

Mono

Bifacial

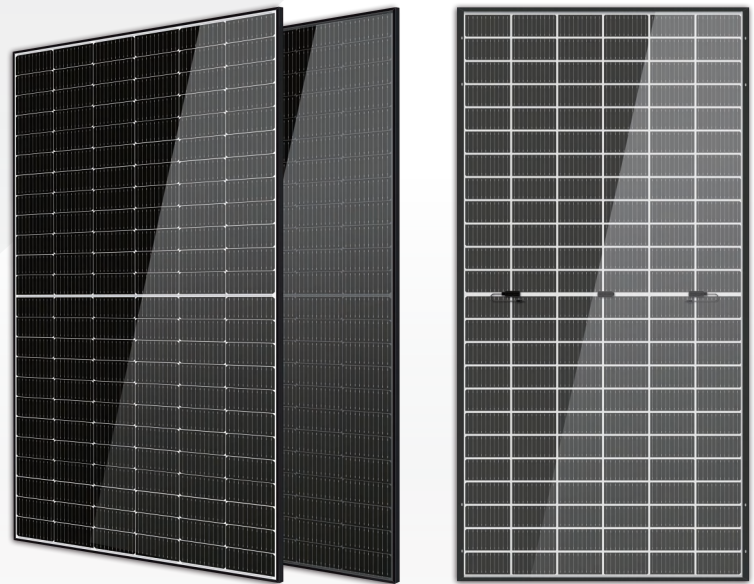
# HORAY

## Solar Ocean

### 535–560 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



**9BB/10BB/11BB 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 560W.



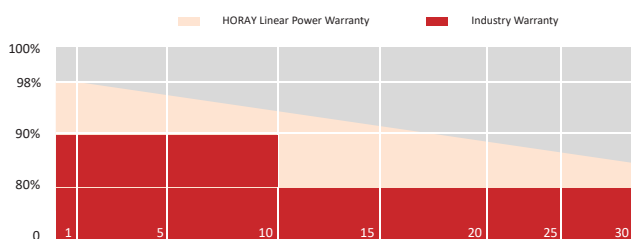
**PID Protection**  
Ensure the attenuation probability caused by PID phenomenon is minimized.



**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.



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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

## ELECTRICAL PARAMETERS AT STC

Module Type	HS535-MHO-D	HS540-MHO-D	HS545-MHO-D	HS550-MHO-D	HS555-MHO-D	HS560-MHO-D
Power	535W	540W	545W	550W	555W	560W
Open Circuit Voltage	49.20V	49.40V	49.60V	49.80V	50.00V	50.20V
Short Circuit Current	13.81A	13.87A	13.93A	13.99A	14.05A	14.11A
Maximum Power Voltage	41.00V	41.20V	41.40V	41.60V	41.80V	42.00V
Maximum Power Current	13.05A	13.11A	13.17A	13.23A	13.28A	13.33A
Module Efficiency	20.70%	20.90%	21.09%	21.28%	21.48%	21.67%

\* 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	586W	591W	597W	602W	608W	613W
Open Circuit Voltage	49.20V	49.40V	49.60V	49.80V	50.00V	50.20V
Short Circuit Current	14.88A	14.96A	15.04A	15.12A	15.19	15.27
Maximum Power Voltage	41.00V	41.20V	41.40V	41.60V	41.80	42.00
Maximum Power Current	14.29A	14.35A	14.41A	14.48A	14.54	14.60

\*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	404W	408W	412W	416W	420W	424W
Open Circuit Voltage	46.44V	46.68V	46.92V	47.17V	47.44V	47.71V
Short Circuit Current	11.05A	11.10A	11.14A	11.19A	11.24A	11.29A
Maximum Power Voltage	38.70V	38.90V	39.10V	39.30V	39.53V	39.76V
Maximum Power Current	10.44A	10.49A	10.54A	10.58A	10.62A	10.66A
Module Efficiency	15.63%	15.79%	15.94%	16.10%	16.25%	16.41%

\* 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.

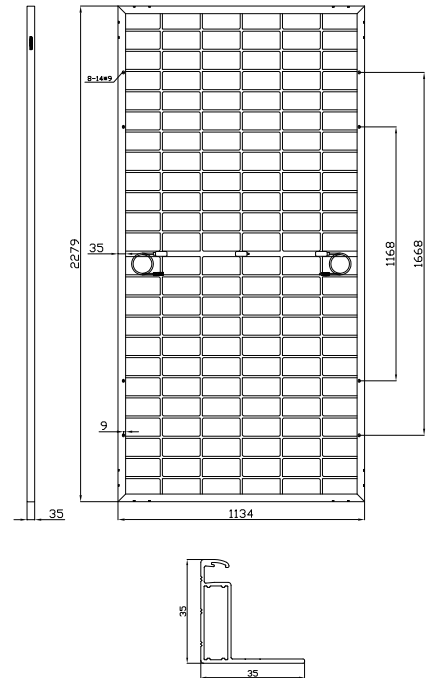
## TEMPERATURE CHARACTERISTICS

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

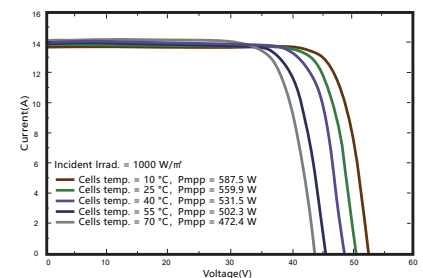
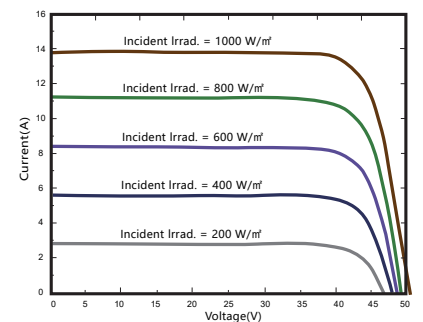
Modules/Pallet	31 Pieces
Packaging Description	20 Pallets, Total=(31+31)×10=620 Pieces
Modules/40' Container	620 Pieces

## MECHANICAL DIAGRAMS



## IV CHARACTERISTICS

### HS560-MHO-D



## 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