Mono Bifacial

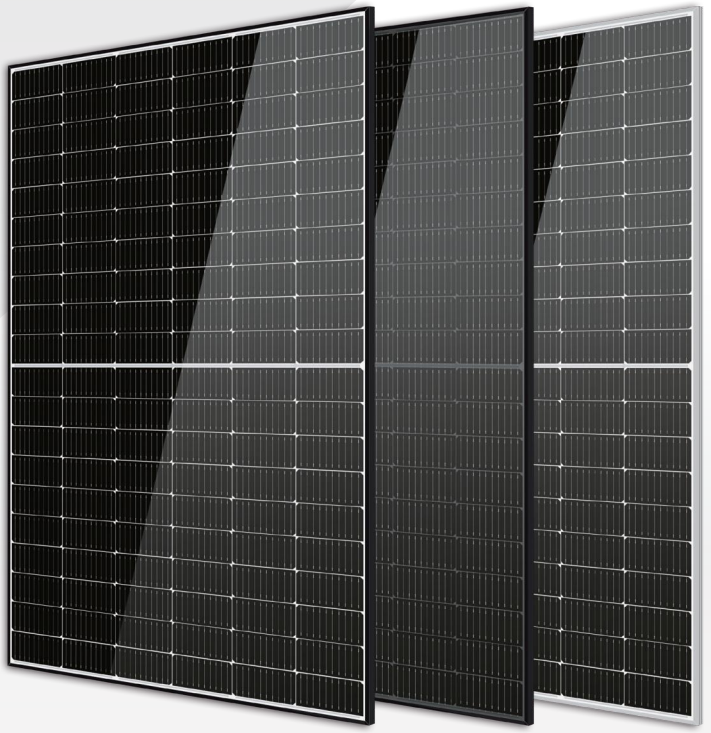
HORAY | TIER1 BloombergNEF

Solar Ocean

450–470 Watt

MONO–FACIAL 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

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

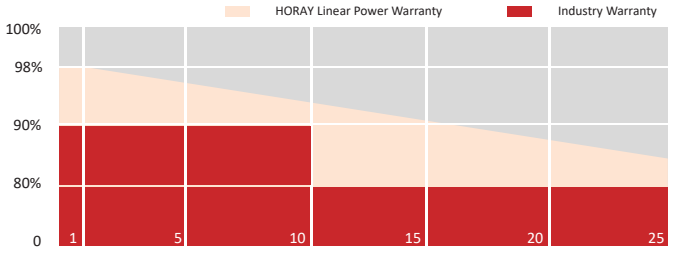
Low Light Features
Higher performance under low light environment.

Higher Output Power
The output power of 120 half-cells Monocrystalline modules is up to 470W.

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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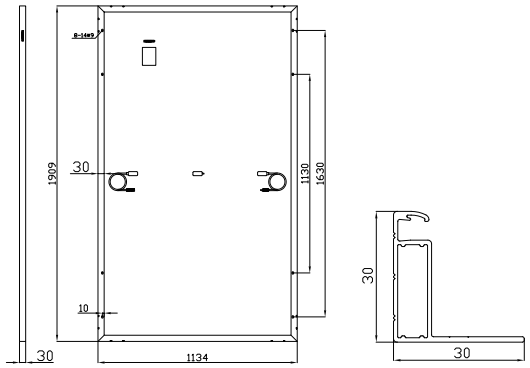
HORAY

MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	22.5kg
Dimension	1909mm*1134mm*30mm
Cell Dimension	182*91mm
Cell Amount	60*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm²,+300,-300mm/±1100mm Length can be customized
Connector	MC4 compatible
Application Level	Class A

ELECTRICAL PARAMETERS AT STC

Module Type	HS450-MHO	HS455-MHO	HS460-MHO	HS465-MHO	HS470-MHO
Power	450W	455W	460W	465W	470W
Open Circuit Voltage	41.40V	41.60V	41.80V	42.00V	42.20V
Short Circuit Current	13.68A	13.73A	13.78A	13.84A	13.90A
Maximum Power Voltage	34.60V	34.80V	35.00V	35.20V	35.40V
Maximum Power Current	13.01A	13.08A	13.15A	13.21A	13.28A
Module Efficiency	20.79%	21.02%	21.25%	21.48%	21.71%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m2, spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL PARAMETERS AT NMOT

Power	340W	344W	348W	352W	356W
Open Circuit Voltage	39.20V	39.45V	39.70V	39.97V	40.21V
Short Circuit Current	10.94A	10.98A	11.02A	11.06A	11.10A
Maximum Power Voltage	32.67V	32.87V	33.08V	33.31V	33.51V
Maximum Power Current	10.41A	10.46A	10.52A	10.57A	10.62A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m2, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

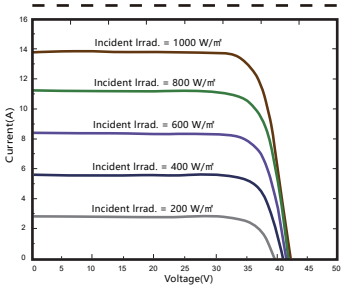
NMOT	45±2°C	Temp Coefficient of ISC	+0.05%/°C
Temp Coefficient of VOC	-0.28%/°C	Temp Coefficient of Pmax	-0.34%/°C

PACKING CONFIGURATION

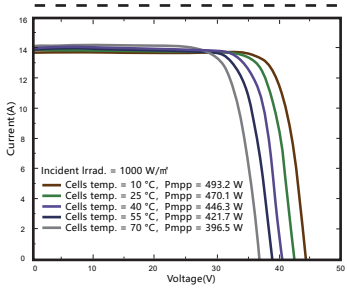
Modules/Pallet	37 Pieces	Modules/40'Container	888Pieces
Packaging Description	24 Pallets, Total=(37+37)x12=888 Pieces		

IV CHARACTERISTICS

HS470-MHO



HS470-MHO



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

12 YEARS Quality Warranty

25 YEARS Power Warranty

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

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