

Mono

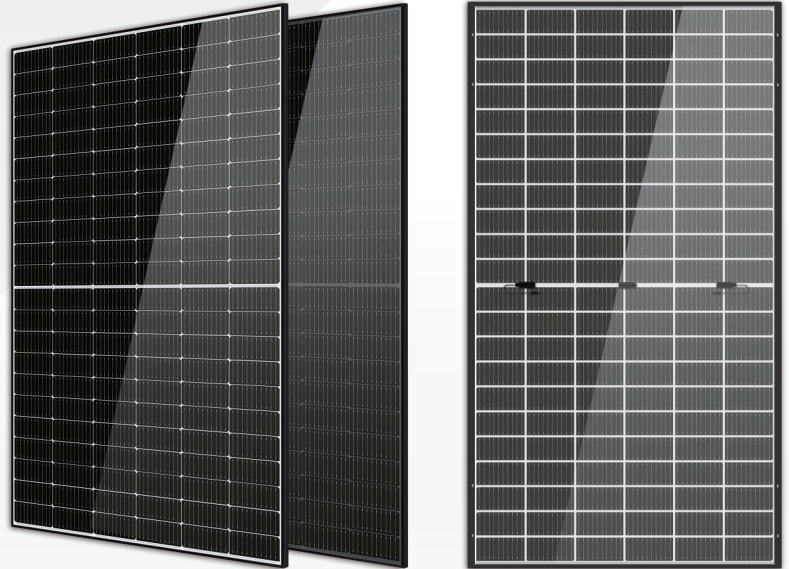
Bifacial

# HORAY

## Solar Ocean

### 495-515 Watt MONO-BIFACIAL MODULE

- IEC61215: 2021
- IEC61730: 2016
- 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



#### KEY FEATURES



##### MBB 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 132 half-cells Monocrystalline modules is up to 515W.



##### PID Protection

Ensure the attenuation probability caused by PID phenomenon is minimized.



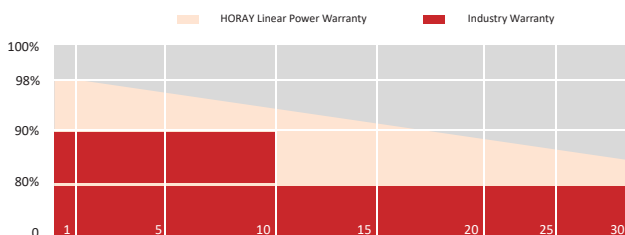
##### Harsh Environmental Adaptability

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

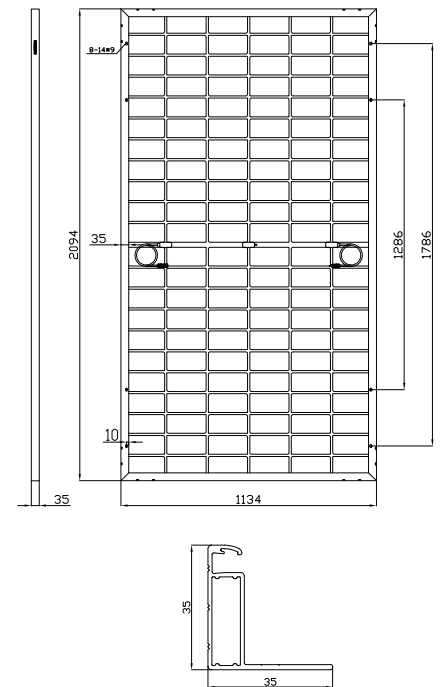
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## SPECIFICATIONS

Weight	29.0kg
Dimension	2094mm*1134mm*35mm
Cell Dimension	182*91mm
Cell Amount	66*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/±1200mm Length can be customized
Connector	MC4 compatible
Application Level	Class A

## MECHANICAL DIAGRAMS



## ELECTRICAL PARAMETERS AT STC

Module Type	HS495-MHO-D	HS500-MHO-D	HS505-MHO-D	HS510-MHO-D	HS515-MHO-D
Power	495W	500W	505W	510W	515W
Open Circuit Voltage	45.10V	45.30V	45.50V	45.70V	45.90V
Short Circuit Current	13.78A	13.83A	13.89A	13.94A	14.00A
Maximum Power Voltage	37.60V	37.80V	38.00V	38.20V	38.40V
Maximum Power Current	13.17A	13.23A	13.29A	13.35A	13.41A
Module Efficiency	20.85%	21.06%	21.27%	21.48%	21.69%

\* 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	542W	548W	553W	558W	564W
Open Circuit Voltage	45.10V	45.30V	45.50V	45.70V	45.90V
Short Circuit Current	15.02A	15.11A	15.19A	15.27A	15.36A
Maximum Power Voltage	37.60V	37.80V	38.00V	38.20V	38.40V
Maximum Power Current	14.42A	14.48A	14.55A	14.62A	14.69A

\*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	374W	378W	382W	386W	390W
Open Circuit Voltage	42.60V	42.86V	43.12V	43.37V	43.62V
Short Circuit Current	11.02A	11.06A	11.11A	11.15A	11.20A
Maximum Power Voltage	35.50V	35.71V	35.93V	36.14V	36.35V
Maximum Power Current	10.54A	10.58A	10.63A	10.68A	10.73A

\* 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.

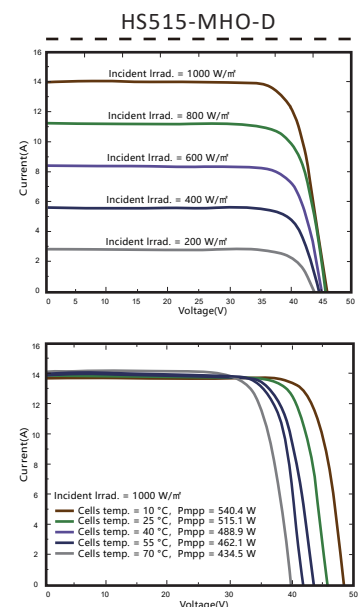
## TEMPERATURE CHARACTERISTICS

NMOT	45±2°C
Temp Coefficient of ISC	+0.05%/°C
Temp Coefficient of VOC	-0.28%/°C
Temp Coefficient of Pmax	-0.34%/°C

## PACKING CONFIGURATION

Modules/Pallet	32 Pieces
Packaging Description	22 Pallets, Total=(32+32)x11=704 Pieces
Modules/40' Container	704 Pieces

## 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

15 YEARS

Quality Warranty

30 YEARS

Power Warranty

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

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Version number: MHO\_D\_EN\_2024\_A