

Mono

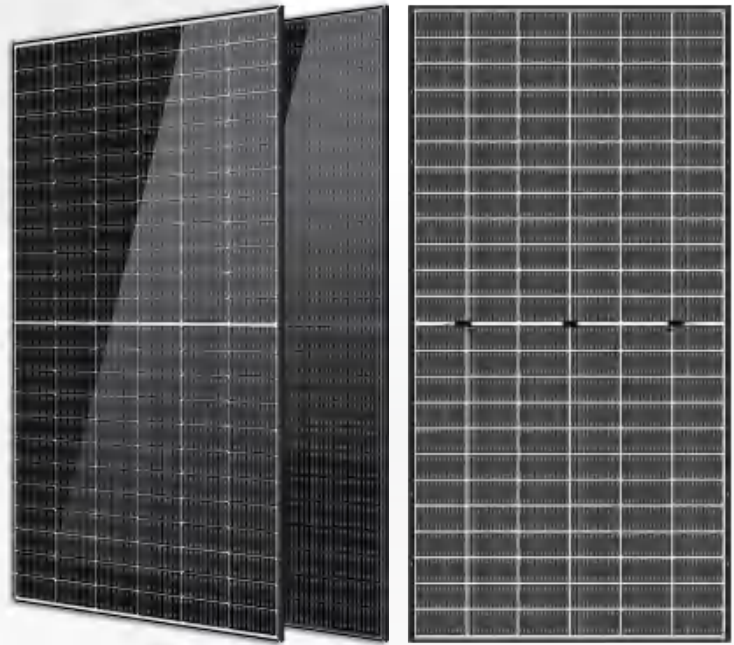
Bifacial

# HORAY

## Solar Ocean

### 570-590 Watt N-Type MONO-BIFACIAL MODULE

- IEC61215: 2021
- IEC61730: 2023
- TUV Rheinland Standard
- Lloyd'S Ariel Re
- Solar Performance Insurance
- ISO9001: 2015
- Quality Management System
- ISO14001:
- Environmental Management System
- CE: Europe Standard
- Inmetro Certificate
- Japan JP-AC
- China Quality Certification Centre
- Solar product certification



#### KEY FEATURES



##### SMBB Cell

More uniform current collection capability, reducing the current heat loss of the internal cells.



##### Low Light Features

Higher performance under low light environment.



##### Higher Output Power

The output power of 144 half-cells Monocrystalline modules is up to 590W.



##### LID Free

N-type solar cell has no LID naturally which can increase power generation.



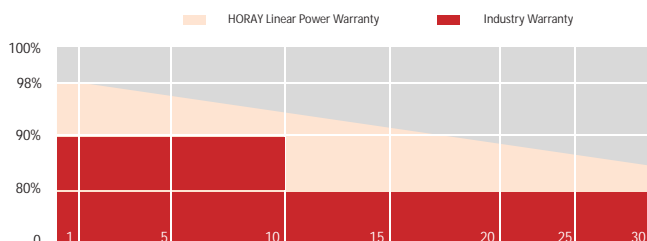
##### Harsh Environmental Adaptability

Strict salt spray and ammonia corrosion test by the third party.



##### Load Capacity

Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa.



HEADQUARTER: HORAY SOLAR CO., LTD.

GLOBAL MARKETING AND SERVICE: HORAY SOLAR GMBH

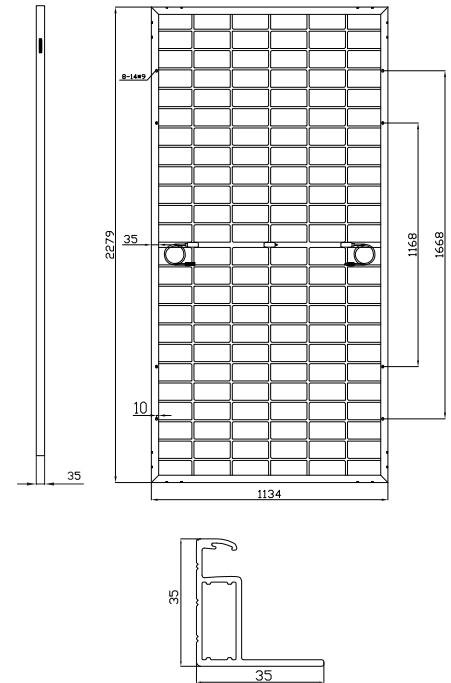
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## ❖ SPECIFICATIONS

Weight	31.5kg
Dimension	2279mm*1134mm*35mm
Cell Dimension	182*91mm
Cell Amount	72*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Type of the front glass	2.0mm Coated ultra clear glass
Type of the back glass	2.0mm Heat-strengthened glass
Frame	Aluminum Alloy
Cable	4mm <sup>2</sup> ,+300,-300mm/±1300mm Length can be customized
Connector	MC4 compatible
Application Level	Class A

## ❖ MECHANICAL DIAGRAMS



## ❖ ELECTRICAL PARAMETERS AT STC

Module Type	HS570TC-MHO-D	HS575TC-MHO-D	HS580TC-MHO-D	HS585TC-MHO-D	HS590TC-MHO-D
Power	570W	575W	580W	585W	590W
Open Circuit Voltage	51.19V	51.30V	51.41V	51.52V	51.63V
Short Circuit Current	14.05A	14.14A	14.22A	14.30A	14.38A
Maximum Power Voltage	43.01V	43.11V	43.22V	43.33V	43.44V
Maximum Power Current	13.26A	13.34A	13.42A	13.51A	13.59A
Module Efficiency	22.06%	22.25%	22.50%	22.60%	22.80%

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

## ❖ ELECTRICAL PARAMETERS AT BNPI

Power	621W	627W	632W	637W	644W
Open Circuit Voltage	51.31V	51.42V	51.53V	51.64V	51.74V
Short Circuit Current	15.37A	15.45A	15.55A	15.64A	15.73A
Maximum Power Voltage	42.41V	42.63V	42.72V	42.84V	42.95V
Maximum Power Current	14.63A	14.72A	14.81A	14.9A	15A

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

## ❖ ELECTRICAL PARAMETERS AT NMOT

Power	432W	436W	439W	444W	448W
Open Circuit Voltage	48.41V	48.52V	48.62V	48.73V	48.94V
Short Circuit Current	11.35A	11.43A	11.49A	11.55A	11.62A
Maximum Power Voltage	40.21V	40.31V	40.42V	40.53V	40.72V
Maximum Power Current	10.74A	10.81A	10.87A	10.94A	11.01A

\* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

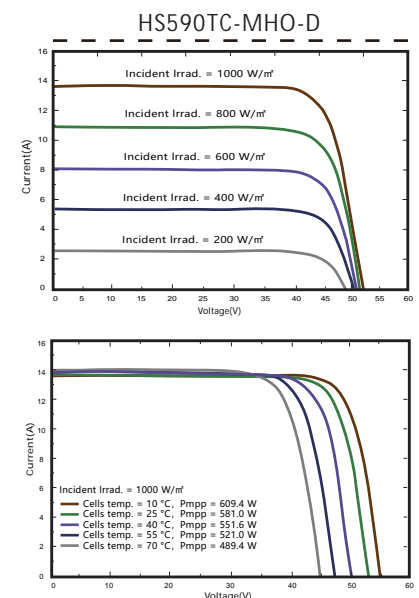
## ❖ TEMPERATURE CHARACTERISTICS

NMOT	45±2°C
Temp Coefficient of ISC	+0.04%/°C
Temp Coefficient of VOC	-0.23%/°C
Temp Coefficient of Pmax	-0.28%/°C

## ❖ PACKING CONFIGURATION

Modules/Pallet	32 Pieces
Packaging Description	20 Pallets, Total=(32+32)x10=640 Pieces
Modules/40'Container	640 Pieces

## ❖ IV CHARACTERISTICS



## ❖ MAXIMUM RATING

Power selection	0~+5W
Measuring uncertainty of Pm	0~±3%
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	25A

**30 YEARS** Quality Warranty

**30 YEARS** Power Warranty

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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