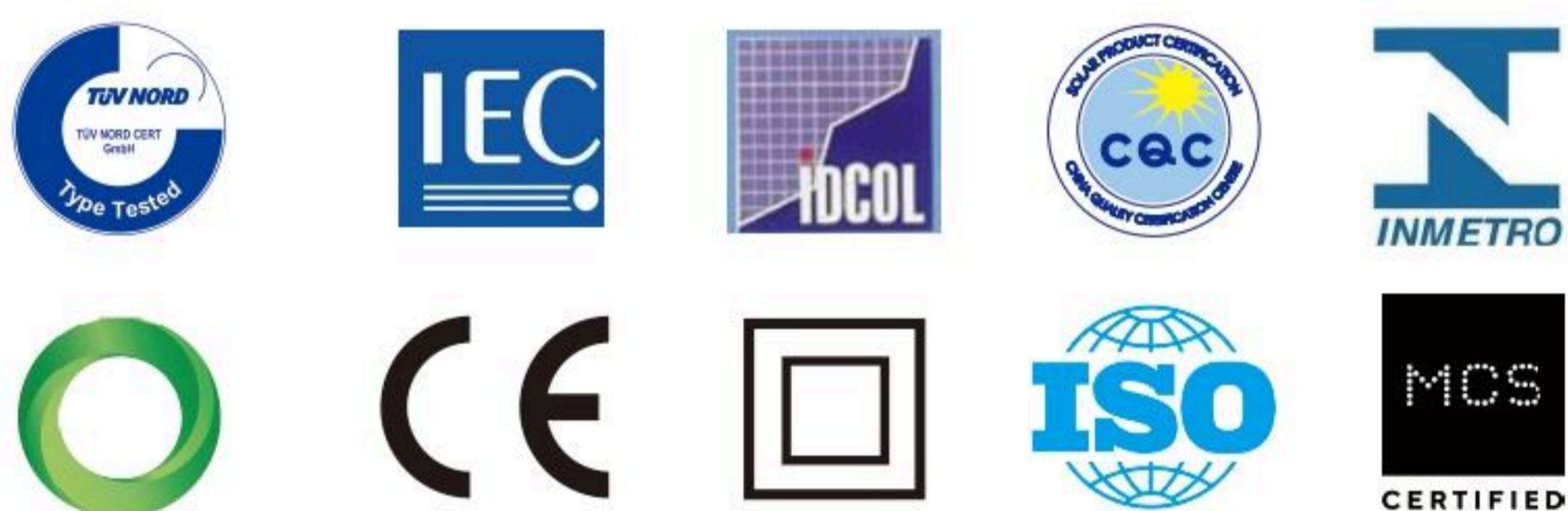
Waterproof protection grade: IP68  
Safety Level: Class II  
Maximum System Voltage: 1500V  
outstanding waterproof level  
Effectively resist harsh environments



### FRAME

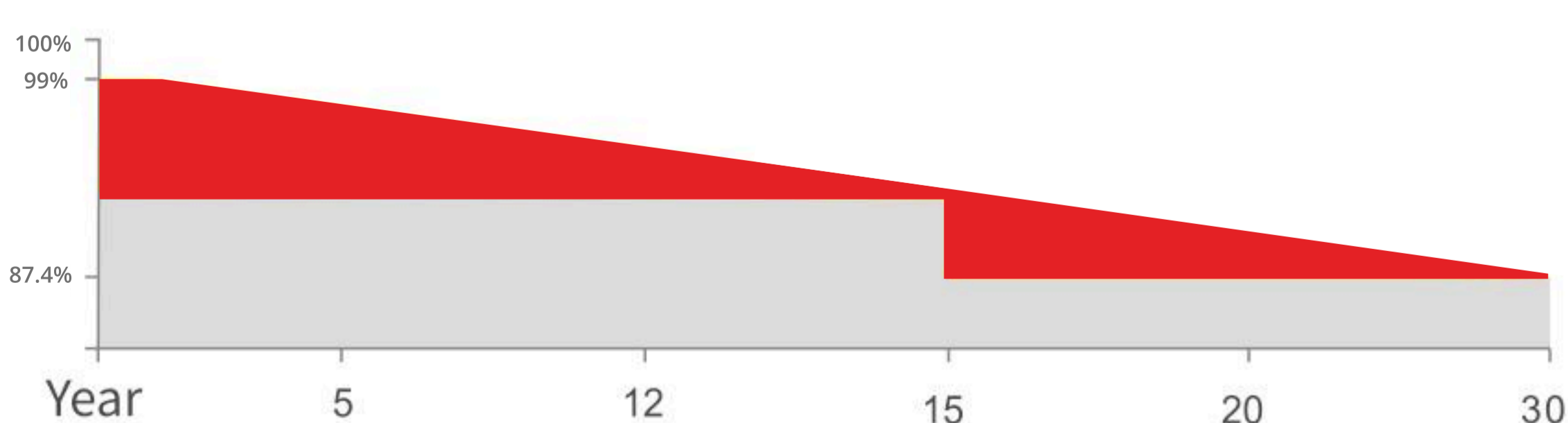
Strong mechanical load  
resistance up to 5400Pa  
Anodic oxidation layer resistant to  
chemical corrosion

## QUALIFICATIONS & CERTIFICATIONS



• IEC61215 / • IEC61730

## WARRANTY



**15 YEARS** Guarantee on product material and workmanship

**30 YEARS** Linear Power output warranty



### SMBB TECHNOLOGY

Better light trapping and current collection to improve module power output and reliability.



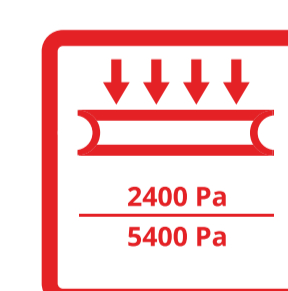
### PID RESISTANCE

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### HIGHER POWER OUTPUT

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.



### ENHANCED MECHANICAL LOAD

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

NEOSUN Energy is a global leader in solar energy, specializing in turnkey solutions for industrial and commercial enterprises. Founded in 2015, we design and build solar power plants and ESS from 200 kW to 10 MW for clients like Adidas, Allianz, FIFA, and Gazprom.

Our products meet top standards (TÜV, MCS, IEC, ISO, CE) thanks to advanced production and strict quality control. We use high-quality silicon cells from Tier 1 suppliers, tested for peak performance and positive power tolerance.

Automated production ensures precision with robotic soldering, assembly, and testing. Panels are X-ray tested, laminated at 1,000 degrees, and flash-tested before assigning a unique ID for traceability. Packed vertically, they arrive in perfect condition.

## ELECTRICAL DATA (STC)

Model Type	NS-144MHD-560	NS-144MHD-565	NS-144MHD-570	NS-144MHD-575	NS-144MHD-590	NS-144MHD-585	NS-144MHD-590
Peak Power(Pmax)	560.00	565.00	570.00	575.00	580.00	585.00	590.00
Maximum Power Voltage(Vmp)	41.77	41.92	42.07	42.22	42.37	42.52	42.67
Maximum Power Current(Imp)	13.41	13.48	13.55	13.62	13.69	13.76	13.83
Open Circuit Voltage(Voc)	50.47±3%	50.60±3%	50.74±3%	50.88±3%	51.02±3%	51.16±3%	51.30±3%
Short Circuit Current(Isc)	14.15±3%	14.23±3%	14.31±3%	14.39±3%	14.47±3%	14.55±3%	14.63±3%
Module Efficiency( % )	21.68	21.87	22.07	22.26	22.45	22.63	22.83

\*STC:irradiance 1000W/m<sup>2</sup>, AM1.5, and cell temperature of 25°C

## ELECTRICAL DATA (NMOT)

Model Type	NS-144MHD-560	NS-144MHD-565	NS-144MHD-570	NS-144MHD-575	NS-144MHD-590	NS-144MHD-585	NS-144MHD-590
Peak Power(Pmax)	421.00	425.00	429.00	433.00	437.00	441.00	445.00
Maximum Power Voltage(Vmp)	39.25	39.38	39.51	39.64	39.77	39.90	40.03
Maximum Power Current(Imp)	10.73	10.79	10.85	10.91	10.97	11.03	11.09
Open Circuit Voltage(Voc)	47.94±3%	48.06±3%	48.20±3%	48.32±3%	48.46±3%	48.60±3%	48.74±3%
Short Circuit Current(Isc)	11.42±3%	11.49±3%	11.55±3%	11.61±3%	11.68±3%	11.75±3%	11.82±3%

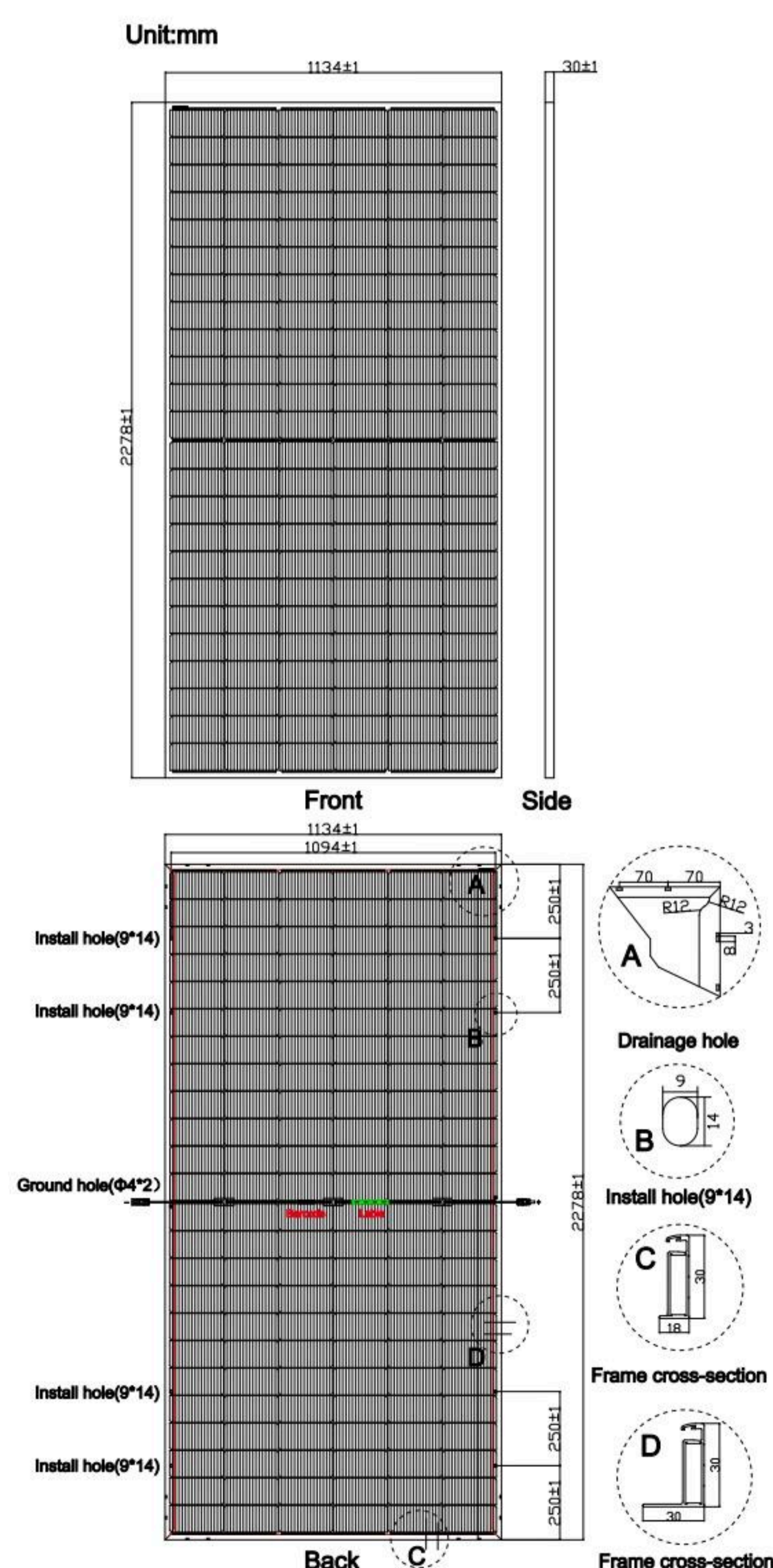
\* NMOT: irradiance 800 W/m<sup>2</sup>, AM 1.5, ambient temperature 20°C, wind speed 1 m/s

## ELECTRICAL DATA (BNPI)

Model Type	NS-144MHD-560	NS-144MHD-565	NS-144MHD-570	NS-144MHD-575	NS-144MHD-590	NS-144MHD-585	NS-144MHD-590
Peak Power(Pmax)	620.00	626.00	632.00	637.00	643.00	649.00	655.00
Maximum Power Voltage(Vmp)	41.77	41.92	42.07	42.22	42.37	42.52	42.67
Maximum Power Current(Imp)	14.86	14.94	15.01	15.09	15.18	15.26	15.34
Open Circuit Voltage(Voc)	50.47±3%	50.60±3%	50.74±3%	50.88±3%	51.02±3%	51.16±3%	51.30±3%
Short Circuit Current(Isc)	15.68±3%	15.77±3%	15.86±3%	15.94±3%	16.03±3%	16.12±3%	16.21±3%

\*BNPI:back irradiance 135W/m<sup>2</sup>, AM1.5, and cell temperature of 25°C

## PV DRAWINGS



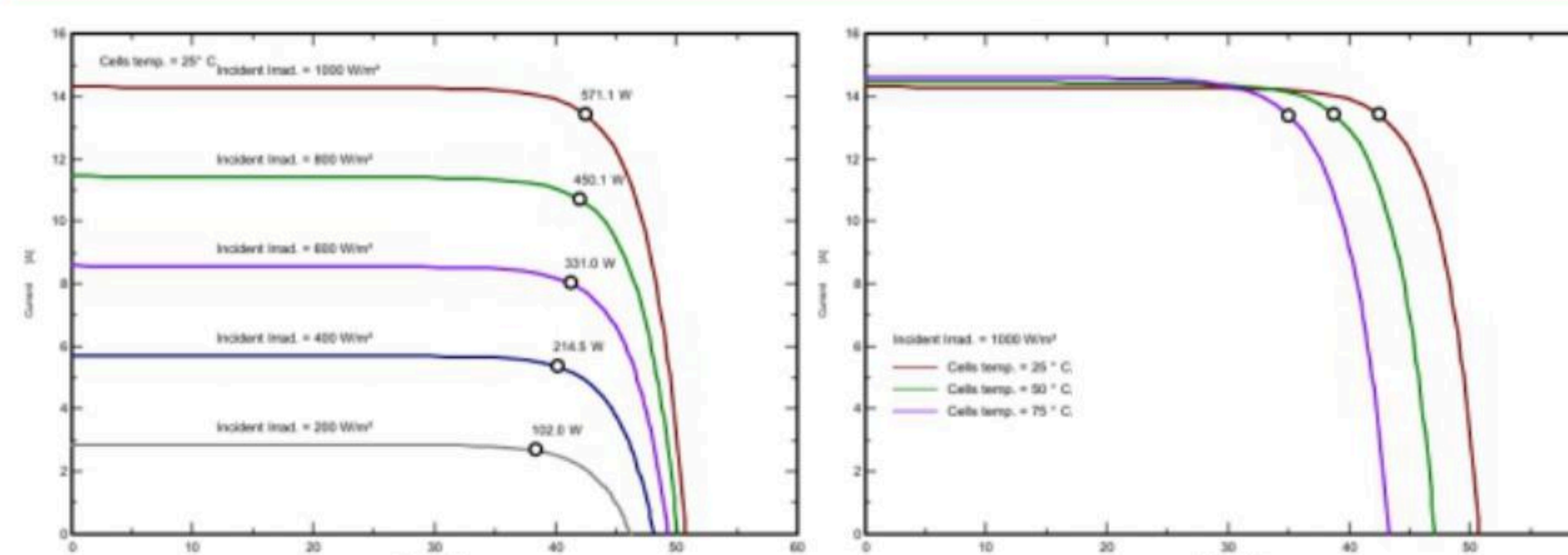
## TEMPERATURE & MAXIMUM RATING

Maximum System Voltage (V)	1500 V
Maximum Series Fuse Rating (A)	30 A
Power Tolerance	0~+3 W
Pmax Temperature Coefficients (W/°C)	-0.300 %/°C
Voc Temperature Coefficients (V/°C)	-0.250 %/°C
Isc Temperature Coefficients (A/°C)	+0.046 %/°C
NMOT Nominal Module Operating Temperature (°C)	45±2 °C
Operating and Storage Temperature (°C)	-40~+85 °C

## MECHANICAL CHARACTERISTICS

Cell Type	182*91 N Type Bifacial Mono
No. of Cells	144 (12*12)
Dimensions	2278*1134*30mm
Weight	32.20kg
Front Glass	2.0mm AR coating tempered glass
Back Glass	2.0mm Glazed Glass
Frame	Anodized Aluminium Alloy
Junction box	IP68 3diodes
Output cables	4mm <sup>2</sup> cable 35cm (Including MC4 connector)
MaxWind Load/Snow Load	2400Pa/5400Pa

## UV CURVE (570W)



## PACKING WAY

20FT container	5 Packages/185pcs
40HQ container	20 Packages/740pcs